

Sustainable Consumption: Stakeholder Perspectives



**Sustainable Consumption: Stakeholder
Perspectives**

A Collection of Personal Essays by World Economic Forum Members and Constituents involved in the Forum's Sustainable Consumption Initiative 2008-2012 and associated Global Agenda Council on Sustainable Consumption

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Foreword: harnessing the impatience for change – Hannah Jones

“The world is at a tipping point.”

These were the opening words of the foreword of the 2010 World Economic Forum report on sustainable consumption, signed by 14 CEOs of global companies representing a range of industries. Those CEOs went on to call for a future of sustainable consumption through innovation, collaboration, investment, values and leadership.

Nike was one of the companies leading that charge, and we still are today. We see sustainability and innovations in the way we consume goods and services as the growth opportunity for our business. Using sustainability as the lens for innovation, we see this as a route to growth and new market opportunities. Like many others exploring this transformation, we are on a journey and are looking to integrate sustainability into the core of our business, through all product lines and as performance deliverables at all levels across our company.

We also are humble in recognizing that we have a long way to go. As a company, even as a market leader, we cannot make the change alone. We need to collaborate with others and redefine the rules of competition so we can innovate across entire industries, rather than individual products. This frustration is slowly spreading to boardrooms, government corridors and the offices of non-governmental organizations (NGO), and we will need all these stakeholders to make the transformative change required.

It is clear from conversations with chief executive officers, government ministers, NGO and business leaders and academic experts that there is no silver bullet for achieving sustainable consumption. Different stakeholders will have different roles to play to trigger scale. However, business can play both a leading and an enabling role.

Over the past four years, I have had the honour to accompany the World Economic Forum through their exploration of sustainable consumption. At the World Economic Forum Annual Meeting 2008 in Davos-Klosters, this journey started as a brainstorming with CEOs about why sustainability is relevant to business. The conversation was focused largely on the regulatory and business risks of inaction. As the ideas matured, it became an exploration of sustainable consumption as a driver of innovation and growth, and how new models at a systems level can lead to solutions of causes rather than symptoms of our overconsumption.

In curating this project, the Forum has provided a crucible for the generation of new ideas: There is increasing agreement that a sustainable future will be one with closed loop systems and no net environmental impact. We will have zero waste and absolute transparency across our value chains, and new models of co-creation with consumers and competitors.

There is, however, growing impatience about the lack of speed and scale at which we are moving, and I share this impatience. I welcome this timely book, which explores some of the many optimistic perspectives of sustainable consumption. The diverse and personal essays within it can help inspire us all to create the sustainable future we want.

Hannah Jones
Vice President of Sustainable Business and Innovation
Nike, Inc.

Preface – Dominic Waughray

In the pursuit of wealth creation, our world economic system has created many pressing global public good or common property resource problems, especially in our relationship with nature. Greenhouse gas pollution, water security, deforestation, the melting Arctic ice and polluted, over-fished oceans are some hot-button issues to name but a few. Given how much we depend on nature's resources to create and sustain our wealth, these problems are not just environmental, they are also economic. Since the mid twentieth century, the pressure we place on nature has grown markedly, and will continue to accelerate under business as usual conditions. Furthermore, as ecosystems react to stress in non linear ways, catastrophic tipping points can suddenly be reached, from which there is no return - the ultimate structural risk.

Within this challenging risk context, the World Economic Forum Environmental Initiatives brings together leaders from all parts of the economy and society to share insight about key natural resource challenges and to help governments (usually the ultimate custodian of the environmental resource in question) co-design informal but practical solutions at scale. This approach of catalyzing informal public-private-civil society collaboration at large scale has worked well. Since 2006 the Forum has, with its partners and constituents, been the architect for a successful series of global environmental and natural resource initiatives - in agriculture, climate change, green investment and water security in particular.

In 2008, however, the Consumer Goods Industry Community of the World Economic Forum set a more complicated challenge. Could the Forum open up a strategic dialogue on the nebulous concept of Sustainable Consumption? Recognising the very real biological and materials limits to delivering an exponential increase in volume of goods and services to the emerging middle classes by 2030 and beyond, what is to be done? How could business growth, social well-being and national economic development be squared with the clear resource constraints that the world economy faces? Not just traditional constraints of capital, labour and access to technology, but also now with the new constraints of nature – the “resource crunch”? What kinds of business and policy innovation would be required; and what kinds of new relationship would need to be developed with voters, customers and consumers?

For four years - 2008-2012 - a unique collaboration of public, private and civil society sector actors engaged in a strategic dialogue on Sustainable Consumption hosted by the World Economic Forum, to help address these and other questions. A Global Agenda Council on Sustainable Consumption was also formed. Over this period, over 20 Forum Industry Partner companies joined a steering board to help lead the discussion, and over 200 professionals from around the world took part in various events and activities related to the project. Four reports were produced and discussed at the World Economic Forum Annual Meeting in Davos 2008-12. It is safe to say that over this time period, the

dialogue helped pivot the Global Sustainability Agenda away from a compliance-based or Corporate Social Responsibility focus (and away from solely a supply-side conversation on resource constraints), toward a new agenda. This “new economics” agenda majored on widespread industry and product innovation; new business model growth; new education, vocations and jobs; new collaborative relationships with supplier and consumers (and even sometimes on new models for sharing experience at the pre-competitive stage with competitors); and, fundamentally, the potential for wholesale transformation toward systemic “circularity” in the global economy.

It is important to reflect that during the period of the Sustainable Consumption Initiative, there was an explosion in economic and political consciousness on food price rises, the resource “crunch” and economic inequality. The dialogue was in full flow at the height of the financial crisis, the occupy movement and the Arab Spring. The challenge of the Copenhagen Climate Meeting outcome also infused the discussion – illustrating how multilateral processes may not provide all the answers in today’s multipolar and multidimensional economic world. All of these factors helped to flavour the Sustainable Consumption Initiative’s discussions and served to tilt the investigation toward finding a “new normal” - new models for materials use, sharing and reuse in manufacturing, new models for business innovation and development, new approaches for consumer relations and engagement and, importantly, new models for architecting and assessing economic growth.

Over the course of the four years, stakeholders broke the investigation down into three component parts: on the challenge of supply (the resource and materials “stock and flow” question); on the challenge of demand (the consumer engagement question); and on the challenge of the rules of the game (the question of how to engage policy makers and regulators). In a general sense, this book is structured around these themes, with an additional segment on personal reflections on leadership as well.

Many of the findings of the project and the ideas generated by the stakeholders found their way into the 2011 High Level Panel on Global Sustainability, convened by the Secretary General of the United Nations in the run up to the 2012 Rio+20 conference. Rio+20 too, provided an important clearing house for the ideas developed over the course of this dialogue. The debates and discussions that took place within the Sustainable Consumption Initiative proved to be so rich, and many of the experiences of the business and subject professionals so personal and compelling, that when the initiative closed in June 2012, it was felt that the standard Forum reports did not do justice to the stories of the people – the Forum’s industry partners and expert constituents – who behind the printed word were the real motor for the project.

This short book attempts to correct that. The Forum invited many of those who contributed to the Sustainable Consumption Initiative over its four year lifespan, to offer their own personal viewpoints and opinions on the challenge of sustainable consumption. They responded with gusto. As a result, the collection of stakeholder perspectives, presented here, is quite unique. It offers a compelling insight into the hearts and minds and life experiences of many of the world’s most well-known corporate and civil society champions for sustainable consumption.

More than a technical manual or textbook, their insights offer the human story in how to try and make wholesale change happen, whether in business, government or international organisation.

Due to the people who contributed to this book, and many others, the World Economic Forum considers the 2008-2012 strategic dialogue on Sustainable Consumption to have been a great success. In today's hyper-connected and fast moving world, getting influential leaders from different sectors of the economy and society to discuss what should be done on key issues over several meetings (in World Economic Forum parlance strategic dialogues) can have a profound impact. Crucially, this one, on Sustainable Consumption, shifted the agenda. Today, unlike in 2008, concepts such as scaling new models for consumer engagement (the person is now a stakeholder in rather than a consumer of the company's products and services); building new global business models in selling service provision (e.g. mobility) rather than selling products (e.g. cars); capturing the opportunity from the disruptive innovation of the digital world to reduce expensive materials flows (for example through 3D printing); forging new pre-competitive collaborations to strengthen shared corporate resilience; and fuelling new movements to scale the circular economy – all of these corporate and public-private agendas for action and many others are now mainstream. They don't sound blue sky any more.

Looking forward, the World Economic Forum is pleased to build on the 2008-2012 Sustainable Consumption Initiative, through its work with the Consumer Goods Industry Community on engaging tomorrow's consumer, and through the build and launch in 2013 of a new Global Initiative on Scaling the Circular Economy. Neither of these major, action-orientated work programs would have been possible without the pioneering strategic dialogue of the Sustainable Consumption Initiative.

Detailed acknowledgements and thanks for all of the World Economic Forum industry partners, constituents and Global Agenda Council members past and present who contributed to this initiative, can be found at the back of this book. I would like to extend my sincere thanks to you all. I would also like to offer a particular acknowledgement to two people. Firstly, Hannah Jones, Vice President for Sustainable Business and Innovation at Nike, who chaired the Sustainable Consumption Initiative; and secondly to Randall Krantz, who directed the World Economic Forum Sustainable Consumption Initiative throughout its lifespan, and who took up the challenge to organise and edit this book.

At the time of the 2013 Annual Meeting of New Champions in Dalian, China, and the Meeting of the Global Agenda Councils in Abu Dhabi, I cannot think of a better moment to look back on the achievements of the Sustainable Consumption Initiative, reflect on the insights of many of its champions contained within this book of stakeholder perspectives, and look forward to what seems to be an increasingly vibrant corporate agenda and growing intent to collaborate in scaling a sustainable and circular economy.

Dominic Waughray
Senior Director, Head of Environmental Initiatives
World Economic Forum
Geneva, November 2013

Introduction

Sustainability has received unprecedented attention over the last several years. Chief executives have aggressively set sustainability priorities and goals, companies have issued sustainability reports and undertaken numerous initiatives focused on enhancing environmental performance, and new reports and articles are released on the topic every week. This attention is positive, for if the modern global economy is to uncouple growth from environmental and resource intensity, awareness is crucial. But for global business, it is not easy to discern what is truly important amidst the cacophony.

The World Economic Forum's Sustainable Consumption Initiative was designed to cut through this noise and the many confusing and sometimes conflicting perspectives. It brought clarity to the discussion by pulling together the perspectives of stakeholders from all sectors and catalysing concrete discussions between those who have the power to effect change and have real value at stake.

Over the course of more than four years, CEOs from a range of companies along entire value chains as well as leaders, scientists and experts from top NGOs, universities and international organizations gathered, first to understand the impacts of consumption, and later to explore the opportunities offered by sustainable consumption as the lens for business innovation. . With workshops and panel discussions at the World Economic Forum Annual Meeting in Davos-Klosters for four years running, from 2008 to 2012, visible progress was made as CEOs first explored sustainable consumption as an important business issue and then embraced the ideas as enablers of innovation to transform their companies.

At the first meeting in January 2008, a group of Consumer Industry chief executives framed the problem by actively viewing sustainability as an opportunity for innovation and growth. The challenge was to make sustainable consumption relevant to the core of business operations and markets, rather than remaining on the periphery as an environment sideshow. Later that same year, the project team was challenged by the company representatives to create a document that would be read by chief executives and chief financial officers, not just handed down to directors of sustainability and corporate social responsibility. The result was the first report entitled *Sustainability for Tomorrow's Consumer: The Business Case for Sustainability*, bringing together the opportunities for growth in new markets balanced with the risks of resource security and changing demand.

While much commendable progress has been made on sustainable consumption since the publication of this report, the companies engaged recognize the difference between the mainstreaming of ideas and the mainstreaming of actions. It is important to acknowledge the power that business brings to the table, especially when one considers the billions of consumers reached on a daily basis by top consumer brands. Many companies are doing the best they can within the rules established around them, while underpriced resources and impatient investors make it difficult to change quickly. By bringing

together business leaders of the highest level with a wider range of stakeholders than ever before, the World Economic Forum is able to make a tangible impact in this space, moving from the ideas and ideologies to the actions needed.

This collection of essays is a volume of interesting ideas, pulled together in order to tell a compelling story. Each author has played a crucial role in the World Economic Forum's work on sustainable consumption since it started five years ago. Many contributors were key members of the Project Board, guiding the direction and scope of the Forum's sustainable consumption work over time. When Best Buy, Nestlé, Nike, and Unilever came together to lead the work, they never anticipated the project would eventually expand to involve twenty seven companies from across seven distinct industries: consumer goods, retail industries, chemicals, mining, logistics, information technology, media and communications.

Others have also contributed their expertise as Members of the Forum's Global Agenda Council on Sustainable Consumption. This Council was one of a wide range of expert groups formed to advance an extensive range of specific topics such as ageing, illicit trade or water security. The Global Agenda Council on Sustainable Consumption gathered expertise from a range of stakeholders, including NGOs, international organizations and academic institutions. The collective group of like-minded individuals from a range of backgrounds has been able to push the issue beyond the boundaries of their own organizations and into a fertile space where the cross pollination of new ideas allowed radical thinking and collaborative innovation.

The Challenge of Definition

Sustainable development was defined in 1987 by the United Nations' World Commission on Environment and Development – the Brundtland Commission – as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”². As an African elder at the 2002 World Summit on Sustainable Development (WSSD) phrased it, sustainable development is “enough, for all, forever”. Building on the Brundtland definition, we define sustainable consumption as “consumption that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

While it seems almost simplistic, this definition is more profound than at first glance for several reasons. First, consumption dominates, and therefore defines, nearly all modern economies, accounting for more than 80% of gross domestic product in many countries. Second, consumption is inherently a reflection of a complex system, since everything we consume carries with it the embedded resources and labour of its full value chain, plus the impacts of its future use and disposal. This interplay was made clear in the Forum's parallel project on Water Security, through the systems view of water, energy, food and climate change,³ each of which has strong linkages to consumption. Last, sustainable consumption looks beyond the technical fixes and efficiencies that can be addressed in the production of the goods and services we use, and reaches into the nebulous space of consumer behaviour and social psychology, a significant enough field of study to have been recognized through two Nobel prizes over the past decade.⁴

Sustainable consumption as documented through the years:

1798 An Essay on the Principle of Population, Thomas Malthus: In his seminal work, Malthus commented on the potential for geometric increase in population. “The power of population is indefinitely greater than the power of the earth to produce subsistence for man.”⁵

1972 UN Conference on the Human Environment: “In our time, man’s capability to transform his surroundings, if used wisely, can bring to all peoples the benefit of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and human environment.” And further, “To defend and improve the human environment for present and future generations has become an imperative goal for mankind.”⁶

1972 Limits to Growth, commissioned by the Club of Rome: This report proposed that one key element to a sustainable society would be for the world’s people to “moderate not only their demand for children, but also their material lifestyles... To achieve this change would mean that the globe’s people establish their status, derive satisfaction, and challenge themselves with goals other than ever-increasing production and ever-accumulating material wealth.”⁷

1987 UN World Commission on Environment and Development: This Commission highlighted imbalances in consumption and the challenge of bringing several billion into the mainstream economy. “Given population growth rates, a five- to tenfold increase in manufacturing output will be needed just to raise developing world consumption of manufactured goods to industrialized world levels by the time population growth rates level off next century.” Later in the report it is pointed out with prescience that, “Perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecologically possible and to which all can reasonably aspire.”⁸

1992 UN Conference on Environment and Development: “The major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances.”⁹

2002 World Summit on Sustainable Development: The closing statement called for countries to “Encourage and promote the development of a framework ... in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production to promote social and economic development within the carrying capacity of ecosystems.”¹⁰

2003 Launch of the Marrakech Process on Sustainable Consumption and Production: This UN process was launched at the first international expert meeting on the 10-year framework held in Marrakech, Morocco, organized by the UN Department of Economic and Social Affairs (UNDESA) Division for Sustainable Development and the UN Environment Programme (UNEP). For nearly a decade, a coalition of willing countries has been working to promote sustainable consumption and production, especially through policy guidelines and in emerging economies.¹¹

*2012 UN Conference on Sustainable Development (Rio+20): “We adopt the 10-Year Framework of Programmes (10YFP) on sustainable consumption and production ... We invite the UN General Assembly ... to take any necessary steps to fully operationalize the framework.”*¹² After nearly a decade of moving ahead without formal agreement by all UN countries, the Marrakech Process 10-year framework is finally adopted as one of the few successes of a controversial Rio+20 Summit.

A key part of the value brought by the World Economic Forum has been to take the theoretical debates of scientists and experts to the practical business level through collaboration with business sustainability and corporate social responsibility (CSR) professionals. Ultimately, however, the goal is to take the conversation to the board level and into the core DNA of the business – CEO support on the urgency and scale of the challenge has been key to the success of this work.

More than Less Consumption – Consuming Right

For many in the private sector, the idea of sustainable consumption is controversial for its implications of less consumption. While consuming less will surely lower environmental impact, less consumption could also imply less economic activity, which would deliver less growth, lower incomes and fewer jobs. This view was shared by many of the companies involved early on in the project, until we had a breakthrough at a “design charrette” held in New Delhi in November 2008.

With more than 50 participants, including business leaders from top global brands and students from the National Institute of Design, India’s most prestigious design school, teams of participants were challenged to completely redesign a series of household products. The challenge was not just to change the product itself, but to innovate around the idea of the value delivered and the need that was being met, thereby changing the “product-service system”. By checking the technological realities at the door, teams redesigned the cotton T-shirt to be made of recyclable polymers with the ability to shake itself clean, bottled water became a community rainwater harvesting scheme with quality control guaranteed by global brands, and washing powder became a licensed ionization technology for waterless washing.

Each of these solutions offered value to both citizens and companies, though business models would be radically different from those we know today. By focusing on the value delivered rather than the materials and the stuff of what we consume, participants realized that sustainable consumption can be an opportunity rather than a threat. By aiming to reduce the volume – not the value – we can consume more sustainably while driving continued economic growth. One participant summed it up by saying, “It is not about consuming less, but about consuming differently – consuming right!”

The Initiative revealed that it is important to look for opportunities beyond just the manufacturing of a product, to the full life cycle, from conception and design through production, use, service and all the way to disposal or end of life. Life cycle thinking and the metrics that inform it have a powerful role in accelerating the shift from more consumption to a more strategic design and delivery of products and services.

Collaboration and Long Termism to Make It Happen

In each of over 25 workshops and sessions held over the past four years, CEOs and experts highlighted numerous barriers that need to be overcome. Many of these barriers are locked in a cycle that is difficult to break: consumers need to know the sustainable choices available to them, or already made for them; businesses need to increase value both to their consumers and shareholders; policy-makers need the confidence of their citizens and the strength of the private sector to drive their economies. As for making the change happen, none can do it alone; each stakeholder must work with the others. The ability to build trust across stakeholder groups is a core competence of the World Economic Forum, and this was borne out in the progress of the Sustainable Consumption Initiative.

Engaging consumers as citizens who embrace sustainable values can create the demand for sustainable products and services, as well as demand for the innovative business models that come with them. In an early workshop at the Annual Meeting in Davos, one automotive executive complained that his company had manufactured a highly efficient automobile that did not meet sales targets. He was discouraged that a significant engineering and development effort had not been rewarded, and concluded that consumers were not interested in greener cars. Five years ago it would have been very difficult to determine the root cause of such a market failure – whether it was a pricing issue, a flawed design, or just an idea ahead of its time. Today it's clear that with the right incentives and rules of the game, consumers are increasingly open to the idea of owning greener cars and, more than that, sharing them.

Given the current state of European and North American economies, many company leaders believe that they have no choice but to focus on cost cutting and sometimes even on short-term survival. Looking beyond profits is a start, but some companies are even changing the way they disclose financial information. While on a sustainable consumption panel at the Annual Meeting 2010 in Davos, Paul Polman, CEO of Unilever, recounted how in the first week in his new role in 2009 he suspended quarterly earnings reporting. Unilever's share price slid 6% almost immediately as a result. The share price may have fallen on the day he announced an end to guidance, but it fully recovered as patient investors recognized the company's long-term performance and strategy, and it is now 35% higher.¹³

It is signals like these from leading Partners of the World Economic Forum that are changing the markets – not only from the leadership of individual CEOs, but also through their interactions provided through high-level engagement and the opportunities to learn from each other's experiences. Over the past four years, company after company has committed to embedding sustainability into the DNA of their business, some very publicly, others behind the scenes.

Sharing Experience and Ambitions

This volume captures some of these trends in a series of essays written by those who are living at the frontier of sustainable consumption. It does not intend to be a compendium of facts and figures, though some can be found in the annexes, but rather a selection of individual experiences and diverse perspectives. Within these pages are stories from those at the forefront, telling of their successes, as well as their failures, and insights into what they learned along the way.

The World Economic Forum's work on sustainable consumption has largely been driven by those who have given their time and thought leadership to this project, in workshops, project calls and interviews. Of the many individuals who have contributed to this work over the past few years, 20 have taken the time to step back and gather and share their thoughts from a personal perspective. The results are compiled in this volume. Our gratitude goes to all who contributed to the World Economic Forum's work on sustainable consumption, to the many who continue to be engaged and particularly to those who contributed to these pages.

People and Preferences on the Demand Side



Consumers are increasingly taking an active part in the creation of the sustainable economy, demanding greater transparency over the origin and contents of the goods they consume and becoming ever more aware of the broad sustainability challenge facing the world. For example, roughly 95% of American consumers say they are willing to “buy green”, and more than one-third report they are more likely to buy sustainable products.¹⁴ The market for products is, in fact, predicted to grow significantly: a recent report for the German government suggests that Germany will earn more money from green products than from car production by 2020.

Despite the mixed signals from consumers and uncertain prognostications from analysts, many businesses are now looking to transform demand through the way they interact with the consumer. They recognize the need to reshape demand by making sustainable consumption more personal and relevant to consumers, leveraging the power of technology to drive engagement and transparency, and redesigning products and services to deliver increased value with fewer resources to make the sustainable choice the default choice.

This is a necessary but insufficient first step towards a transformational change in consumption habits. The real challenge is to connect the intentions of individuals as citizens with their actions as consumers. A better understanding of social behaviours and clarity on how individual actions contribute to social goods will help. Part of the challenge is that there is not yet a globally recognized definition of the sustainable consumer. Preferences and levels of consumption vary hugely between different societies, driven by culture and level of income.

Many consumers in the Organisation for Economic Co-operation and Development (OECD) countries are becoming increasingly sensitive to concepts of environmental sustainability, but consumption levels and environmental footprints are already high. Achieving sustainable consumption implies very substantial improvements in resource use and waste management, as well as changes in product types and different models of consumption. A Deloitte study found that consumer behaviour is still principally dictated by price, quality and convenience, rather than by origin of products and sustainability content.¹⁵ Sustainable consumption remains a niche and the disconnect between awareness and action is stark.

Emerging economies present both the greatest opportunity for a growing consumer market as well as the greatest challenge in terms of achieving wider prosperity for current generations without undermining the sustainability of long-term prosperity. The prize is there for the sustainable economy to be built in emerging markets, while leapfrogging the resource-intensive consumption that characterizes the developed world. Attitudes towards sustainability and environmental management are often just as deeply embedded in the emerging and developing world as in the developed world – indeed, in some cases, the structures that might allow improved models of sustainable consumption in societies and communities are far more advanced in the developing nations.¹⁶

Over the following pages, the role of the consumer in achieving sustainable consumption is explored from six different perspectives: consumption cultures, sustainable lifestyles, food waste, consumers and supply chains, the role of brands, and conscious consumption. Together, these personal experiences paint a picture of the breadth and depth of both the challenge and the progress being made, and the protagonists driving it.

The views expressed herein represent a collation of various viewpoints from participants in the World Economic Forum Sustainable Consumption Initiative, the World Economic Forum Global Agenda Council on Sustainable Consumption and viewpoints from other invited contributors. The text and the individual contributions do not necessarily reflect the views of every individual participant nor do they necessarily reflect the individual institutional viewpoints of any of the participating companies, institutions, organizations or their members, or of the World Economic Forum.

Reflections on consumption cultures

- Bjarne Pedersen, Consumers International

Bjarne Pedersen of Consumers International has been engaged with the Forum for several years, since he first joined the Global Agenda Council on Sustainable Consumption in 2009. Looking at consumption from the perspective of a consumer rights issue, Consumers International (CI) is the international federation of national consumer organizations from around the world. In this chapter, he traces the origins of sustainable consumption and the evolution of consumer interactions, also reflecting on a certain amount of cognitive dissonance as one attempts to practise what one works on professionally.

Shopping for a Better World

We all know it: unsustainable patterns of consumption are having serious (and long-term, detrimental) economic, environmental and social impacts worldwide. By way of logic we should be able to change that by changing our consumption – by mobilizing consumers everywhere to change the way they consume and live for the greater good of our planet and those in need of development. So why has this not happened?

In reality, if consumers could save the world by “shopping for a better world”, then they probably would have done so already. This might seem like a slightly odd statement coming from a consumer activist who believes in consumer rights and action as well as in the empowerment and education of consumers as means to change. But as a consumer activist, while I do believe in consumers as a force for change, I also believe that the change needs to happen based on a clear understanding of what enables consumers to change and what does not really help them.

My journey as a consumer activist started when I took my degree in Family and Consumer Sciences in Denmark back in the 1980s. The sustainable development debate was then broadly dominated by the clean production thinking as developed by the United Nations Environment Programme (UNEP) and the United Nations Industrial Development Organization (UNIDO) but with an emerging debate about sustainable production and consumption (SPC). In the late 1990s, I became involved with CI and led its involvement in the preparatory work to the World Summit for Sustainable Development (WSSD) in Johannesburg in 2002.

The SPC debate really took off in the run up to the Summit, largely driven by a number of European governments, the UNEP Division of Technology, Industry and Economics and of course the consumer movement. Even the small print changed – suddenly we talked about sustainable consumption and production (SCP) rather than sustainable production and consumption and SCP got a chapter in the implementation plan from the Summit: “Chapter III: Changing unsustainable patterns of consumption and production”.¹⁸

Chapter III is in many ways a “catch all” for sustainability items that did not fall into the chapters on poverty eradication, resource management or sustainable development. It still did bring the SCP agenda further up the priority ladder in the intergovernmental debates in the years that followed. As mentioned in the Introduction, the cornerstone of the SCP inclusion is the creation of a 10-Year Framework of Programmes (10YFP) that is to “*encourage and promote the development of a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production....*”¹⁹

The 10YFP took on a life of its own in the shape of “the Marrakech Process”²⁰ – an intergovernmental/stakeholder process aimed at developing the 10YFP. One of the absurdities of the SCP debate that followed is, of course, that it took 10 years to develop the 10YFP, which was finally approved at the Rio+20 Summit in 2012.

Leaving the very long development aside, the Marrakech Process did do one significant thing – it started bringing SCP stakeholders together, developed SCP thinking and slowly we saw the SCP concept becoming more mainstream and appearing on the agenda of major organizations outside of the intergovernmental processes – the World Economic Forum, the World Business Council for Sustainable Development, the International Standards Organization (ISO), to mention a few. It is fair to say that the concept of SCP became mainstream on an institutional level – or at least among some major stakeholders.

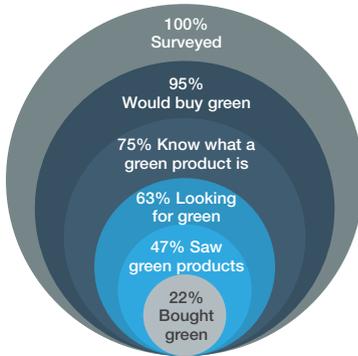
A Well-worn Challenge

What did not happen over the past decade was mainstreaming outside the “big processes and institutions”. I would argue that the sustainability choice has not delivered much besides some higher margin products for retailers to benefit from, without anything truly mainstream yet. There has been an increase in consumer facing initiatives. We, as consumers in the developed world, can of course buy our Fair Trade coffee and tea, our organic chocolate and eggs, and for Valentine’s Day we can express our love by buying Fair Trade flowers.

However, in the context of the urgency and the scale of change needed, the clear risk is that the consumer facing initiatives will not deliver significant impacts. The real risk is that the many initiatives, developed on the basis of providing information to a specific segment of empowered “green consumers”, will fail to deliver on mainstream uptake and impact that matters. Furthermore, these initiatives often compete both against each other in their narrow consumer segment and against calls for market based regulation.

So choice has not really delivered the transformative mainstreaming force that would move us towards fairer and more sustainable lifestyles and societies, despite best intentions. And the best intentions are certainly there when we talk about consumers. Consumer survey after consumer survey²¹ clearly shows the same pattern: increased awareness of the need to make more sustainable and fair choices and a stated intent to make better and more sustainable choices – and the obvious paradox that the intent and awareness do not translate into action.

Figure 1: Willingness to “Buy Green”



This figure suggests an unfulfilled, latent demand for green products that could be realized through the right product development, instore communication, and product availability. However, even if consumers did “buy green”, what would this mean, and would it be enough to put us on a track to sustainability? Consumer engagement is only one piece of the puzzle, and it needs to move beyond the belief that society can consume its way to sustainability.

Source: GMA/Deloitte Study, Finding the green in today’s shoppers: Sustainability trends and new shopper insights, 2009

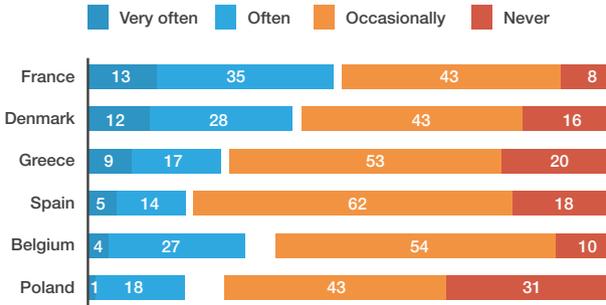
When I participate in debates about consumer behaviour, this is often the most contested issue – the “action gap” between the stated intent and the actual behaviour. More often than not, the argument goes along the lines that consumers “can’t really be trusted” and that somehow they are not true to their words.

For me the action gap is not a surprise – in reality I do not know many consumers who set out to “do bad” when they make choices. What we do have is the well-worn challenge of trading off the consumer’s core fundamentals (like price and quality) with the citizen’s ethical considerations (such as development, climate change and fair trade). Additionally, in our busy 21st century lives, there is the pressure of time and complexity – think Friday evening shopping for the family in the local supermarket – which is not really conducive to making consistent and coherent ethical choices.

All that is of course if busy consumers can even find a product or service that they can trust to have some sustainability credentials. Figure 2 shows the results of a survey in 2009 by GlobeScan for Consumers International across six European countries. The survey shows both large differences across the countries in terms of consumers having seen fairly traded products and disappointingly low rates of seeing sustainable products “very often”.

Figure 2: Prevalence of Fairly Traded Products

How often “fairly traded products” are seen in select European countries²²



Source: *Consumers International Survey on Consumer Attitudes to Socially Responsible Procurement*, GlobeScan (2009).

Finally and, in my opinion, most importantly: The Consumption Culture. On a daily basis, we are bombarded with messages about consumption – consume less, consume differently and, most often, “consume more”: consume less to make ends meet, consume more to improve personal well-being, consume differently to help the world’s poor, and – in the face of this international financial crisis – just consume to save the economy.

In this context, it is no wonder that consumer choice has not driven the “sustainability” market: the enabling environment is simply not there. And in many ways the “shopping for a better world” approach has been a diversion from the other levers of change, e.g. regulation, international negotiations and enabling infrastructure.

In addition, the consumer movement has struggled to frame sustainable consumption (SC) and, more importantly, take concrete measures leading to more sustainable lifestyles. In my work at Consumers International (the international federation of national consumer organizations), I have experienced that more often than not, despite good intentions, SC has been seen as a slightly elitist concept focusing on a limited consumer segment (willing and able to pay more) and with a bias towards “green” issues.

But within the last few years, some stakeholders in sustainability, including the consumer movement, have moved the agenda forward, driving a conceptualization of SC around “ethical consumption” in an attempt to open SC up to mainstream consumer segments. This also helps broaden the SC concept beyond “green” issues.

However, in my opinion, we still have some way to go – the growth of “ethical” consumption still remains a “niche” solution to the mainstream problem of unsustainable consumption. As an example, the ethical market in the United Kingdom was worth £43.2 billion in 2009, compared to £36.5 billion two years earlier. However, ethical spend remains a small proportion of the total annual consumer spend of some £700 billion.²³ The narrative that ethical consumption provides does not offer a sufficiently wide vision of what sustainable lifestyles should look like, nor does it articulate the transformative principles and policies that should guide us towards more equal, fair and sustainable consumption.

Of course the consumer movement believes in consumer information, education and empowerment, but we also know this cannot stand alone. Often missing are sound (consumer protection) policies and principles that create the enabling environment for consumers to take action that matters. And taking action that matters brings me back to my journey. In 2002 I moved from Denmark to London to work for Consumers International. Moving from a relatively small city like Copenhagen to the metropolis of mega-consuming London was in many ways a consumption culture shock for me.

I was used to living a fairly sustainable life in Copenhagen with an infrastructure that supported my sustainability choices – I could take my bike to work without endangering my life, I could separate my waste and I could buy (even if few) officially eco-labelled products.

I consider myself to be both an aware consumer and an empowered consumer – but that did not quite prepare me for London. I of course set out to ride my bike to commute to work – four weeks and two accidents later, I settled for public transport; being in a mega city with no bike lanes can be a sobering experience for a sustainable mindset. However – I did stick to the principle of not having a car and I did end up enjoying crisscrossing London on the tube and buses. The current push for bike lanes in London may offer ambitious cyclists new hope: the introduction of two new “cycle superhighways” led to an increase in cycling numbers on those routes by 70% overall within one year to 2010.²⁴

I no longer separated my recyclables from my waste – my upmarket neighbourhood in North London did not provide that opportunity in a convenient way. I placed all my waste in one bin and put it on the pavement in the morning where it would be collected every day. When I left London in 2012, I was still putting my waste on the pavement every morning. While some London boroughs do collect certain recyclable waste, the practice varies by borough and is far from universal.

At an OECD meeting in 2010 on resource management, I actually used the waste example as an illustration of a significant barrier to being a sustainable consumer in the 21st century – trying to emphasize the importance of an enabling infrastructure. After my speech, I was promptly addressed by a representative of the UK Government who informed me that there was indeed a recycling station less than 1.2 miles down the road and it was my issue if I did not use it – and clearly not a matter of lack of infrastructure. I politely tried to point out that due to my sustainable choice of not having a car and using public transport, I did not

find it especially convenient to use my early mornings or late evenings after work (or my weekends) to separate my waste and carry it on two buses to take it to the recycling station.

My trusted eco labels were gone. Instead, I found myself having to navigate an obesity of information in the form of self-declared claims telling me that most of what I bought and consumed was either green, natural or in some way animal friendly, illustrated with a variety of pictures of happy looking more or less exotic animals looking at me from almost every product I bought. I do not think that the UK market in this respect is very different from the North American market – where, according to TerraChoice, 95% of green claims commit at least one of the “sins of greenwashing”.²⁵

I went from having what I thought to be a fairly sustainable lifestyle to a fairly unsustainable lifestyle, driven by a lack of enabling infrastructure, the unavailability of credible ethical products and services, and the overabundance of information. I also became acutely aware of the cumulative “paradox of choice” – the vast choice I had made me unable to make a rational, ethical choice. On the positive side, I drank Fair Trade coffee and ate Fair Trade chocolate.

The paradox is of course that my unsustainable lifestyle made me a more determined sustainable consumer in spirit – or at least an aspiring sustainable consumer.

My sustainable food consumption was greatly helped by the increase in local farmers markets in London, and my navigation through sustainability information became easier as more voluntary sustainability standards (VSS) took hold, with 10 per cent or more of global production in forestry, fisheries and key agricultural commodities certified.²⁶ Through my work at Consumers International, I became more involved in the VSS community. VSS is an area where I see some potential, in particular where there is strong focus on the potential value of standards as tools for developing countries to achieve their sustainable development goals.

There is, of course, a great deal of vested interest in the VSS space from standard setters, retailers and certifiers, which could lead to a proliferation of standards competing for the interest of the niche green consumer. But there is also promise in the success we have seen of some major initiatives – the Forrest Stewardship Council, the Marine Stewardship Council and, of course, the Fair Trade movement, just to mention a few. Key stakeholders’ increased understanding regarding mainstreaming and real impact is still needed – but some very positive steps have already been taken with such initiatives as the “Ethical Trade Fact-finding Process”²⁷ and the creation in 2012 of the United Nations Forum on Sustainability Standards.²⁸

The Beginning of a New Journey

In parallel with my journey and interest in the sustainability standards space, my personal journey has also changed course. In 2012 I decided to move from London to Kuala Lumpur in Malaysia. My consumption culture shock has just been renewed and my assumptions about SCP challenged. Kuala Lumpur with its mega malls and shopping culture is in many ways even more focused on consumption than London – however it is also very different.

The Malaysians' multicultural approach to life and love of food and local food markets are fascinating – local consumption and real marketplaces are everywhere in a country that is rapidly expanding its place in the global market-based economy.

There is a real energy about Kuala Lumpur and a high awareness of development issues, which does give me cause for hope. There is also a much deeper connection between cultures and consumption, which in many ways is a perfect segue into a more sustainable society.

But there are also undeniable signs of an unsustainable development path that we have seen in other parts of the world. Heavily subsidized fossil fuels make personal transport and owning a car the norm and part of a person's social status. The presence of massive shopping centres everywhere talks to and promotes the consumption culture and aspirations that in many ways mirror what we have seen in Europe and North America – a relentless bombardment of messages about shopping and consumption needing to be part of and defining one's culture and social status.

For me, Malaysia has reinforced my belief that consumption choices are deeply connected to social cohesion and aspirations, conversations about status as well as personal and cultural norms. And enabling consumers to change their consumption and lifestyles means changing what is culturally and socially acceptable as well as unacceptable.

This is also what gives me hope in terms of citizens as consumers and drivers of change towards more sustainable consumption and sustainable lifestyles. We know that information is not enough, and that people do not learn alone. From what I have witnessed first-hand, connecting aspirations, culture and social norms with (sustainable) consumption and lifestyles can be a potential game changer in the way we see consumption and lifestyles as part of sustainable development.

We can also help people as consumers move beyond insignificant and token consumption changes and help them understand (and trust) that they are making a difference – and can make a difference. I do see vast potential and opportunities for sustainable consumption and lifestyle to be a major force for change in our pursuit of sustainable development.

What we cannot do is “save the world by shopping for a better world”. Of course we need to be aware of the consequences of our purchase and support the good initiatives out there that promote a more responsible purchase. But to realize the great potential of consumer citizens as drivers for change and sustainable development, we need to go beyond that. Education and empowerment combined with a focus on what makes a difference must be the starting point. Creating an enabling environment including infrastructure and adequate consumer protection is key and absolutely critical.

Above all we need a renewed and positive focus on the connection between lifestyles, consumption and aspirations, cultures and social norms. Then we'll have the potential to mobilize and unlock people's consumption and lifestyles as real drivers for change and sustainable development.

Visions of Sustainable Lifestyles - Michael Kuhndt, Collaborating Centre on Sustainable Consumption And Production

Michael Kuhndt runs the Collaborating Centre on Sustainable Consumption and Production, which engages a significant team of researchers to push the boundaries on such issues as sustainable lifestyles and “choice editing”, making sustainable lifestyles part of business models and creating products and service for One Planet Living. At the 2008 Annual Meeting of the New Champions in Dalian, China, Michael memorably asked an audience of 200 high-level participants to close their eyes and imagine how each would pass a sustainable weekend, emphasising the importance of framing consumption as more than just an act in a store, but part of an overall sustainable lifestyle.

Automobiles and the Beginning of a Love Story

Long ago I worked for a major automobile company where I had responsibility for supply-chain management. We were working hard to improve environmental and social production standards and the car’s technical quality. But when I was driving home in my company car, stepping on the accelerator and brake pedal in turn, hearing the motor rattle, smelling the exhaust through the open window while in traffic, I realized that we were just looking at one side of the coin: the production side.

In this company, many actions were taken to address supply-chain issues. This was good, but these efforts were never seen as being linked with consumption where the bulk of environmental impacts occur: while the vehicle is being driven. For example, the fuel economy of the vehicles we produced was seen as being of only minor importance for car production. This experience was to some extent the beginning of my love story with consumption issues. While I saw it as useful to work on supply-chain issues, I also realized how important it was to not forget about the consumption side as well. I learned that when one considers product sustainability, it is important to look at sustainability aspects along the entire life cycle – starting with where the raw materials come from through to product use, and finally what happens when the consumer is finished with the product.

Step by step, I began to explore the existing research on consumption issues, reaching out to institutions that were working on sustainable consumption issues. I learned that social, environmental and economic sustainability were not additional tasks, but an integral part of the solution for our society. To fill a gap of innovation management in the market place, I ended up creating my own organization. We became quite successful in working with business, explaining the importance of the overall picture, including the linkages between supply-chain and consumption issues, and how business can address their overall sustainability impacts.

Through this work I was engaged to work with various organizations, including the United Nations Environment Programme (UNEP), the European Commission, and

the Wuppertal Institute for Climate, Environment and Energy in Germany. Like a small fire, a passion arose in me to advocate for consumption issues on the agenda of policy-makers, businesses and civil society – I had to find an organization that was supporting these issues and that was working to bring about the necessary changes, large and small. My journey culminated with a request in 2005 that I develop a business plan for the Collaborating Centre on Sustainable Consumption and Production (CSCP), a new centre established as a joint cooperation between UNEP and the German Wuppertal Institute for Climate, Environment and Energy.

Bringing Stakeholders on Board

Because of the existence of a political process called the Marrakech Process, we worked first with policy-makers. In this international process initiated by UNEP, the CSCP played a role by supporting policy decision-making by bringing forward consumption-related research and information.²⁹ At that time it was clear to us that policy-makers were working on consumption issues. But what about civil society? Here we saw a need to reach out, because unquestioning obedience to regulations is neither what you get from society, nor what we wanted. An awareness of sustainable consumption and the greater good behind new regulations was also needed, so we began to work with civil society and built a network of some 100 NGOs that were working on consumption issues.

Compared to other parts of a life cycle, there are really no quick fixes for sustainable consumption. In production, for example, you can quite easily save a little energy by implementing a new technology. The consumption side is enabled by more of a society-wide process – you have to change consumer desires and needs, you need to have the right infrastructure in place, and you have to provide consumer access to sustainable products and services. It is a whole network of complex and interlinked initiatives that need to work together. Systems thinking became one of our key ideas, which we not only followed in our own strategy but also tried to pass on to our partners. Working with our NGO network, we organized workshops and conferences as well as an online platform to unite sustainability practitioners. We wanted to activate and enable them, for example, by sharing strategies to find partners on their journey to sustainability.³⁰

Four years following the launch of the CSCP, we turned our attention to the business community in order to mainstream sustainable consumption in the marketplace. More recently, we have worked intensively to engage with business to look into their role in advising consumers on use-phase aspects, in offering sustainable choices, and in exploring new business models that offer the access to products and services rather than the ownership.

We try to share learnings on sustainable consumption for open innovation processes with all stakeholders and as many partners as possible. Also, because only collective actions will be sufficient, we work at the CSCP in a multicultural and multidisciplinary team. As a collective, we derive substantial inspiration from the contacts we make, the ideas we hear and the wisdom of different people. It is a big move to shift to more sustainable ways of living, but an interlinked way of looking forward is the right approach in the face of the challenge.

A Community of Contributing Individuals

In the journey over the last seven years we discovered that sustainability is increasingly becoming a mainstream concept in society. People actually do understand that their way of consuming has an impact on environment and social issues, as stated by 72% of individuals in a survey conducted in 14 countries in 2011.³¹ This survey also substantiates our impression that ever more people are talking about sustainability, understanding its meaning and engaging in personal reflection on the issue. This personal reflection is very important, as business people, policy-makers and members of civil society organizations need to have a vision about what sustainability means to them personally in the context of their family and their local community.

My work includes a lot of personal reflection, and I find myself confronted with questions like how I spend my weekends, how I get from A to B, when I should use my car and how many people should ride along with me. Sharing rides relates to the concept of collaborative consumption where we are beginning to reconsider notions of ownership of products. If I own a product like a car, but provide access to the car for other people, only one car is needed to be produced for several people to use. As part of a personal journey, one might also question the food we eat and the necessity of eating meat. Beef has one of the highest water footprints of any food, and the production of one kilogram takes more than 15,000 litres of water.³² Confronted with such numbers, is it possible to eat other foods in the future? Are there substitutes for animal protein, or can we get animal protein from other groups of animals? In some other cultures, insects actually serve as food. Bringing edible insects such as leafhoppers or mealworm beetle larvae onto our menus would not only supply the necessary amount of protein but also can provide jobs and income to rural producers.³³ I have tried eating insects myself, and I could imagine it as a possibility, although we still lack good recipes that suit modern western cultures.

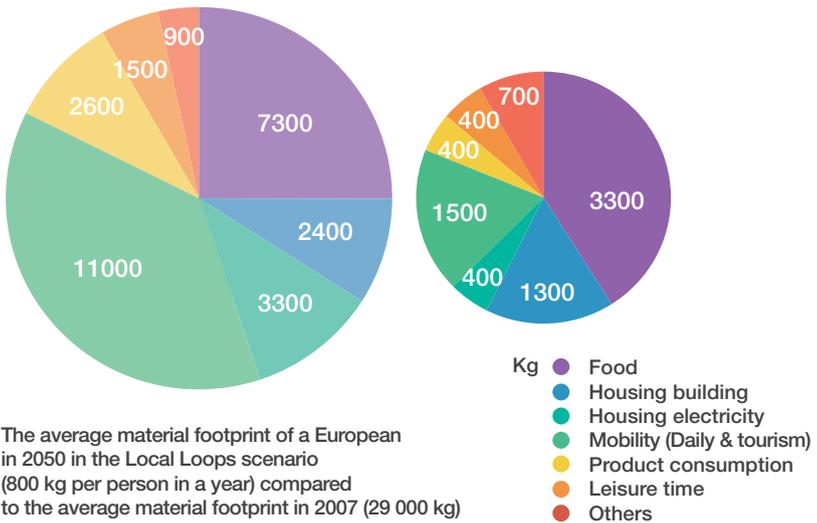
As we explore the potential to live a sustainable lifestyle, we can also see how infrastructure and the city around it might need to change to enable a sustainable life. For example, it is very hard to use public transport if you don't have a good system in place. Los Angeles and Paris serve as interesting contrasts, from the eponym for smog billowing up from the highways that cross the city to an efficient metro system and bike and car-sharing schemes. It is also very difficult to live in a sustainable home if there is none available to buy or rent. You might have a home built, but you would need substantial financial resources at your disposal, and there are very few sustainable homes available in any country as rentals. My colleagues and I at the CSCP believe that this must change – and it is possible.

From relatively simple things like car sharing to more radical changes like the reinvention of breakfast habits, homes and the way we spend our time, this is the journey that we are exploring at CSCP. When this happens to the mainstream of society, especially to social leaders, sustainability becomes not simply a theoretical concept that is of little interest, but rather an aspect of daily life.

Ideas to Face the Challenge

To accomplish the change process at all levels, we still have much to do. To have some indication of benchmarking, the Wuppertal Institute developed a material footprint standard, reflecting how many resources of our finite planetary system we use per year for housing, food and moving around. Together with our partners, we came to the conclusion that we have to reduce our material diet to 8,000 kg per annum by 2050 if we want to live in a resource-secure world. For the average European in 2012, this would mean a reduction of 70-80% of material resources consumed each year (see Figure 3) To reach this objective, we have to reinvent products, services, cities, our leisure time activities, even our financial mechanisms. For example, can we integrate sustainability issues into financial loans? A future bank might ask a customer, “What is the sustainability impact of the product you want to buy with your loan? Is there a lower impact product that you could consider instead?”

Figure 3: 2050 Material Footprint Compared to the Average European Footprint in 2007



Source: Leppänen et al., p. 24.³⁴

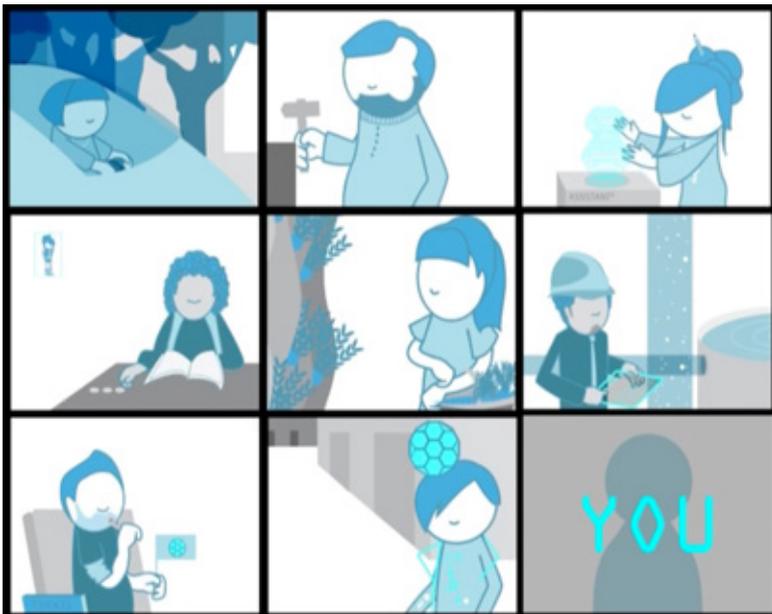
There are also substantial changes needed in certain aspects of how we arrange our societies – economic policy is one example. We are starting to question if one-dimensional indicators like GDP are a good measure of well-being, and there is increasing evidence that they are not.³⁵ So perhaps we can look to the national happiness indicators of Bhutan. With this we can begin to describe social progress in terms of happiness rather than in terms of the growth in economic activity alone. This discussion about what we are reaching for, leading us beyond GDP, began over 10 years ago. Today we are getting into a phase where we are not only talking about issues of well-being, but we also have many good initiatives and lots of examples where change is happening already.

One Step Further: Sustainable Lifestyles

When CSCP began to look at consumption issues, we thought of private household consumption, individual consumption and government procurement, and we then developed ideas about how these activities could become more sustainable. But fixing supply chains and communicating them to consumers are not sufficient. We need to take an even broader, more systemic view because consumption is just one part of our life, so we have a team working to explore the concept of sustainable lifestyles.³⁶

We mustn't forget to ask what aspects of the way we live result in the most serious unintended negative impacts on people and the planet. To explore these impacts, we considered the diversity of different ways of living across Europe and invented the "family" concept to consider how lifestyle impacts play out from a systemic point of view. Then, we invented the "Family You"³⁷, living a more sustainable lifestyle to show that there are many different solutions, actions and paths that can lead to more sustainable ways of living. Looking at this family, we asked: Why are we always looking at current problems rather than our thoughts, dreams and hopes of how a family could live more sustainably in 2050? The next step was to sketch this family by creating personas – family members – living sustainable lifestyles in 2050 as a reflection for people who would like to emulate this family.

Figure 4: Personas of "Family You"



Source: Centre on Sustainable Consumption and Production.³⁸

The setting is a sunny morning in May 2050, when Marianna (in the centre picture) is collecting carrots from the garden, where she is growing most of the food her family consumes. She finds personal motivation crucial for the well-being of society. Her 17-year-old son Jin (bottom, middle picture) relaxing in the garden also inherently knows how to get things done without changing locations, through the simulation of all kinds of actions via the Internet. When he grows up, Jin wants to revolutionize transport systems through games on the Web.

Introducing these and other future personas as potential friends or neighbours helps to set the mind free, to start dreaming. If we ask questions about the present, people usually begin to focus on the problems and barriers that prevent something from happening. However, in the future everything is possible. We use this opportunity to make that point: if everything is possible, how can we work to reach our goals? What are the pathways and the directions to achieve this vision? This method is called back-casting, and it helps to create positive momentum for the process through which it is possible to design and create the desired future. By using this approach, we can have a positive outcome in mind rather than be preoccupied with problems and barriers. Then we can return to the present and, of course, have a discussion on the barriers by necessity, but in light of knowing where we want to go. Considering issues from this perspective gives us new energy for the work done by those in our networks.

Mainstreaming Sustainable Lifestyles

While we have received a considerable amount of recognition in recent years, we have only touched the tip of the iceberg. We need to work urgently to address the remainder of this figurative iceberg because, as is becoming increasingly clear, real icebergs are melting before our eyes. I would like to see sustainable consumption and lifestyles as a starting point for many mainstream discussions, but this is not yet a reality – SCP remains something that we need to embed not only into the environmental agenda but also into the conventional agenda. We need to create reality where you can smell, taste and feel sustainability.

To overcome this challenge requires courage, so the real challenge is to overcome fear of change. The necessary changes can be accomplished step by step or we can jump to show what is possible. However, jumping can be scary, and many people have a “loss aversion bias”, in which the fear of losing what they have exceeds the expectation of what they can gain in the future.³⁹ Also, people like to stick with what they know, which psychologists refer to as “path dependence” or “lock-in”. To overcome these, we have to look even more broadly again and bring sociology and psychology into our work to challenge the expectations these decisions are based on. The creation of positive visions and beliefs about the future as in the “Family You”, for example, is one psychological trick to make curiosity outweigh fear, enabling both the interruption of past habits and different expectations for future outcomes.

I personally would like to see the transformation of these visions to reality in the near future: to be able to explore a house, a school, a supermarket, an online shop or to experience how a city or society might look. What might a collaborative consumption community look like? What is a one planet living city? How is its infrastructure developed, and what is the role of a retailer within this city?

For the future it will be important to convince, inspire and enable people so that this sustainable life becomes more desirable than the life we have at present. Living a more sustainable life in the context of existing infrastructures and retail product offerings is not easy, but we must do the best we can within existing systems while seeking to change them at the same time. If we manage to inspire more, the notion of sustainability will build a momentum that can be used to overcome the fear of change. At some point in time, we will have a critical mass of people saying that sustainability is possible, that it is not difficult but rather it is fun, and that people are happy because they receive more back in terms of friends and social contacts than they left behind in terms of material possessions and consumption.

Food For Thought - Liz Goodwin and Mark Barthel, Waste & Resources Action Programme

In the world of sustainability, the UK has produced some interesting hybrid organisations, which deepen the collaboration between the public and private sector and civil society. These include “government delivery bodies” such as the Waste & Resources Action Programme (WRAP). By bringing together government funding with engagement from the private sector, WRAP has successfully engaged many groups of stakeholders around very specific sustainability issues, with particular success on the issue of food waste. Liz Goodwin, Chief Executive Officer of WRAP, was able to share her experiences with the Global Agenda Council on Sustainable Consumption from 2009 to 2011. Along the way, the Forum also benefitted from close engagement with Liz’s colleague and the co-author of this piece, Mark Barthel, Special Adviser and Head of Design. This essay follows their journey as they first raised awareness on waste in companies and households, and then actively engaged with stakeholders to quantifiably reduce food waste at both the industry and consumer levels.

Taking Consumers and the Food Industry on a Sustainable Consumption Journey

In 2000, households, commerce and industry in England and Wales generated 106 million tonnes of waste a year, 83% of which went to landfill; the average municipal composting and recycling rate was just 9%. That year, the Governments of England and Wales published *Waste Strategy 2000 for England and Wales*,⁴⁰ calling for a tripling of municipal composting and recycling rates, and an 85% reduction in the amount of commercial and industrial waste sent to landfill, both by 2015. At the time, household waste was growing at 3% a year.

In response to this challenge, the Waste & Resources Action Programme (WRAP) was born in 2001 as a not-for-profit company to deliver government policy on waste and resources. In the decade or so since its birth, few of us would have forecast the extraordinary evolutionary path that the organization was to follow. Shaped by subsequent reviews,⁴¹ WRAP has evolved from an organization whose primary role was to increase the quantity, quality and economic value of recycled materials, to one that sits at the heart of the sustainable consumption and production debate, promoting the need for a circular economy, and whose work covers all parts of the product life cycle and value chain.

A big part of this journey of discovery has been WRAP’s work on food and food waste. Reducing the amount of food and drink wasted is now seen as a key component in developing a sustainable food system and playing a major role in future global food security.

Since 2005, we have been working with the UK food and drink industry to tackle the growing problem of food waste. Our international work on the topic has led the UN Food and Agriculture Organization (UN FAO) to conclude that approximately one-third of all food grown for human consumption is lost or wasted, with some 1.3 billion tonnes per year of perfectly edible food never being eaten.⁴²

Along the way, we learned valuable lessons from our experiences, successes and failures, and from our partners in industry, retail, local authorities and consumer-facing groups. In so doing, working with industry and consumers, we have made significant progress in tackling food waste in the UK.

From Nothing to Numbers

In early 2004, some of our earliest internal discussions on food waste were prompted, in part, by a report from the Prudential (a UK insurance company)⁴³ that tried to place a value on people's wasteful behaviours. The report showed the opportunity cost of **not** using the goods and services we purchased and how this "wasted" money might have been spent on financial products that would generate financial security and not debt.

The Prudential found that UK adults wasted an estimated £80.6 billion a year on unused goods and services; the average British adult wasted £1,725 on food, luxury items, entertainment, travel, gadgets and hobbies each year, with £424 of this money lost to wasted food.

This information was arresting enough, but it was the name of the report that caught our eye – why would an insurance company publish something called the *Soggy Lettuce Report*? As it turned out, the report got its title from the fact that the humble lettuce was the most wasted food item mentioned by those polled in the study.

We began to realize that food waste was indeed a major concern, and one about which there was very little reliable information. Our earliest research, looking at local authority waste collection data, suggested that food waste probably accounted for one-fifth of all domestic waste collected in the UK. Beyond that we had very little idea of the nature and scale of the problem.

We also realized that most consumers were completely unaware of the issue: our early consumer research suggested that 90% of UK households described what food they threw away as "some, hardly any, little or none" when even those who were adamant that their household wasted no food at all were throwing away an average of 90 kg of food per year.⁴⁴ Throwing away food was a largely unconscious act.

Partly this is a function of inherited behaviours but it also results from the fact that the average UK household spends less than 10% of its disposable income on food (although spending on food has increased fivefold in the last 30 years, disposable income has increased twelvefold).⁴⁵

We were also acutely aware of how personal food is for everyone; it means so many things to different people: enjoyment, fuel to get through the day, something to be valued or accepted as an everyday chore. Everyone is an "everyday expert" when it comes to food.

With so many strongly held views and myths to bust, we knew that before we could affect any change, we needed a better evidence base: one that chimed with common sense and everyday experience. Without this, any awareness-raising campaign and industry engagement were unlikely to generate the pace and scale of change we were looking for.

A Major Step Forward: The Courtauld Commitment

As it happened, the third component of our emerging food waste strategy, getting a solid engagement with industry, came first. Without much of an evidence base, we managed to persuade signatories to our first voluntary agreement with the grocery industry – the Courtauld Commitment – that food waste was an issue worth investigating further and one on which they could work with us. And so an aspirational target “to tackle the growing problem of food waste” was included in the Commitment when it was launched in July 2005.⁴⁶

At launch, all of the major grocery retailers in the UK, representing 92% of the market, signed up to the Commitment. By the end of its first phase in December 2010, we had 42 signatories, with major brand owners and own-label suppliers outnumbering retailers 3:1, representing nearly half of UK food and drink manufacturing turnover at the time.

In the meantime, our evidence base was developing well and by December 2008 we were able to agree with industry on a quantified target to help reduce the amount of food the nation’s householders threw away by 155,000 tonnes by 2010. Working with Courtauld signatories, we exceeded this target, preventing 270,000 tonnes of household food waste and saving UK households £610 million, while preventing 1.1 million tonnes (Mt) CO₂e emissions.⁴⁷

A Toe in the Water: Going Public and What Happened Next

Working flat-out to develop our evidence on household food waste, and with more than a little trepidation and nervousness about the public and media response, in 2007 we published the first summary of our work to date, a short paper with the simple title “Understanding Food Waste”.⁴⁸

To our delight, the response was instantaneous and almost wholly positive. Most national newspapers covered the story, leading to radio and television interviews and a first round of feature articles. Suddenly we were working with journalists from food and women’s magazines, as well as our usual colleagues in the environmental and sustainability media. Food waste, a left-field, underdog issue, was beginning to find a place in the public consciousness.

This response gave us the confidence to invest more time and effort in the issue. It also did something else that was unexpected: it created an environment where retailers and food manufacturers began to see that tackling food waste themselves was a new point of competitive difference. Helping consumers make the most of the food they purchased could become a customer loyalty issue, creating “demand pull”. As more consumers became aware of food waste, they turned to supermarkets and their favourite brands for help.

The culmination of all our efforts⁴⁹ provided the definitive picture of the food we waste in the UK and why. For many, this was a startling revelation. How could food, quite literally the stuff of life, be so undervalued, to the point where UK consumers threw away over 6.7 Mt of it a year, worth £10.2 billion and with an associated carbon cost of 18 Mt of CO₂e emissions?

Our field research to reach these conclusions was considerable. We interviewed 2,715 UK households to gain an understanding of their knowledge, beliefs and behaviours around food and food waste. We then collected the waste from 2,138 of these households to understand not just what they “thought” they threw away and why, but what they actually threw away. Emptying and segregating the waste from over 2,000 household waste bins and separating out the different food and drink items that had been thrown away was not a task for the faint-hearted – particularly in the middle of a very hot summer!

This was critical as it allowed us to segment household food waste in a number of ways (see Table 1). We also achieved a state of product-level detail that enabled us to prioritize our work with consumers and industry to tackle the problem based on the volumes and economic value of different types of food being wasted. So, for example, we could now extrapolate that every day in the UK, we threw away 37 million slices of bread (worth £640 million a year) and 5.3 million whole potatoes (worth £240 million a year).

Table 1: Definitions Associated with Household Food and Drink Waste

Avoidable:	Food and drink that could have been eaten at some point prior to being thrown away, although much of it would have been inedible at the point of disposal (e.g. a slice of bread, apples, meat)
Possibly avoidable:	Food and drink that some people eat and others do not (e.g. bread crusts), or that can be eaten when a food is prepared in one way but not in another (e.g. potato skins)
Unavoidable:	Waste arising from food or drink preparation that is not, and has not been, edible under normal circumstances (e.g. meat bones, egg shells, pineapple skin, tea bags)
Kitchen waste:	All forms of food and drink waste (i.e. avoidable, possibly avoidable and unavoidable)
Edible waste:	Only food and drink waste that could have been consumed (i.e. avoidable and possibly avoidable)

With other studies that followed,⁵⁰ we were able to improve the quality of information. Over time, our figures were amended upwards, particularly following the inclusion of drinks waste, to 8.3 million tonnes of wasted food and drink every year. This equates to some 3% of the UK’s domestic greenhouse gas emissions and nearly 6% of all the UK’s water requirements.⁵¹

The magnitude of these figures is best understood by considering the “average” household in the UK: the quantity of avoidable food waste generated annually is around 160 kg, costs £470 and generates 0.6 tonnes of CO₂e emissions, which is similar in magnitude to all members of this average household taking a return flight from London to Prague each year. In per capita terms, the water footprint associated with this waste is 240 litres per person per day, approximately 1.5 times the daily average household water use in the UK.

Understanding Behaviours, Building a Brand, a Message and a Following: Love Food Hate Waste

Our research into food waste always sought to understand the complexities of consumer attitudes, behaviours and knowledge around food. Wasting food is not a behaviour in itself, but results from the interaction of multiple attitudes and behaviours relating to the planning, shopping, storage, preparation and consumption of food.

In our first mapping exercise, we identified no fewer than 74 complex and interrelated food attitudes and behaviours that lead to food waste, which presented an enormous challenge, as no consumer-facing campaign can cope with such complexity in its messaging and communications. Over time we distilled this complexity into just two major reasons for why food is wasted in the home: households cooked, prepared or served too much food, or they simply didn't use it in time and it decomposed or was no longer of an "acceptable" quality.⁵²

We also learned that oversimplifying our communications could also confuse consumers. In December 2006, we attended the BBC Good Food Show to test our initial food waste-saving messages with the general public. We used what we thought was a clear "Reduce Food Waste" message alongside the RecycleNow logo from our UK-wide recycling campaign of the same name. The combination of the "reduce" message with our recognized recycling logo confused consumers into thinking all they had to do was compost food waste to do the right thing – and not prevent it from happening in the first place.

This experience taught us a lot, including the need to develop a separate campaign and branding to take forward our food waste-saving messages. It turned out that consumers also really wanted product-specific advice and guidance.

Our quantitative consumer research to understand the "why" of food waste allowed us to look at the number of responding households who admitted to particular food attitudes and behaviours that do – or are likely to – lead to food being wasted. By better understanding these drivers for wasting food and their socio-demographic context, we were able to formulate behaviours and product-specific messages and recommendations that WRAP and its partners then used to engage consumers. We also worked with our partners to develop tools and guidance for the food industry to inform changes to products and product information.

The Early Days: “Guilt with Humour”

With a solid evidence base and good engagement with industry, we now needed to engage and communicate with consumers in a way that recognizes how food and food waste often conflicts people, one that reflected people’s love of food and at the same time taps into their emotions when food gets wasted.

So in June 2007 we created the *Love Food Hate Waste* campaign⁵³ as the vehicle for that communication, launching it at London’s famous Borough Market. Celebrity chef Ainsley Harriott demonstrated food waste-saving recipes and tips, ably assisted by the UK Environment Minister, Joan Ruddock.

Everyone had a lot of fun with the launch sparking a massive amount of media and public interest. It set the tone for what was to come, and truly reflected what our focus groups, sitting on couches around the UK, had told us was called for: a little bit of guilt and a lot of humour to bring home the message – a new form of retail therapy! This has proved to be a winning formula ever since.

That day and the next we did over 40 radio interviews, launching the campaign on all of the national news channels and in every national newspaper. The first three months of campaigning generated no fewer than 117 articles and features across national, regional, online and broadcast media, reaching an audited audience of almost 153 million people. We really felt like we’d arrived.

Everyone Plays Their Part: A Helping Hand from Our Partners to Extend Our Reach

In the months and years that followed, the *Love Food Hate Waste* campaign has had the support of all the UK supermarket and convenience store chains, and a growing number of food and drink brand owners. Birdseye Foods ran a £500,000 week-long campaign to promote the use of frozen foods to reduce food waste, while Sainsbury’s went on to launch their *Love Your Leftovers*, *Feed Your Family for a Fiver* and *Active Kids: Get Cooking* campaigns, and Morrisons launched their Great Taste Less Waste campaign to complement our own.

A conservative estimate of the impact of *Love Food Hate Waste* shows that industry has invested over £15 million in complementary consumer communications, more than our own investment over seven years of research and campaigning. At the same time, over 300 local authorities in the UK have also helped to get the *Love Food Hate Waste* message out to consumers.

Such partnerships are critical to us as we rely increasingly on others to take our messages to consumers, changing with the times as the austerity measures in public spending significantly reduce the amount of direct communication that WRAP is able to do in its own right.

All Change: How We've Helped Consumers to Waste Less...

The Courtauld Commitment provided some serious traction to generate the scale and pace of change we were looking for, spurring the industry to invest in new food waste-saving technologies and packaging innovation. We were in a great position to engage with the industry and build a technical strategy around three key food waste-reduction themes to help consumers:

1. *Buy the right amount of food and drink:* for example, by offering a range of portion/pack sizes to suit the needs of different households, and using retail promotions that reduce the risk of food being wasted (e.g. price reductions rather than “buy one get one free” offers)
2. *Keep what is bought at its best:* for example, providing consumers with resealable packaging to protect food and improving the clarity and consistency of storage and freezing guidance
3. *Use what is bought:* for example, applying clearer food date labels and promoting product innovation to extend product life

Every other year we undertake a survey across UK retailers of a selection of food products to track our progress.⁵⁴ We collect data on a range of factors that we believe influence household food waste; including pack size, price and promotions, pack functionality, labelling and guidance, and point of sale communications. We review approximately 12,000 separate products across 20 product categories. The data collected through the survey provides an important resource for us and the food industry to identify good practice that could be implemented more widely, and areas where inconsistency or lack of clarity could be addressed to help consumers get more out of what they buy and waste less of it.

International Departures

Our work on food waste and food security has been gradually expanding, helping to support broader food policy in the UK and providing the basis for action at the European and international levels.

In July 2008, the *Food Matters* report was published⁵⁵ by the UK Cabinet Office. It called for an integrated food strategy in light of growing food chain risks brought about by extraordinary and ongoing increases in commodity prices that pushed the cost of some ingredients up by over 100% in less than a year, resulting in food riots and export bans in nearly 40 countries around the world.

The report argued that more needs to be done to ensure that the UK is food secure in the future and that WRAP's expertise on tackling food waste should be shared with other countries. We set up a food waste research forum to do just this, bringing together UK and international research in this area. Immediately we found ourselves providing advice to other countries on how to identify, quantify and reduce waste and losses in their food chains. Governments and research institutes from as far afield as the USA, Australia, China and Brazil came to us to learn more.

Working with the UK Government's Foresight Programme, we spent 18 months researching how reducing global food losses and waste could help to feed 9 billion people sustainably and healthily by 2050, reviewing over 500 studies and

talking to members of our growing expert network. We came to some worrying conclusions, not least of which is that the current rate of food losses in agriculture is significant (from a manageable 5% up to a deeply concerning 70% of crops grown⁵⁶), particularly in the developing world (where farmers can least afford it).

As the international momentum and interest in food waste and security continued to grow, WRAP helped to shape a Joint Declaration published by the European Parliament in December 2010, and a draft European Commission Communication on Sustainable Food in 2013, both calling for action to tackle food waste across the EU-28. WRAP was also behind the European Commission naming 2013 as the year to step up European activity to reduce food waste. WRAP is now supporting this intent, starting work in 2012 on a European Commission project to drive social innovation in the EU-28, as a means of changing consumer behaviour.

In the run-up to the UN Rio+20 meetings in June 2012, we worked alongside the UNEP, UN FAO, the International Institute for Sustainable Development (IISD) and the International Union for Conservation of Nature (IUCN) to produce a discussion paper on the contribution of sustainable consumption to a sustainable food system: *The critical role of food consumption patterns in achieving sustainable food systems and food for all*. The report was well received and enabled the food waste debate to step up a notch on the international stage in Rio.

Where Next?

In November 2013, we announced a 15% reduction in household food waste in the UK (with a 21% reduction in avoidable food waste)⁵⁷ between 2007 and 2014, some 1.3 Mt less than the previous 2007 estimate. Consumers are now saving at least £3.3 billion a year by wasting less food.

More recently, as a result of the progress made by the signatories to the latest phase of the Courtauld Commitment,⁵⁸ we were able to report an 7.4% reduction in supply-chain waste between 2009 and 2012. And most recently, we launched a new parallel voluntary agreement to tackle food waste in the hospitality and food service industry⁵⁹, where consumer behaviours are subtly different again from those found “in the home”.

While this is a good start to the journey of eliminating waste, we know there is still a long way to go. Of the 38 Mt of food and drink brought into UK homes, 19% (7.2 Mt) is still thrown away. Manufacture, distribution, storage, use and disposal of this food waste alone results in some 17 Mt of “unnecessary” CO₂e emissions a year, equivalent to the emissions from one in five cars on UK roads, accounting for 4% of the UK’s total water footprint.⁶⁰ And while household food waste represents almost half of overall UK food waste, at 15 Mt a year, food losses and food waste in the rest of the food chain are also clearly significant, with 3.9 Mt of food waste in manufacturing and a further 400 Kt of food waste in retail and wholesale. insert footnote here: Estimates of waste in the food and drink supply chain (WRAP, July 2013).

Looking to the future, we are exploring new ways of applying our research and our work with the industry and consumers. For instance, WRAP is investigating the effectiveness of different types of intervention, and the best ways of helping different groups of people, for instance single occupancy households who, on a per capita basis, waste more than the national average. We've also begun working with industry and others to improve the broader environmental sustainability of food and drink products through a new Product Sustainability Forum in the UK and leading the establishment of a new International Network of Product Sustainability Initiatives, significantly extending our research and implementation activities.⁶¹

Tackling consumer food waste will continue to require a combination of industry engagement and consumer information campaigns. The use of “smart” domestic kitchen technologies may make it easier in the future for consumers to manage their food and take some of the guesswork out of food preparation, wasting less food in the process. For example, consider this vision set sometime in the not too distant future:

Each member of the family keeps an electronic list of their favourite foods and a separate list of their nutritional targets. These targets are informed by medical advice based on DNA analysis, identifying food allergies, intolerances, susceptibility to disease, daily calorie consumption, etc. The information is fed into a programme with an “electronic master chef” that creates recipes based on nutrition, preferences and the projected shelf-life of food in the home – only slightly more complicated than the iTunes “genius”. Advanced appliances will be able to measure and process ingredients to reduce waste and prevent cooking mishaps.

These technologies will enable families to enjoy a varied, healthy and tasty diet using ingredients of known provenance and containing the optimal nutritional mix for each member, cooked by easy-to-use kitchen appliances with products automatically reordered as they are used, with little or no food waste involved.

This kind of seductive vision may take a while to mainstream in society but the technology to deliver it already exists. Quantifying the challenge and understanding consumer behaviour is just the first step. We are as determined as ever to play our part in realizing a more sustainable food system for all⁶².

Citizens Are The Solution - Steve Howard, IKEA Group

Steve Howard is Chief Sustainability Officer of the IKEA Group. In his prior role as Chief Executive Officer of The Climate Group, Steve served as Chair of the Global Agenda Council on Climate Change. Making a shift to the private sector, he was invited to join the Global Agenda Council on Sustainable Consumption. In this essay Steve challenges the conventional thinking around consumption.

As a young boy in the 70s, I was deeply affected by a television documentary on battery farmed chickens. I found it difficult to believe that people were capable of such cruelty, and that I had been an unwilling participant with my soft-boiled egg for breakfast. Over the following few years, I learned about the Amazon being destroyed for timber and beef, mad cow disease, dolphins caught up in tuna nets, climate change, apartheid South Africa and child labour. I also understood that I was not alone in liking eggs but not wanting chickens to be mistreated, or in loving wood but not wanting to be part of forest destruction. This sowed the seeds of an obsession with what is in our shopping baskets. Is consumption bad, or is it possible to consume and make the world a better place at the same time? And today, can citizen consumers play their part in a sustainable economy – a world with good labour standards, affordable renewable energy, sustainable forests and farmlands, and waste that is turned into resources?

During my early career I worked for the World Wildlife Fund and, along with many others, helped establish the Forest Stewardship Council (FSC) and chaired the organization in the UK. I realized back then that when it comes to driving change, few things are black or white – more shades of grey – and deciding what is “good enough” is a mix of the objective and subjective. I remain a big believer in the FSC approach because it tackles this challenge head on: through FSC, stakeholders with different interests – commercial, environmental and social – come together to work out what constitutes responsible forestry in a particular region or country.

In the UK we achieved a consensus among all the stakeholders, and it was powerful. We could all stand behind what we had agreed. As a result, forests are audited, the chain of custody is checked and a consumer can choose wood with confidence. There are now FSC certified forest areas⁶³ around the world that, when put together, would equate to nearly five times the size of Germany – creating a real and positive link between the consumer and the forest. In fact, in my last family home, I could point to our cherry wardrobe or ash staircase and not just know the species, but something of the forest it came from: every product had a story.

Around the same time, Mike Sutton was also working at WWF, setting up the Marine Stewardship Council (MSC), and we spent some time looking at lessons learned from the FSC. Could companies and consumers support sustainable fishing instead of destructive over-fishing? Fisheries, however, are in some ways more complicated than forests: fish move around and are hard to count, “land” tenure is uncertain and fishermen are often hunters of the sea looking to earn a

living. But, despite these challenges, there are now nearly 300 fisheries engaged in the MSC programme, accounting for more than 10% of the world's wild fish catch, providing consumers with more than 15,000 seafood products to choose from.⁶⁴ This kind of certification and labelling has since boomed in other sectors, with a proliferation of schemes from Energy Star to Fair Trade. It has helped create a demand for more sustainable ethical production, but there can be complexities, which I will come back to later.

There are more than 7 billion of us trying to get by on this planet. We all want to make life better for ourselves and our children. Since my grandmother was born in 1901, we have seen a fourfold increase in population and a more than tenfold increase in the size of the economy. This economic boom delivered fantastic benefits, but not without a price: society is now using resources at a rate that requires 1.5 planets to sustain it,⁶⁵ and the economy has also shown it has weaknesses.

The majority of people, however, are still mostly poor with less than one-third of the population, approximately 2 billion people, living “middle-class” lifestyles.⁶⁶ Over the coming 20 years, we will see significant changes, as it is estimated there will be 5 billion people in the middle class,⁶⁷ which is great for people escaping poverty, but a challenge for our crowded planet.

I was struck by a recent study by the Rowntree Foundation looking at people's expectations of what a minimum income level should be in the UK⁶⁸ and what people think is needed for an “acceptable minimum standard of living”. According to the study, a family with children now needs a car, computer and Internet access to conform to this minimum standard. The “need” for a car has pushed many more people into relative poverty. But these expectations are probably not limited to the UK. I was recently in a small village in eastern Maharashtra, India. This poor community of cotton farmers is well equipped with mobile phones and every other house has a satellite TV dish. Of course, people have always strived for more and, beyond meeting basic human needs, poverty has always been a relative measure. But as these expectations are embraced by tomorrow's 5 billion people with middle-class lifestyles, is consumerism on a collision course with the planet?

If resources were unlimited, solving poverty and meeting people's needs and dreams would largely be a matter of wealth creation and distribution, which is still difficult to do correctly and fairly. But resources are limited, so our challenge is to do this within the limits of one planet, and help billions of people become part of the solution to a sustainable world.

That was one of the main drivers when, in 2003, I co-founded The Climate Group to promote business and government leadership on climate change. We made progress, engaging with business and governments, but it proved difficult to engage with the public. So we carried out some consumer research in the US and UK together with some of our partners and the communications agency Lippincott. The results were clear.⁶⁹ People want to act on climate change, but it needs to be easy for them to do so and they also need to feel that others are doing something too. People feel their actions only make a difference if they are part of something much bigger.

So we tried something different. With Prime Minister Tony Blair and a wide group of NGO and corporate partners in the UK, and later beyond, we launched the “Together” campaign. Each partner made commitments to help customers reduce CO₂ emissions – a phone tariff without the need to buy a new phone, discounted loft insulation and affordable energy saving light bulbs. The campaign itself was successful, saving an estimated 1 million tonnes of CO₂ at the same time as helping millions of consumers collectively save £200 million off their energy bills.

It helped increase corporate efforts to engage consumers on climate change but it also provided some hard lessons on the limits to which consumer-facing companies will collaborate together, or on the extent to which NGOs will promote a “competing” brand. Although it would have been easy to declare victory, I realized we had only just scratched the surface. That said, one lesson was clear: people will respond to sustainable offers if they are easy to understand and cost effective.

I joined IKEA Group at the beginning of 2011 in part because it is a company with strong values, a good track record and leadership commitment on sustainability, and it was willing to put a lifelong sustainability person on its management team to further that commitment. But my decision was also based on IKEA being well placed to play its part in helping millions of people live a more sustainable life at home. After all, for most of us, home is the most important place in the world.

Longstanding successful companies tend to have good values and a strong business idea. At IKEA, we are guided by a vision of “creating a better everyday life for people”. We believe in people and take our responsibilities seriously. Our business idea is to combine good form, function and quality with built-in sustainability, at prices so low that as many people as possible can afford them. This is the foundation for our contribution to a better home for people with ordinary incomes.

When I think about a few of the initiatives⁷⁰ IKEA has undertaken aimed at making our business more sustainable and what they mean for the consumer, I often start by looking at our supply chain and our code of conduct for suppliers, IWAY, which was first launched in 2000. To date, over 170,000 environmental and social improvements have been recorded – transforming conditions in factories around the world. In fact, in 2011, nearly 800 unannounced audits were carried out across our supply chain by our internal and external auditors. We source raw materials with care and are one of the world’s biggest buyers of FSC certified wood. More than a quarter of our cotton is from more sustainable sources and we’re working towards getting to 100% by 2015. We offer UTZ certified and organic food options in our food halls and restaurants. This kind of responsible sourcing is the foundation of a responsible business. Customers care about these issues; to some they are hygiene factors that should be part of all products, while to others they are something more – providing an extra dimension and adding value. They are complex to communicate but people do care and expect more from businesses, possibly more than ever before.

Take Better Cotton: IKEA is a founding member of the Better Cotton Initiative, which aims to promote measurable improvements in the key environmental and social impacts of cotton cultivation worldwide to make it more sustainable.⁷¹ The cotton IKEA customers buy is part of a value chain transforming the way cotton is produced with dramatic benefits for the environment, the farmers and their families – a powerful story that a customer should know about; for many it will add value to the product.

To further explore textile sourcing, I visited a women's weaving factory that we recently set up in collaboration with a supplier in Uttar Pradesh, India. The local weaving industry is male dominated and there are very few opportunities for women to work. After some training, female weavers now have work places that are walking distance from their homes. They work in decent conditions, are paid the legal minimum wage or better, and have flexible hours. And the rugs they produce are of great quality. I met one of the women's grandfathers while he was weaving and he described with pride that his granddaughter could now earn an income. This is a story of women's empowerment, and trade providing a great first step out of poverty. It also makes good business sense for us.

But just as working conditions and workers' rights are crucial; it is easy to forget that customers are the most important part of the value chain. Without them, we wouldn't have stores, co-workers or a supply chain to work with. They have their needs, specifications and even responsibilities. But what choices should we leave to the customer and where can we make a choice on their behalf? At IKEA, we focus on 100% compliance with our IWAY standard, our code of conduct for suppliers, and we will not offer products that don't meet that standard; in this regard, we have made a decision for them. The concept of making choices for the consumer across all products, known as choice editing, is not without controversy.

When it comes to resources, our long-term direction for any renewable material is that it should be sustainably sourced. We have, until now, limited certification labels on our products, except for UTZ coffee and chocolate, because it sets up a choice between the labelled product and the unlabelled product within our store. We have sometimes been criticized for this approach. While we do use a lot of FSC certified wood and cotton that is produced in line with the Better Cotton Initiative, we know that an uncertified wood product, or piece of textile, is also part of a value chain that is driving more responsible forestry, or better cotton. It could be argued that this is just as important as the certified material itself. It is about the future. Our challenge is to be able to communicate this more complex picture in a clear and transparent way to enable customers to make their informed choice – but perhaps the choice is more about IKEA, as we take care of all these things on behalf of our customers and tend less to the individual products.

So certification and labelling are incredibly important tools. But in the long term, should we be offering a choice between premium-labelled green products and "unsustainable" normal products? This is not an approach we take at IKEA. We want all cotton to be better cotton and all wood to be FSC or equivalent standards, and at no extra cost.

Another area for choice editing is chemicals. We have taken a stand for fewer and safer chemicals. We have banned PVC – a plastic that comes with a history of health concerns – from our products (with the one exception of electric cables, which we are working on). We have also banned lead in mirrors, dramatically reduced formaldehyde from lacquers and glues, and we never use optical brighteners in IKEA textiles. As soon as we have better alternatives, it is in our interests and the customer's to implement them across our product range as fast as possible at the lowest prices possible. Similarly, we successfully phased out incandescent bulbs in favour of more energy efficient compact fluorescents in 2010; we will now roll out LEDs in the same way – again, at the lowest prices.

Regarding low prices, are they a good or bad thing? At IKEA, I have frequently heard this question raised – “do we promote a high consumption throwaway society?” Should people feel guilty by the very fact that they are consumers? I hope not, but this is an important question with several aspects.

Despite many efforts, most people around the world remain in poverty, and even those in the middle class are making careful decisions about how they spend their limited financial resources. Low-priced goods, whether food or furniture, can help improve people's quality of life. Families everywhere deserve enough food on the table and a place to call home. However, lower prices have been linked to a “rebound effect”: that cheaper goods or energy result in increased consumption of these goods. That is logical, but it's important to look into the details.⁷²

It might be a slight simplification, but two schools of thought exist on the rebound effect with regard to energy: one school argues that the benefit of big improvements in energy efficiency will reduce overall energy use; the other school argues that increased productivity means more people use more things more often and overall energy use increases. But take lighting: we use lighting far more than previous generations but, as more people shift to ever more efficient LEDs, will we end up using more energy or less? There are possibly as many as 12 billion incandescent bulbs still in light fittings around the world. LEDs are seven-and-a-half times as efficient as incandescent light bulbs and before long will be 10 times as efficient, and they last 20 years rather than a few months.

Light is getting cheaper for people by an order of magnitude. But does cheaper light mean we will use so much more that it will wipe out the energy savings? To use the same amount of energy as those old incandescent bulbs, we would need to install around 100 billion LEDs. People use a finite amount of light in their homes so even if cheaper light does increase the amount of light people use, it has a natural limit. And before long, affordable and intelligent home energy management systems will mean lights simply won't be on when you are not there. Staying with energy, our induction hob (the stove-top cooker) promotions have resulted in strong sales increases, enabling us to drop prices even further. The product is simply better; it cooks faster than a conventional electric hob and is twice as efficient. People will save on energy, so does that mean they will cook twice as much? Not likely. The rebound effect exists, but it also has its limits.

Durability is also a key factor and we often ask ourselves how long stuff should last. We have a range of guarantees, such as 15 years for our Gynnsam knives, or 25 years for many of our kitchens, our mattresses and sofas. It is our job to ensure that products have durability fit for purpose and that they can be remanufactured or recycled at the end of their life. After all, we want kitchens to last many years. But how long should a toilet brush last? We have to ensure durability is right for the particular product. Our shared challenge with our customers is also to make it easy to resell, remanufacture or recycle our products. Early trials on items such as mattresses and garden furniture show a real appetite for these options and we believe the circular economy will grow rapidly over the coming years.

Cheaper goods for some of us, however, can increase the tendency to throw away products before they are worn out. This might best be demonstrated by the 68 pounds of clothing a year the average American now throws away,⁷³ much of which, a generation ago, would have been worn for longer or remade into new clothes. But surely keeping prices high cannot be the answer to that and many other problems, as it simply means keeping more people poorer for longer. I cannot emphasize that too much – sustainability must be affordable to the many, it cannot be a luxury good.

The citizen consumer of today and tomorrow must navigate through a complex world of toxic chemicals, life-cycle impacts, labour standards and a sea of product claims and labels, as well as understand the technology behind a sustainable home, solar panels, heat pumps and 10 different types of insulation. This is not realistic for the vast majority of people: we have to make it simple and easy. As we move towards greater transparency and clearer information, perhaps the decisive question for the citizen consumer is, “do I trust the brand?” Brands need to earn this trust.

In a busy world, we need positive impacts – simply being “less bad” will not do. If we can have a zero-waste circular economy with sustainable raw materials, affordable products that enable people to live more sustainably at home, a long-term supply of clean energy and strong energy efficiency, we should be able to ensure a great quality of life for the world’s many people. I am convinced we can collectively meet this challenge but I am deeply concerned about the pace of change. Business should help accelerate this clean revolution.

We as businesses should think about our citizen consumers and do the hard work so they don’t have to. At IKEA, this means we will develop our entire product range with increasingly sustainable production methods, we will both offer choice and edit choices, and we will strive to provide beautifully designed products that help enable millions of people to live a more sustainable life at home. We will promote transparency and every product will have a back-story. We are making good progress already but still have much to do.

Using Corporate Sustainability to Enhance Brand Relevance - Lawrence Hutter, Alvarez & Marsal

In his previous role as Global Head of Deloitte's Consumer Business practice, Lawrence and his team supported the Forum's Sustainable Consumption Initiative as Project Adviser for three years, from 2008 through 2011. During this time, he supported the completion of three reports and seconded members of his team to work with the Forum in Geneva. In this essay Lawrence explores the important link between brand value and sustainability

The global middle class is expected to grow to around 5 billion by 2030, mainly driven by growth in Asia and Africa. The associated increases in consumption will place increasing pressure on such environmental resources as energy, water and land, as well as create ever greater pressures on the need to manage carbon footprints, waste and recycling. More and more leading consumer-focused businesses therefore see world-leading performance on these dimensions of their businesses as critical to the true sustainability of their business models, to their corporate reputation and to the relevance of their brands to consumers in a more resource-constrained world. As part of this sharpened focus on the sustainability of business models, there is also growing emphasis on creating tangible socio-economic value as a critical element in protecting and enhancing reputation, especially in developing markets.

While business leaders are increasingly aligned behind the need to embed the principles of sustainability into business strategies and operating models, in most businesses the link between such initiatives and brand marketing is still at an early stage of development. There are of course brands for which sustainability is core to their value proposition for consumers and that's fairly straightforward. The more complex question is how a brand-led business can bring, in a systematic way, the relevant parts of its sustainability strategy to brands that stand for very different things in the mind of the consumer, ranging from lifestyle aspiration and youthful fun to convenience and healthy living. We believe there is a real, long-term opportunity to strengthen brand equities and create competitive advantage for those businesses that apply this strategy. That is what we will explore in this article.

Corporate Sustainability Strategies

Leading consumer-focused businesses are increasingly recognizing that putting sustainability at the heart of business strategy will be critical to their ambition to be among the most admired companies in the world, respected by consumers, employees, customers and suppliers alike. While we will focus here on consumer engagement around these issues, each of these stakeholder groups is critical. From an employee perspective, for example, we should not underestimate the importance of people wanting to work for a business that stands for something in the battle for talent. From a customer perspective, leading retailers are, for example, increasingly placing specific sustainability performance requirements

and targets upon their suppliers. And from a supplier perspective, the ability to present strong sustainability credentials is increasingly an essential ticket to play with customers.

A few leading businesses are drawing the different elements of such strategies together into a clearly articulated overarching sustainability ambition, including, for example, Unilever with its Sustainable Living Plan and Nestlé with Creating Shared Value. Some businesses have also chosen to put specific targets in the public domain. Unilever, for example, has stated its intention to double the size of its business without creating any additional demand on natural resources. PepsiCo is also a leader in this area and has, for example, set out a number of specific objectives in the public domain such as:

- reducing agricultural carbon emissions of key crops by 50% by 2015;
- reducing the impact of applied water by 50% within 5 years where its farmers operate in water stressed areas;
- applying new technologies like the i-crop and Cool Farm Tool to measure water inputs and carbon emissions.

Against this background, we see a number of business leaders choosing to adopt strong campaigning stances to promote sustainable business practices. Examples include Paul Polman (Unilever) on the need to move away from a short-term view of value creation, Peter Brabeck-Letmathe (Nestlé) on the need to recognize the true value of water and Mark Parker (Nike) on the need to recycle and reuse resources.

Common threads in the way these leading consumer packaged goods companies are now defining sustainability are clear. Their corporate sustainability programmes tend to address five key areas, consistent with the frameworks recognized by leading opinion-formers and commentators on the issue: environmental impact, resource stewardship, local economic development, community support and, where relevant, healthy living. However, the way in which these strategies are reflected in individual consumer brand value propositions is far from simple.

Frameworks for Marketing Excellence

Before we explore the challenges and opportunities associated with leveraging corporate sustainability strategies in consumer brand propositions, it is helpful to understand the marketing frameworks typically found in leading consumer products businesses. Over the past few decades, the majority of these businesses have moved from the multi-domestic structures that characterized most of the industry in the 1970s and 1980s to more integrated operating models, with global brand-led businesses in the vanguard of this movement. As a part of this process of operating-model change, these businesses typically looked to standardize and professionalize the ways of working in different areas, including consumer insight, innovation and brand marketing.

Most leading consumer products companies had established such standard frameworks for marketing excellence by the early 2000s, typically covering the full brand marketing life cycle from opportunity assessment and portfolio strategy to brand activation planning, execution and post-evaluation. These frameworks also typically define how product innovation and marketing bundles are developed and cascaded through the business to local markets. Such frameworks have been adopted by both global brand-led businesses and businesses with more local brand portfolios looking to strengthen their competitive position through marketing excellence across all of their brands.

Most leading consumer products businesses therefore have two strategic frameworks in place, one for brand marketing excellence and another for embedding the principles of business sustainability into strategy and operating-model development. The problem is that, in most businesses today, these frameworks are not linked and, until they are, brand owners will not be able, in a systematic way, to take advantage of the corporate sustainability position to enhance brand relevance.

Consumers and Sustainability

The way advocates of more sustainable models of production and consumption talk about the need for change can actually get in the way of engaging consumers in more sustainable lifestyles. The idea that the majority of consumers will put considerations of sustainability ahead of convenience and economy is idealistic. Before we talk about the way forward in better aligning brand marketing and sustainability frameworks, we need to address the true drivers of consumer choice.

While it is true that growing numbers of consumers, especially the more privileged in affluent markets, are advocates and practitioners of more sustainable models of living and consumption, most consumer choice is driven by more near-term considerations about convenience and what “matters to me”. Consumer engagement strategies need to reflect the complexity of the ways in which consumers choose, spanning the rational, emotional and contextual dimensions of choice.⁷⁴ This, in turn, has implications for how consumers can be engaged on issues of sustainability.

Consumer purchase choices for a wide range of products are driven as much by identity and lifestyle as about the qualities of the product itself. Establishing social norms is key, as nearly all consumption choices are subject to some kind of social influence – either personal recommendations, ideas of social acceptability, awareness of others’ purchasing habits or visibility of one’s own. Also, consumers have short time horizons, tending to focus on the upfront benefits of products rather than long-term costs. The relative efficiency of products rarely outweighs relative initial outlay in affecting decision-making, although, for large ticket items such as domestic appliances, energy-efficiency labelling is increasingly influencing choice. Providing more information does not necessarily help as consumers rarely balance the costs and benefits of each purchase. Habit, emotion, intuition and situation are just as important as information – increasing the value of branding, and easily recognizable and trusted labelling.

The success of specific labelling to inform more sustainable choices is therefore a bit mixed. A large number of labelling schemes now exist, such as Planet Positive, the Rainforest Alliance, the Natural Step, Forest Stewardship Council, One Planet Living, the Marine Stewardship Council and Fairtrade.⁷⁵ However, for the most part, while consumers recognize that they probably stand for something good, most don't understand what they mean and few use them to inform choice.⁷⁶ They expect the suppliers and retailers they buy from to be responsible anyway – it's just assumed. Among the examples given, only Fairtrade has really become a broadly recognized consumer brand. Provenance does however usually resonate more with consumers and is often interpreted as a sign of authenticity and quality. Saucisse de Toulouse, Melton Mowbray Port Pie, Parma Ham and Champagne are all great examples. Consumers relate to the “brands” based on factors such as authenticity and perceived value, asking less how sustainable they are.

In summary, any messaging related to sustainability has to be a natural fit with and relevant to the brand, the situation and the individual, “what matters to me”. To quote a senior executive from one of the world's largest brewers, “when a thirsty man walks into a bar and orders a cold beer, sustainability is not usually the primary driver of brand choice”. Understanding this basic reality is fundamental to the way brands can engage with consumers on the sustainability agenda.

Sustainability Strategy and Consumer Brand Propositions

In spite of these challenges, consumer-focused businesses increasingly see synergies between their corporate sustainability strategy and the positioning of their brands in the market. The most enlightened recognize that they need to be proactive in supporting their consumers on a journey to more sustainable patterns of consumption and have the ability to do so through the way their products touch people's lives every day.

A clearly articulated overarching sustainability ambition can help businesses to communicate with opinion-formers, including the informed media audiences who in turn influence politicians and regulators on the key issues that matter. Clear communication of such an ambition can have positive impacts in different ways, indirectly through the methods in which these opinion-formers influence consumer attitudes and directly through the methods in which the sustainability ambition plays out through consumer brands.

However, the translation of corporate sustainability strategy into consumer brand value propositions presents challenges. First, the corporate brand may not be familiar to consumers and therefore its positioning may not be relevant. Some consumer product companies choose not to give profile to their corporate name in consumer marketing. Reckitt Benckiser, SABMiller and, until recently, P&G are examples, although the latter's London 2012 campaign suggests this may be changing. Other companies adopt the opposite approach, giving prominent consumer profile to their corporate brand in many of their categories. Unilever, Nestlé and Nike are examples of businesses that adopt this approach, even though not all of their products fit well with every pillar of their overall sustainability

strategies. Unilever would not claim Ben & Jerry's ice cream to be first and foremost about healthy living, nor would Nestlé likely claim that all of its bottled water products fully reflect the very high priority the company puts on sustainability more broadly. However, on the journey to more sustainable models of consumption, the brands that engage, excite and play to the aspirations of consumers will be those that play the most important role.

Different brands stand for different things, reflecting the needs, desires and aspirations of different consumer segments and different need states. For example, natural foods with a strong link to primary agriculture offer opportunities to build on many aspects of the corporate sustainability agenda, including healthy living, local socio-economic development and minimal adverse environmental impact. Indulgent products with high levels of processing may offer more challenges and benefit less directly in terms of brand relevance from the corporate sustainability platform. However, as for example Cadbury has demonstrated through its Fairtrade initiative, even for indulgent products, great opportunities remain to create product value chains that can be communicated in a way that reinforces both corporate and brand reputations.

It's important to recognize that different consumer groups in different markets respond to different stimuli. For example, issues of environmental sustainability, carbon footprint and global warming resonate less with most African and Latin American consumers, by contrast with European consumers who are becoming increasingly sensitized to such issues. On the other hand, African and Latin American consumers tend to be more sensitive to local socio-economic issues than most consumers in Europe and North America. Initiatives related, for example, to local agricultural development and tied to the brand proposition resonate well in many of these markets.

Successful brand strategies therefore rarely reflect the full corporate position on sustainability, leveraging instead relevant parts of the wider sustainability platform to strengthen brand equity. Brand level initiatives and consumer value propositions need to be relevant to the individual brand and specific market context to engage with consumers. Ben & Jerry's and Dove's sustainability initiatives as communicated to consumers reflect, for example, different specific pillars of Unilever's public domain corporate agenda through initiatives that have direct relevance to consumers; Ben & Jerry's is about reducing environmental impact and enhancing livelihoods and Dove's is about health and hygiene, and sustainable sourcing.

Bringing the Frameworks Together

If brands are to take systematic advantage of the corporate sustainability agenda, and at the same time contribute to progressing that agenda, then the right questions need to be asked at each point in the marketing life cycle to understand what those opportunities are and to address them through the portfolio strategy, brand strategies, brand plans and activation. By reference to a typical marketing life cycle, this might look something like the following:

Table 2: Marketing Life Cycle Steps and Questions

Marketing life cycle step ⁷⁷	Illustrative questions
Opportunity assessment (market level)	Are there consumer segments, channels or occasions where unmet interests in a brand or product could offer more in terms of a contribution to the community or environment?
Portfolio strategy (market level)	Could such potential demand be met by strengthening the environmental credentials of one or more existing brands, or does an opportunity and need for a new product in the market exist?
Brand value proposition (brand level)	Could the value proposition for this specific brand be enhanced through leveraging specific elements of the corporate sustainability platform?
Brand and channel strategy (brand level)	Are there particular channels in which the sustainability elements of the brand value proposition would resonate?
Activation planning (brand level)	What types of activity would be most effective in communicating the brand value proposition to the target consumer segments? How are these best integrated across the different touch points on the consumer's journey to the point of purchase?
Post-evaluation (brand and market level)	Did consumers respond as expected to the value proposition incorporating the agreed messaging? Does either the value proposition or the activation need refining?

If brand owners were to apply this approach as an integral part of the ongoing market and brand portfolio development process, we would see considerations of sustainability built into consumer value propositions across brand portfolios in ways that are relevant to each brand, market and consumer segment.

Executed well with a strong focus on the factors that really drive consumer choice, this should result in three positive outcomes. First, brand value propositions will be strengthened through the incorporation of relevant parts of the corporate sustainability agenda. Second the corporate sustainability agenda will be strengthened through the brand stories being told. And third, the business and its brands will make a contribution to encouraging consumers to adopt more sustainable patterns of living.

Conclusion

While the relationship between the corporate sustainability ambition and the positioning of each individual brand is subtle and specific to local circumstances, common corporate thrusts are still needed. Most leading consumer packaged goods companies are therefore pursuing broad sustainability programmes that embrace environmental impact, resource stewardship, security of supply, local economic development, community support and healthy living.

Brand alignment with the corporate agenda continues to be important and credentials need direct brand relevance, although individual brand strategies rarely reflect the full corporate agenda on sustainability. The case studies illustrate the beginnings of the systematic use of corporate frameworks to inform brand values and positioning. Within brands, variations in emphasis by market context are still needed, and consumer awareness and responsiveness to different aspects of sustainability (e.g. environment versus community) depend on cultural factors and the maturity of the local market.

In addition to an increased need for companies to be responsible and to ensure the sustainability of their business models, it is necessary to be seen as responsible and sustainable. More and more brands therefore also see a growing imperative to establish strong “defensive” credentials around doing business responsibly with increasing transparency of information about good practice.

Finally, while the business case for alignment between sustainable consumption and brand can be strong, the reputational elements are rarely quantified. The benefits typically fall into three areas: direct economic and value chain sustainability benefit; corporate reputational benefit; improved brand reputation and relevance with consumers.

In spite of all this complexity, the benefits of leveraging the relevant components of the corporate sustainability agenda to strengthen brand relevance can be significant. More and more leading consumer packaged goods companies are increasingly positioning themselves as responsible leaders on the sustainability agenda, aiming to optimize resource and cost efficiency, ensure that their operating models are fit for the future, and ensure that their brands will continue to be relevant to consumers in the years ahead.

A Learning Journey Towards Conscious Consumption - Helio Mattar, Akatu Institute

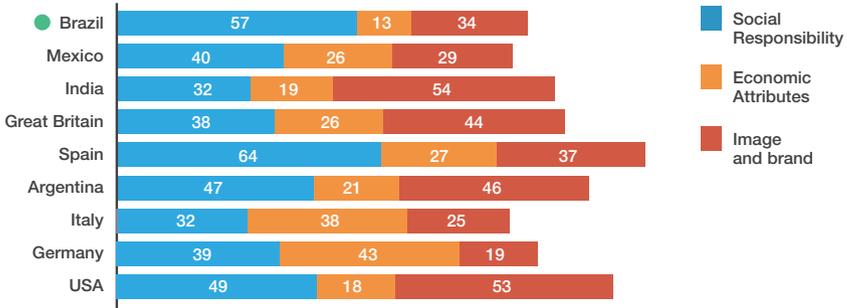
Helio Mattar, President of the Akatu Institute for Conscious Consumption, is a recognised leader in the field of sustainable consumption, especially in Brazil. He has been a Schwab Foundation Social Entrepreneur since 2003, and first presented his ideas on sustainable consumption to a group of executives during a workshop at the World Economic Forum on Latin America in Rio de Janeiro in 2009. Along with ideas on sustainable lifestyles offering more meaningful human engagement, Helio has been instrumental in promoting the concept of conscious consumption.

In early 2001, the Board Members of the Ethos Institute for Corporate Social Responsibility faced a dilemma. As a leading Brazilian non-governmental organization created in 1998 to help companies manage their business in a socially responsible way, the Board Members were becoming convinced that it was necessary for consumers to value companies for their effort in social and environmental sustainability for companies to continue to work in that direction.

If price and the intrinsic quality of products and services were to continue to be the main, and in many cases the only, attributes considered by consumers in their buying decisions, companies would not continue to go deeper in their social and environmental responsibility efforts. To address these issues of consumer engagement on sustainability issues, the Akatu Institute for Conscious Consumption was created in March, 2001, as an offspring of the Ethos Institute.

The findings of opinion research in 2000 and 2001⁷⁸ were very clear in showing four findings: 1) consumers all over the world considered social responsibility as a very important attribute when evaluating companies (see Figure 5, data for 2000 and 2001); 2) consumers all over the world were interested in learning about what companies were doing to become more socially and environmentally responsible (see Figure 6, data for 2004); 3) opinion leaders were discussing the ethical behaviour of companies with friends and family; and 4) consumers declared they rewarded or punished companies based on their social and environmental responsibility.

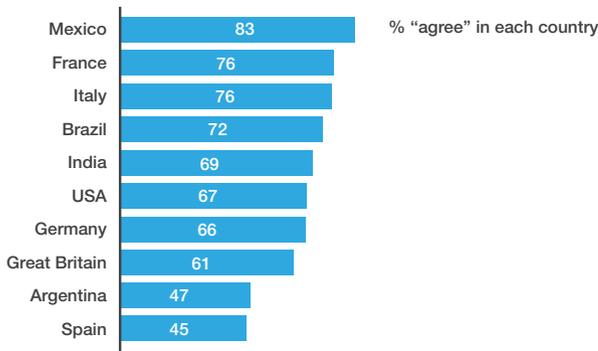
Figure 5: Main Attributes Used by Consumers When Evaluating Companies, 2000 and 2001



Source: (a) Instituto Ethos - Responsabilidade Social das Empresas - Percepcao do Consumidor Brasileiro, Pesquisa 2001
 (b) The Villenium Poll on Corporate Social Responsibility - Global Public Opinion on the Changing Role of Companies - Envirionics International Ltda, 2000

Obs.: People interviewed informed their first two choices. That is the reason why the numbers add to more than 100%.

Figure 6: Interest of Consumers in Learning about What Companies Are Doing to Become More Socially Responsible, 2004



Source: Responsabilidade Social das Empresas - Percepcao do Consumidor Brasileiro, 2004

It should be stressed that, given the concentration of consumption in the world (16% of humanity is responsible for 78% of total consumption⁷⁹), given that humanity is already consuming 50% more renewable resources than the Earth is able to regenerate,⁸⁰ and given that in the next 20 years about 3 billion people will be moving towards consumption societies, it is clear that technology changes, by themselves, will not be sufficient to lead to sustainability of life on the planet in a timely way.

Based on this information, it seemed only logical that if credible, third-party verified, comparable information were to be provided to consumers to show what companies were doing to become more socially responsible, consumers would immediately use that information for their consumption choices, by choosing the more socially responsible companies to buy from.

A Good Idea but Very Naïve

That was the rationale used to start the Akatu Institute for Conscious Consumption, and I had the honour of being named President of this new organization. About 80 companies completed a questionnaire with the requested information on their social and environmental responsibility efforts. In parallel, an instrument was designed to present the information to consumers in a comparable format and the data was made available on the Institute's site for consumers to use.

The media was enthusiastic about the effort and disseminated the arrival of Akatu and the new instrument, so consumers learned of the existence of the data and the possibility of learning what companies were doing to become more socially and environmentally responsible. We then sat back and anxiously waited for consumers to invade our site, searching for that information and, as a consequence, changing their ways of behaving in terms of what companies to buy from. Right? Not quite! The number of visits to Akatu's site increased for a few days, just enough to give us hope, and then rapidly diminished, making us reflect.

To understand what had happened, Akatu talked directly to consumers in an informal way. It did not take long to find out that, among consumers who were users of the Internet, very few were willing to "study" the behaviour of companies, even if the instrument was considered user-friendly. Moreover, Akatu was told that the crucial moment for consumers to have the information was when they were making a purchase.

At that critical moment of sale, consumers wanted to have information on the shelves or published on packages, readily available, easily understandable and comparable among companies. And, more importantly, consumers did not believe in the power of their consumption choices to change the way companies behaved. Each consumer thought that the impact of his or her buying decisions would be too small, that a change in individual consumption behaviour would not cause significant impact on the behaviour of companies to invest more in CSR. It was clear that Akatu was naïve to believe otherwise.

It was also clear that increasing the availability of information on corporate social and environmental responsibility was not in itself sufficient for consumers to change their purchasing decisions. It would first be necessary for consumers to believe that their individual acts of consumption were relevant and would influence the behaviour of companies.

Measuring Consciousness in Consumption

We then asked the question of whether a group in society would be willing to leave their comfort zone to make consumption decisions differently. If this group existed, perhaps these consumers would have a perception of the transformative power of the acts of consumption and could lead the process of provoking change in consumption behaviour.

To identify the existence of such a group, Akatu first needed to develop metrics to identify consumers in segmented groups according to whether they considered the environmental and social impacts of their acts of consumption, be it buying, using or discarding products or services. The more aware the consumer would be in terms of these impacts, the higher the consciousness of consumption.

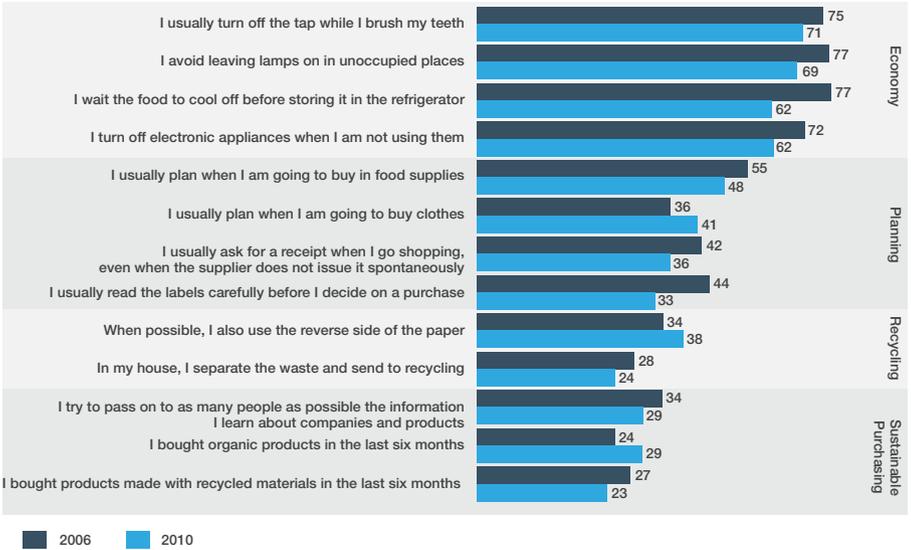
A group of more conscious consumers, even if small, would be evidence that a process of raising the consciousness of consumption was happening in society. However, since it was clear that conscious consumption was a nascent movement in society, Akatu decided that the metrics should not compare consumers to the “ideal conscious consumer”, but should positively differentiate between consumers who were above the average consciousness in consumption. In other words, it was necessary to praise the half-full glass rather than criticize the half-empty glass.

Through opinion research, the state of consciousness in consumption was identified in 2003. Starting from the practice of 120 behaviours, it was possible to identify 13 of those behaviours positively correlated to represent the practice in most of the others. After the initial application in 2003, the Brazilian population was asked in 2006 and 2010 whether they always practised those 13 behaviours. The results appear in Figure 7.

More importantly, it was possible to differentiate four groups of consumers: conscious, engaged, beginner and indifferent. The basic difference between the less conscious consumers (“indifferent” and “beginners” levels) and the more conscious ones (“conscious” and “engaged” levels) was that the former group was only interested in the immediate personal benefits derived from consumption, while the “conscious” and “engaged” consumers also considered the delayed and collective benefits derived from their consumption choices.

This process led to the creation of the Conscious Consumption Test (CCT), offered as a pedagogical tool to all groups of consumers involved in Akatu’s workshops. The CCT was applied to the Brazilian population and, in 2003, showed that 5% were categorized as conscious consumers, 37% were engaged, 51% were beginners and 7% were indifferent.⁸¹ The CCT was applied again to the Brazilian population in 2006 and 2010 and, although there was no change in the 5% of conscious consumers, the group of engaged consumers *reduced* from 37% to 23% in 7 years.⁸² This caused frustration within the Akatu team: after many years of work, the relative size of the group of more conscious consumers decreased!

Figure 7: Percentage of Brazilian Consumers Who Declared They Practise Behaviours of Conscious Consumption, 2006 and 2010



Source: Akatu Institute for Conscious Consumption

Fortunately, the analysis of these results by sociologists and anthropologists dealing with consumption gave us hope: conscious consumption was (and is) an emerging process in society. That, in itself, leads to fluctuations in the relative size of the groups. But, more than that, from 2003 to 2010, Brazil had undergone the country’s highest economic growth in recent history, going from unemployment to full employment, from high to low interest rates, and from virtually no availability of credit to a large number of options. That means that the initial 2003 results were actually showing restraint in consumption more than conscious consumption.

Looking back, it is clear that it is unrealistic to expect quick results in changing consumption behaviour. It is a slow process whose results will fluctuate up and down, until a change in the culture of consumption really starts to take place in society influenced by the behaviour of a critical mass of more conscious consumers. Only then can the consistency of results over time be expected.

Harnessing the Power of Consumers

The CCT metrics allowed us to address the basic behavioural question of consumers feeling powerless to affect the social and natural environment by changing their individual consumption behaviour. Unless that perception changed, consumers would not be willing to leave the comfort zone of their consumption culture.

CCT was then applied to groups of students (boy scouts) and to employees in companies that supported Akatu's work. The findings were used as a basis for discussion among the members of the groups. After many groups were exposed to this discussion, certain conclusions appeared on various conditions to change consumption behaviour, which was called Akatu's "pedagogical methodology".

Discussions on the impact of water consumption, for example, conducted by Akatu showed that by closing the faucet when brushing one's teeth during a lifetime (an average of 72 years in Brazil), enough water would be saved to nearly fill an Olympic size swimming pool, and 1 million people during one month would save 12 minutes of the water that falls from Iguaçu Falls (17 minutes from Niagara Falls).

These examples offered an element of surprise that jolted the emotions of the groups involved. Step by step, group by group, it became increasingly clear that consumers were not aware of certain basic facts that, if conveyed to them in both a rational and emotional way, could incite them to change their consumption behaviours (buying, using and discarding products or services). These facts include:

1. The relevance of impacts: all consumption impacts society, the environment, the economy and the individual consumer; this points to the need of making those impacts explicit
2. The interdependence of impacts: acts of consumption impact everybody, including the individual who consumed
3. The power of daily actions: even small individual acts of consumption, or those of a small group of people, if repeated for a long period of time, will have significant impact
4. Leading by example: each consumer, by himself/herself, influences the consumption behaviour of family, friends and acquaintances
5. The multiplication of impacts: each consumer can and should mobilize other consumers to be more aware of conscious consumption, given that, when practised by many people, a consumption act will generate enormous impact in a very short period of time.

Through these studies we learned that consumers are not irresponsible, they are simply not conscious of the impacts of their consumption and of the enormous transformative power of individual consumption, of leading by example and of proactively mobilizing others. When consumers learn the facts, in both a rational and emotional way, in supportive group discussions, changes in behaviour start to occur, whether or not they last.

Scale and Speed

The next challenge was to build on our knowledge and outreach strategies so Akatu's work would start to have impact on a larger scale and at a faster pace.

During the work in communities, it became clear that consumers who had started their journey towards a new model of more conscious consumption needed social recognition through which their new behaviour would be valued and, as a consequence, maintained over time. Otherwise, the aggressive advertising of goods and services and the psychological pressure of social recognition through consumption as part of certain reference groups in society would lead those consumers back to their traditional consumption behaviours.

Research shows that patterns of consumption are important attributes for all groups, in any part of the world. Lifestyles tend to define groups through visible attributes such as the consumption of certain clothes, food and leisure activities, which are directly linked to what is and is not allowed in certain social groups. Although in more recent times, the individual choice of goods has become stronger as an attribute of identity,⁸³ and although consumption practices have become more ephemeral, patterns of consumption continue to be important for social recognition and for a feeling of belonging to a group in society.⁸⁴

This is the phenomenon of competitive consumption, which derives from a value system in modern society through which success tends to be equated to consumption capacity, and consumers are victims of their own need for recognition as individuals. As expressed by Pierre Bourdieu, "maybe, there is no worse deprivation ... than that of the losers in the symbolic fight for recognition, for access to an existence socially recognized, in short, (the fight) for humanity".⁸⁵

To overcome that difficulty, Akatu started analysing the longer-term results of the work in communities. It became clear that the greater the feeling of belonging to a community that valued more conscious consumption, the higher the probability of an individual being able to maintain the conscious consumption behaviour.

In search of ways to improve the scale and speed of the process of behaviour change in society, Akatu started systematic work in 2010 using such social networks as Facebook and digital tools as YouTube to try to engage consumers in the movement towards more conscious consumption. The difficulty proved enormous, most probably because of the extraordinary competition for the user's time on the Internet.

Facebook, as a social site, is an emblematic case: the fact that it has almost 1 billion registered users does not mean that this potential population can be accessed for any purpose, or, more particularly, to engage in noble causes related to the solution of collective problems. At most, it is possible to call the attention of some groups for a brief moment to something interesting on YouTube or communicated via Twitter, leading some people on Facebook to "like" it and post it. Most of the time, however, the effect is very small. Of course, these Internet tools are relatively recent, so more time is needed to use them effectively.

Commonalities still exist between the real world and the digital world. For scale and speed of impact, it is necessary to create reference groups in which the more conscious consumers can gather and bond so they gain a feeling of belonging and social recognition. This will keep the new behaviours active among the more conscious consumers and may offer them the space and process to actively engage the less conscious consumers.

The Challenge Forward – Hope towards the Future

At this point, the process seems to have gone full circle. The more conscious consumers complain about the lack of products and services that offer the more positive and less negative social and environmental impacts. On the other hand, due to economic difficulties and the lack of market demand, companies do not seem willing to be radically innovative in the development of new products and services for a more sustainable society. How can these challenges be faced?

From a purely environmental point of view, a revolution in the culture of consumption is needed, shifting society from one focused on products and services to once focused on well-being. What does that mean concretely, for companies and consumers? It means supplying the same or better well-being in an extremely dematerialized way, going from fast obsolescence to durable products; from material to virtual products; from individual use to shared use of products; from global production to more local production; from tangible products to experiences; from competition to cooperation; from waste to integral use of products and materials; and, finally, from excess to sufficiency in consumption.

Some of these shifts are technical, but most are cultural and behavioural. They constitute an enormous change in the culture of consumption, which will only happen if consumers – and companies – are able to understand that sacrifice is not needed, that the sustainable future is desirable in a compelling way. That is the first challenge: I do not think humanity will move in a more sustainable direction without making the utopia of a sustainable future explicit through a compelling and attractive vision of the future.

This, of course, is nothing less than a change in the model of civilization, which will only happen if societies organize multistakeholder debates – which are being called by Akatu as transition roundtables towards sustainability – to define the next steps in radically dematerialized products and services to provide the well-being of people in general with a broader view of the necessary changes and trade-offs among stakeholders. Fortunately, mass communication and new technologies are available to help converge this discussion.

At the beginning of its second decade, Akatu expects that the use of new tools and innovations will allow building on the knowledge learned in the first decade with increased speed and scale, especially by integrating some of this in public policy. Through the introduction of conscious consumption in the education process, as well as by working with networks of organizations that have interest in sustainability in Brazil and elsewhere, we hope it will be possible to export the knowledge acquired. This can be used to inform public campaigns, regulation and legislation, as well as processes of mediation in society.

The opportunities of hosting the Football World Cup in 2014 or the Olympics in 2016 add new potential for this process to become global and to expand with even greater speed and scale, leading to a higher sense of urgency and a greater engagement of civil society organizations and businesses. In this way, not only will we avoid the largest crisis in the history of humanity but, more importantly, we will substitute it for a brighter and sustainable future for all.

Architectures That Define the “Rules of the Game”



While many companies have made excellent progress in changing their supply chains or engaging their consumers, the limits of these efforts are quickly reached if the environment in which they operate does not enable more profound changes. Getting public policy right is essential to building the sustainable economy that is needed. Good public policy can create markets, incentivize businesses and transform consumer behaviour in support of sustainable consumption. Bad policy can help entrench perverse incentives, destroy opportunities for sustainable value creation and discourage innovation.

While many of the regulations that shape environmental law have been present for the best part of 50 years, new trends are changing the way governments interact with business through advanced incentives, market mechanisms and, more recently, “nudges”. This enabling environment reaches across stakeholder boundaries and into new types of innovative interactions with governments and investors. According to Tom Albanese, the former CEO of Rio Tinto, “Low prices on resources and no prices on externalities will create waste and discourage innovation. Smart policies can help overcome this.”

The different roles of government – as enablers of markets, as incentive providers and as enforcers of compliance with regulation – are critically important to unlocking business innovation and to guiding markets’ allocation of scarce capital. Changes to policy can help build better alignment between private returns and sustainability objectives. Policy frameworks can make markets work in the private and the public interests.

Open innovation applies to policy-making as much as it does to collaborative business innovation. Effective public policies can and should learn from examples from communities, civil society and businesses – as well as from policy innovations elsewhere. While not a government policy, the development of ISO SR 26000 by the International Organization for Standardization has brought together governments, businesses, NGOs and international organizations in shaping the world’s first truly international standard to encourage environmentally and socially sustainable activities.

In addition to policies and regulations, key areas where business leaders can help shape the policy landscape will be in the greening of public procurement, the reform of subsidies that are harmful to the economy and environment, the improvement of regional trade agreements, and in the measurement of progress and of the role of long-term investments.

Governments are not the only exogenous factors that influence business indirectly. In line with changes in consumer, business and government attitudes, investment patterns are increasingly supportive of the shift towards sustainable business models. The Climate Disclosure Project, for example, uses the influence of the US\$ 78 trillion of investor assets under management by its participating investor members to encourage businesses around the world to increase their transparency on carbon emissions. The penetration of responsible investments is expected to rise rapidly over the next few years – from under one-tenth of assets under management to approximately one-fifth, or US\$ 26.5 trillion.⁸⁶

This represents an extraordinary depth of funding availability for sustainable businesses, at a time when funding for other businesses has become far more difficult to obtain.

Several collaborative initiatives involving the financial industry exist, including the UN Principles for Responsible Investment, which have attracted more than 640 signatories so far, with combined assets under management of over US\$ 14 trillion, and Ceres, which directs the Investor Network on Climate Risk (INCR), a group of more than 80 leading institutional investors with collective assets of more than US\$ 8 trillion. Just as government is beginning to create the appropriate regulatory framework for businesses to invest, sustainable investment could be the financial enabler that allows aspiration to become reality, and that rewards companies for investments made in sustainable infrastructure, products and innovation.

Such policy and investment innovations are important. Without them, sustainable consumption will either remain a niche market or become the market paradigm too slowly to mitigate the environmental and resource risks facing the world and the associated economic, social and political disruption they may bring.

The views expressed herein represent a collation of various viewpoints from participants in the World Economic Forum Sustainable Consumption Initiative, the World Economic Forum Global Agenda Council on Sustainable Consumption and viewpoints from other invited contributors. The text and the individual contributions do not necessarily reflect the views of every individual participant nor do they necessarily reflect the individual institutional viewpoints of any of the participating companies, institutions, organizations or their members, or of the World Economic Forum.

Innovation Lessons from the Song Dynasty - Ted Howes, Cleantech Group

Ted Howes, Formerly Director of Consumer Products and Innovation at Business for Social Responsibility (BSR), is now Executive Vice-President, Advisory at Cleantech Group. Ted has been a Member of the Global Agenda Council on Sustainable Consumption, including serving at its chair. In this essay he explores how to catalyse change at scale, in order to mainstream sustainable consumption.

I'm an inveterate optimist – I believe that better solutions are possible and are always worth pursuing. This belief is the underpinning of my sustainability career to date, an arc that began with being an environmental broadcast journalist, having impact through sustainable supply-chain programmes and certification, and leading me to focus on using sustainability as a lens for innovation.

Despite my native optimism, I'm increasingly concerned about our forward progress in the face of challenging shifts in our world – the context of our immediate future includes a rapid rise in population coupled with strained and undervalued natural capital. While we've made notable advances in technological innovation, they will likely be an insufficient response to the challenge. We'll need to couple our technological innovations with knowledge and commercial innovations that integrate sustainable consumption into the economic, regulatory and policy architecture of our global systems. Sustainable consumption is complex both as a concept and as a goal to achieve. It is an epic systems level challenge that is the grand opportunity of our times to create a model for lasting prosperity. What will it look like and how should we act on the challenge?

One of my inspirations is history, inspired by my study of Chinese history as an undergraduate student. It's not the dates and names that have stuck with me, but the story of change, the intersection of technological, social systems and commercial innovation that result in economic development, social stability and prosperity.

From the 10th to 13th centuries, Song dynasty China doubled in population and was unparalleled in technological innovation: the movable type printing press, paper money, gunpowder and the magnetic compass were among the innumerable inventions developed during this time. Yet, arguably the most profound achievements were knowledge innovations that facilitated the creation of new models of leadership and in turn spurred broader economic and social progress.

The movable type printing press allowed for the greater democratization of knowledge and the standardizing of civil examinations, which broadened the scholar-official class through meritocracy. This strengthening of the political system allowed for a unified national economy for the first time, and with commercial innovation around economic organization, like partnerships and joint stock companies that separated managers from owners, a stronger, more sophisticated merchant class also emerged.⁶⁷ Essentially, there were three types of innovation during the Song dynasty:

technological innovation created the tools; knowledge innovation created the systems of education and governance; and finally commercial innovation created the right enterprises.

This framework shouldn't be construed as being dependent or causal, but as being representative of a virtuous cycle of innovation that has generated tremendous benefit, stability and prosperity throughout history that falters when progress slows in one sphere relative to the others. We live in a time when our technological innovation far outpaces our knowledge and commercial innovation, creating an imbalance that limits our ability to get to sustainable consumption.

My own journey reflects this cycle and led me to my current point of view around the necessity to innovate around "the rules of the game" in order to embed sustainable consumption into our system architecture.

Building on my interest in Chinese history and innovation, my first career was as a journalist in Taiwan. In the 1990s, Taiwan was a global success story, with tremendous growth and a vibrant export economy. At the same time, the country was emerging from almost half a century of martial law. I experienced first-hand the emergence of a civil society struggling with the environmental and social costs of rapid and unconstrained economic growth.

One of the first news stories I covered was of an electronics factory in Taoyuan, formerly owned by RCA (Radio Company of America), that churned out televisions destined for the US and other developed markets for decades. The factory also allegedly poured toxic wastewater into a well for about 20 years, and the groundwater was contaminated by levels of trichloroethylene and tetrachloroethylene that exceeded safe drinking water levels by a thousandfold, and could be found in underground water drawn as far as two kilometres away from the site.⁸⁸

This was the first time I personally came face to face with the human cost of economic development at the expense of environmental safety. I'd read about it and heard about it, but talking with people who suffered (and still do) through this was heartbreaking, maddening and frustrating. More than 200 former employees died and 1,000 suffered from cancers that are associated with exposure.⁸⁹ Seeing the cascading impacts through the lives of individuals, their families and their communities made the issues tangible and visceral to me and motivated me to further explore and expose similar issues, ranging from the impact of low-level radioactive waste, to the degradation of natural resources and watersheds due to industrial, agricultural and extractives activity. While in Taiwan, I covered protests, sit-ins and near riots of people trying to exercise their newly granted ability to publicly demonstrate on behalf of their environmental and human rights.

After a few more years, I recognized that I wanted to not just report the news but take action and have impact. At the time I couldn't see a way to reconcile the antagonism between businesses and environmental activists that I experienced while covering the news. A key perspective wasn't introduced to me until I returned to the US and was inspired (as so many were) by the newly published book, *Natural Capitalism*. It's rare to be able to identify books that change one's life, but now I saw a different way into the conversation, and learned ways to think differently and reframe the challenges in environmental issues as opportunities.

I later had the opportunity to witness the balancing of a framework and its impact on the lives of individuals when I was working in the young field of environmental certification and supply-chain issues. I had the fortunate timing to be able to work with Starbucks to lead the development of their sustainable green coffee sourcing programme, Coffee and Farmer Equity (CAFE) Practices.⁹⁰ Designing a sustainable agricultural verification programme from the ground up with my expert colleagues at Scientific Certification Systems was a deep learning experience. Addressing the complexity of social and environmental issues in coffee and the interaction between those indicators was a profound education in building sustainability tools from the ground up. One of the clear innovations of the programme was structural – as a preferential purchasing programme, farms and processors were in competition with each other to improve their environmental and social profile. This was an elegant and simple solution on how to engage all coffee producers, regardless of where they were on the continuum towards sustainability.

For most of the farmers we worked with, it was their first contact with the notion of sustainability, and their reactions were mixed. At one point I found myself on a coffee farm in Guatemala, talking with a farmer, who shared with me how furious he was when the standard first came out, as he saw it as an additional cost and hassle to producing great coffee. When a drought brought reduced access to water, he was still able to process coffee because he'd invested in the water-saving elements of the CAFE Practices standard.

That farmer actually thanked me. It was a humbling experience to both see and hear the real world impacts of thinking and acting on sustainability and, over the six years I led the development, implementation and audit of this global programme, I experienced this feeling time and time again. The programme even had unintended positive consequences – as one farmer related to me, the quality of his coffee went up and his labour costs went down when he started to plant along the contours of his hillside coffee farm. Workers could move more quickly through the coffee trees, reducing harvest costs and allowing them to pick through multiple times to ensure peak ripeness and quality.

I truly appreciated the value of developing and deploying the right set of tools but also recognized the need to set the rules appropriately – the success of this programme was due to Starbucks' commitment at scale to integrating sustainability into how they bought coffee. It seemed to me at the time that if companies built and adopted the right tools across industry sectors, we would make rapid, steady and constant progress in getting to sustainability.

This world view was challenged immediately with the next shift in my career, and my point of view on sustainability shifted radically when I joined IDEO, the innovation and design consultancy. It previously seemed self-evident to me that if people had the right tools and means to understand and act with sustainability in mind, they would make the right choices. This perspective seems naïve now, but moving from a rationalist approach to sustainability to a more empathetic one was a profound experience.

I spent much of my time at IDEO leading our global efforts around energy – there were tremendous opportunities to have impact through design and innovation in helping utilities, cleantech start-ups, consumer electronics firms and governments address energy. One key lesson is about having empathy for people who would like to make the right decisions, but are confused by a tremendous cognitive overhead when they're thinking about energy.

On one project, we were exploring ways a utility could be more innovative and were in a woman's house talking about home comfort. We asked her to show us what she did when she left her home – she grabbed her cell phone, purse and keys and walked out, leaving the television on and the air-conditioning cranking away. If we'd asked her about energy, she would have likely turned off the TV and turned down the air conditioning as a response to our leading questions. These tensions between how people think and how they act reveal design opportunities to provide solutions. It was exciting to design solutions for people, and all the complexities that come with their responses to these thorny challenges. I also recognized that often times some of the tools that are developed to help people are created by the select minority of individuals who are either motivated by data or already invested in sustainability. Most people aren't predominantly motivated by sustainability, and likely never will be. These people need tools and support to meet them in their current mindset.

My prior experience around developing the right tools and systems for sustainability was augmented by a process new to me – design thinking. Simply put, design thinking is about working in multiple disciplinary teams to develop solutions to people's unmet needs. This is done through ethnographic research and then using the tools of design like prototyping, storytelling and rapid iteration to create unique solutions, be they products, strategies, experiences, services or environments.

IDEO was fertile ground for understanding and exploring sustainability through the explicit lens of human centred innovation and design. I now had a profoundly useful toolkit for meeting people's unmet needs around sustainability and energy, one that I use to this day to build solutions.

My work has evolved to embrace sustainability more holistically and I believe that corporate social responsibility is a good start, but in many cases it's incremental and does not move beyond the eco-efficiency curve to address the root challenge of sustainable consumption. When I look at where we are on the journey to more sustainable consumption and what we'll need to get there, it is clear to me that we're a long ways off and running out of runway.

So how can sustainable consumption fundamentally be embedded into the architecture of how we do business? One opportunity to change the short termism that stifles innovation is to address the insistence on quarterly financial reporting in the public markets and the corporate focus on maximizing financial returns above all other considerations. We can redesign this system and finally embed environmental externalities and social impacts and ecosystem service valuation into how companies operate, invest, act and report. There are bright spots or prototypes we can learn from – Puma recently released an

environmental profit and loss statement that captured the theoretical costs of the company’s full environmental impact.⁹¹ This is a bold example, but we need companies to do this en masse and the likely way there is through designing the next rules of the game.

We know our existing approach of ignoring these costs is a failure, but there are strong vested interests in adherence to the existing set of depression-era accounting rules. The rules aren’t changing fast enough and, at a certain point, won’t shift fast enough in response to our population and resource situation. Markets based on unvalued natural capital are always viable right up until collapse.

Changing the rules that govern capitalism is a systems-level challenge and, like all such challenges, it’s inherently complex and difficult to act on. We should start by learning what “good” looks like – develop a collaboration with a small subset of policy, accounting, business and technology experts and design a system for reporting and tracking environmental and social impact. We can then move beyond the prototype and test performance in the new dimensions of environmental and social impact against financial performance, which will help us iterate the model. Once we’ve evolved the process and tools by which to embed these issues, we can test and deploy the knowledge and systems innovations necessary to support the new model.

Eventually, the Song dynasty approach to innovation got out of balance and the imperial China system of governance calcified and became more about stability and serving itself at the expense of feeding the technological, knowledge and commercial innovations. At that point the system started to fray and falter.

We’re at that phase now. We have tremendous technological innovations that could support changing the system – big data, cloud computing, ubiquitous sensing, the Internet of things are all tools waiting to be deployed to help us quantify and mitigate our impact in business, but our knowledge and commercial innovations have failed to keep pace in implementation. Without addressing the economic architecture of the rules of the game, getting to sustainable consumption is like playing the lottery with supply-side impacts and solutions to support behaviour change among consumers.

By creating the underlying systems architecture for sustainable consumption, we’ll be able to have real prices for natural resources, know the true social costs of our consumption and hold a long-term view in our markets. Most importantly, we’ll have moved our innovation beyond technology, to innovating our knowledge and our models for more sustainable consumption.

Shaping The Rules for More Sustainable Living - Thomas Lingard, Unilever

Thomas Lingard is Global Advocacy Director at Unilever. Thomas takes the reader through the challenge of addressing exogenous factors beyond the control of business, and how a company thinking ahead must work with other companies and stakeholders to influence these factors to create the best environment for a sustainable business to flourish.

One of the most interesting trends in the past 20 years has been the development of a new discourse on the subject of global governance. That's a rather technical term that I prefer to call "the rules of the game". Traditionally of course, governance is the role of the public sector. The reality is that as global problems transcend nation-state boundaries and weak international multilateral organizations are often unable to deliver results, other actors are stepping in to fill the void.

One of the private sector's earlier exposures to this situation was in the fish business. The problems of over-fishing are exactly the kind of issue for which one might expect governments to find a solution. Fishing is largely regulated in many countries with quotas for catches agreed, in theory, to preserve fish stocks for future generations. Instead, over-fishing becomes a classic example of a "tragedy of the commons", described as a situation where individuals acting independently in their own self-interest deplete a shared resource, even if ultimately it is not in their own long-term interests.

In this case, Unilever witnessed that the political pressures acted to keep national fishing quotas high, even if the long-term effect was to decimate the fish stocks on which everyone depends. Seeing this problem worsening and with a simple business case of "no fish = no fish fingers", Unilever set out to work with others, such as the World Wide Fund for Nature (WWF), to help establish the Marine Stewardship Council in order to address this problem through an independent consumer-facing label to show which fish are from sustainable sources. Even if a fish is legally caught, it may not be sustainable, and with this eco-label we were able to raise the bar on existing lowest-common-denominator legislation that was failing in its task of governing fish stocks. In effect, we set in motion a change to the rules of the game that continues to have positive impact today in the field of fisheries management and sustainable consumption.

This was just one way back in the mid-1990s that consumer goods companies began responding in a more organized manner to a range of new global trends, particularly around limits to natural resources, and the way globalization was increasing the pressures on global systems, such as agriculture, fisheries and fresh water. Companies began to realize that some things needed fixing, governments were finding it difficult to take action, and it became in their own interests to find alternative solutions.

Fast forward 20 years and it is much the same story. A growing body of evidence on a range of global trends has made it evident that these challenges are accelerating. It is clear that the future is unlikely to resemble the past. We will be living under a different set of constraints and drivers, which requires us as businesses to adapt and change. One senior colleague of mine used to say that corporate strategy is about forming a point of view about the future, and then aligning the resources of the organization to take advantage of it. That in essence is what we are now trying to do.

In a recent strategy paper, we outlined our approach at Unilever for our ambition to double the size of our business while reducing our overall impact on the environment and increasing our positive social impacts. This was fleshed out further in our "Sustainable Living Plan", launched in November 2010,⁹² which set out around 50 specific, measurable, time-bound targets that we, as a business, committed to achieve. The plan has three overarching goals: to help one billion people take action to improve their health and wellbeing; to halve the environmental impact of our products across their life cycle from the sourcing of raw materials through consumer use and disposal; and to source 100% of our agricultural raw materials sustainably.

It was a bold step. Many companies have plans, but not all of them set 10-year goals for areas outside their direct control, and even fewer are then laid out for public scrutiny in the beginning, and public accountability along the journey. But the thinking behind this course of action is clear. We know the ambition level is so high that we can't make progress without the support and involvement of others. Making the plan public makes clear our intent and acts as a beacon to potential partners who want to work on these challenges with us.

Like many others, I believe the world will become more resource constrained in the future. At the same time, consumers will continue to aspire to an improved quality of life, particularly in developing and emerging markets. They will not necessarily aspire to a Western lifestyle, but they will nevertheless aspire to an improved quality of life.

And so consumer demand for products that help people live more sustainably will emerge in time as people begin to personally experience the consequences of environmental degradation, water scarcity, climate change, crop price volatility and the associated issues of food security. For consumers in many parts of the world, the future may become tougher, which creates an opportunity for forward-thinking businesses to explore more practically how we will continue to meet existing and new consumer needs as that context changes.

At Unilever we developed a business case for our Sustainable Living Plan based on six factors. The first is consumer demand, which is already there to some extent but we think will grow over time. Second is growing customer demand – our customers include the world's biggest retailers, many of whom have their own sustainability programmes. By being a leader in this area, we are in a great place to build strong relationships with them by helping them realize their own sustainability ambitions.

Third, is that it drive innovation. If you say, "give me a shampoo that works just as well without water," or "find a way to design this product so it uses less energy when in the consumer's home," then the response can be transformational and drive innovation in a powerful way.

Fourth, it positions the business well in growth markets. Unilever's fastest growing markets are now emerging markets: Asia, South-East Asia, Africa, Latin America, and many of those places are where these sustainability challenges will bite first and bite hardest. The danger for Western companies is to see sustainability as a Western agenda; it is often presented that way. This perspective can be very damaging to the discussion – we are looking at products that help people in a very different context, help improve their quality of life in what is a changing and, in many cases, deteriorating external context.

Water is likely to be the resource that consumers notice becoming scarce first, and many business innovations now are geared around products that use less water or that provide safe drinking water. We have a brand new business model (Pureit) which is about providing safe drinking water that does not require either flowing water or electricity. We think it has huge potential. For consumers in developing countries, this is a huge advantage, particularly if you are paying for water, or having to transport it. We think that by focusing our efforts in this area, we are positioning the business well to continue to grow in these markets.

Fifth, it frequently saves money. This is particularly true in our own operations where a renewed focus on energy-saving and eco-efficiency is driving cost out of the business. We had already done much in this area, but the plan is challenging us to go further and to think more long term about the investments we make.

Finally, we have great data to support the positive impact that our sustainability strategy has had on our internal engagement scores – how people feel about working for the business and how it connects them to a greater sense of purpose more aligned with the original mission of one of our original founders, William Lever. It has been dramatic, and if you understand strategic human resources management you will understand the value of a high employee-engagement score in a large organization.

In my view, it's not possible to do a bit of sustainability – the decision is either to be sustainable or not. So if a company makes the decision to try and become a sustainable business, that decision has to be a strategic decision at the company level. There must be commitment. It starts to make more sense once the decision to do it has been made, and unexpected benefits follow.

Beyond the Business

One of the interesting things about the targets the business has set itself in the Sustainable Living Plan is that they take us beyond the realm of factors within the direct control of the business.

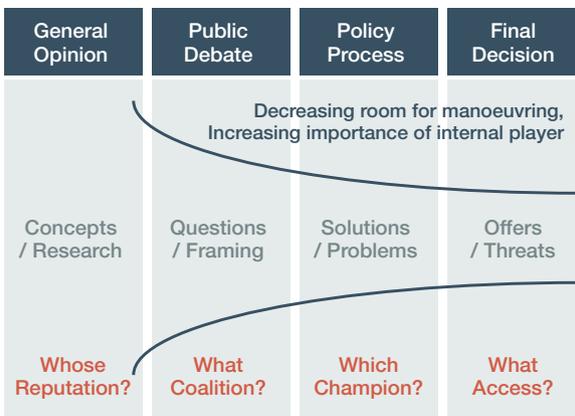
These exogenous factors require setting what the development community would call external goals. Most businesses manage internal goals, goals about the company. Conventional measures of business success are usually linked to

things within the direct control of the organization – improving efficiency, reducing costs, increasing customers. But now, with these kinds of external success measures, we have made ourselves accountable for things that are far outside our direct control and take us into the realm of influencing a wider system.

This plays into the shift in thinking we are seeing about how to define value creation. Is the company’s narrow focus on maximizing short-term shareholder value or is it interested in the longer-term health of the business and the society in which it exists? If the latter, then alongside measuring shareholder value, a range of other ways of measuring value created for stakeholders becomes important. When one begins to set the kinds of external goals that depend upon influencing the wider system in which one operates, that very quickly leads towards thinking about the need to proactively influence public policy.

That is how we came to hold a workshop looking at the targets within our Sustainable Living Plan and asking the question, “What is the policy context in which these external goals are now trying to be met?” In setting our boundaries, the relation between public opinion and public policy is also important. We defined the landscape as being not just about government policy but also about public opinion, which goes on to create the context for future public policy. We’ve been influenced here by the work done by the think tank E3G, and the policy funnel they have developed to help chart how issues move from being broad ideas in the public consciousness to becoming “rules of the game” through soft or hard legislation⁹³ (see Figure 8). By better understanding these processes from a sustainable development perspective, we hope to be able to influence them towards the outcomes outlined in the Sustainable Living Plan. The development of a more campaigning approach to these issues was also influenced by my own experience working on secondment at the NGO and policy think tank Green Alliance in the UK and gaining a first-hand understanding of just how powerful the right policy frameworks can be in driving the right sustainability behaviours by businesses and individual consumers.

Figure 8: Understanding the Decision Process: The Policy Funnel



Source: Policy Funnel: Nick Mabey and Anita Neville, E3G

To understand where and how we might usefully do this, we began to map the public affairs implications of the Sustainable Living Plan. We brainstormed and wrote down everything that we could think of that might be happening between now and 2020 that would be helpful or unhelpful depending on the direction things turned. We also allowed ourselves to ignore the limits of what might be normally possible through conventional government relations in order to explore what legislation in which countries might help us achieve our goals. For example, would it be helpful if there were a requirement for all schools in a particular developing world country to provide hand washing facilities and information about hand washing and soap? Of course having a regulation doesn't necessarily mean it will actually happen in practice, but we wanted to conceptually explore whether there were credible public-policy dimensions that might be attractive politically while supporting the achievement of the sustainability goals we had set ourselves.

At the end of the discussion, we arrived at four policy areas: climate and energy policy; recycling and waste public policy; basic sanitation and public health in developing countries; and international trade policy, particularly around tariffs as they are applied to commodities.

On recycling, our target is clear. We are aiming to halve the waste sent to landfill associated with the disposal of our products by 2020, on a per consumer use basis. Unilever can make something more recyclable, and we can play a role in helping consumers understand the importance of recycling, although the right infrastructure must be in place to actually enable people to recycle.

As we look around the world, we see that the issues in developing countries, where there often are big informal waste-picking communities, are very different to those in the United Kingdom or France where they are more regulated and where waste collection services are provided more formally. We thus see wildly different recycling rates in different parts of the world. So part of how we are going to halve the waste from the disposal of our products is through working with the different public authorities to influence and bring about the right kind of infrastructure to enable that to happen – we need to become more active in shaping the future that is most likely to deliver that reduction in waste to landfill.

Trade is slightly more complex, and certainly more political. Trade policy has always been a commercial issue for Unilever and therefore has always been within the stable of public affairs issues for the organization, because businesses generally believe in free trade and are opposed to market distorting subsidies. But the Sustainable Living Plan gives us a different dimension to the argument: What if governments who are interested in supporting a shift to sustainability could find a way within their tariff system to favour commodities that have been grown to certified sustainable standards? That would be very interesting, particularly for commodities such as palm oil, which are critical both for the food supply chain and for climate change if linked to deforestation.

We recognize that this is a real difficulty involving all kinds of challenges to the trade rules as currently agreed within the World Trade Organization. But to start that conversation about the possibility of differential tariffs for sustainable and unsustainable palm oil, for example, is enormously exciting and powerful. It has the potential to throw a huge amount of weight behind the shift to certified sustainably-sourced commodities. It is early days in that debate, but we feel that certified sustainable palm oil is another example of business working in partnership with NGOs to find a solution to a systemic problem, and we see a pattern of leading companies committing to buying those certified sustainably-produced commodities. By throwing a little public policy muscle behind incentivizing that shift, the market could be much larger and the impact could be transformational.

Getting to Scale

As we step back, we see that there are many really excellent pilots in this space. The challenge that many people are facing is how to take these initiatives to scale. Not just scale within a business, but real scale, such as the whole sector of the economy. And while it is not terribly fashionable as a business to admit that there are things a company cannot do on its own, the reality is that these are systemic issues, and the rules of the game are set by the policy-makers. By being transparent about what it is we are trying to achieve and about where we have (or do not have) a commercial interest, we can begin the process of asking what it might be possible to change through public policy to strengthen and accelerate our own work. This is a really exciting conversation to have, and it's what we are trying to do.

On the path to scale, in traditional public affairs debates the relationship between business and NGOs is shifting. To exaggerate for a moment, on one side business is pushing for maximized short-term profits through the relaxation of rules, less control and less policy, engaging in a tug-of-war with NGOs who favour more of those things on the other side.

I think we will start to see less of that combative approach. When coming into the territory around climate change or around recycling, the likelihood is to end up with groups of businesses such as the World Economic Forum's 2010 Task Force on Low-Carbon Prosperity that want more regulation on climate because there is a market failure around the price of externalities.⁹⁴ We *do* want international binding legislation on greenhouse gas reductions to ensure fairness as it is rolled out, we *do* want stricter emission reduction targets, even though we accept that will lead in the future to a rise in the cost of energy. That rise in the cost of energy is coming anyway at some point in time and we need to gear the market towards a more fundamental transformation.

Rather than this traditional tug-of-war between business and NGOs, it's more likely that different business interests will be up against each other. The businesses that have the most to lose from a transformation to a low-carbon sustainable economy are fighting the hardest and spending the most money to defend their short-term interests. Meanwhile, progressive businesses that want to be part of this new economy are lining up on the other side to combat that status quo. This brings into question how effective traditional industry associations are; they often assume that business speaks with a single voice, which explains why we see a growing number of issue-specific business coalitions popping up to speak out on individual issues, such as climate change.

For a while, the consumer companies were seen as the bad guys in a constant fight with the NGOs but, already in the climate debate, we find ourselves more often on the same side as the NGOs. In recycling, that dynamic has changed a little bit too and now the consumer companies are recognizing that they have no interest in their packaging going to landfill. We're not alone in taking this approach. Interface, a leading floor covering business, has called for landfill bans on carpet to help promote closed loop approaches to its own product categories. Coca Cola ran a high profile "Give it back" campaign asking consumers to ensure bottles are returned for recycling. The list could be longer, but certainly a trend of businesses getting more involved in the space outside their traditional comfort zone is apparent.

Implicit in this may be another shift that will help take us to scale, one we are starting to see among senior business leaders, not just in the public affairs function. Organizations have tended to think about the political context as something that is fixed, a given; not that it never changes, but it has been something businesses reacted to, not something that we have traditionally sought to influence. Conventionally, the role of public affairs has been to articulate the case for why legislation should not be changed, or why it should be removed, or why proposed new legislation should not be so strong, and so on. What's new is the idea that business should not take this policy context as a given but can and should actually proactively try to shape it in a positive direction, in a way that drives competitive advantage for the business and a sustainable future for the world.

A Political Journey - Helen Mountford and Ysé Serret, OECD Environment Directorate⁹⁵

Helen Mountford is Deputy Director, Environment Directorate, Organisation for Economic Co-operation and Development (OECD). Ysé Serret leads the Directorate's work on Environmental Policy and Household Behaviour. Helen has been involved with the Forum's Global Agenda Council on Sustainable Consumption, in particular supporting its efforts through the rigorous survey data and analysis of the OECD's work on Household Behaviour and the Environment. In this chapter, the complex agenda of making progress on sustainable consumption at a supranational level is discussed

Although the environmental impacts of consumption and production decisions have been a concern internationally since the 1992 Earth Summit, discussions on how to move towards more sustainable consumption have not lacked in controversy. Sustainable consumption has drawn allergic reactions from both government and business representatives on numerous occasions, while for others it has been seen as a panacea for all manner of environmental woes. Both viewpoints have been apparent in some of the discussions on sustainable consumption at the OECD.

In the initial years after the 1992 Earth Summit, sustainable consumption and production became a major focus of OECD work, with environment ministers in 1996 highlighting the Organisation's important role in helping to elaborate the concept, including a focus on eco-efficiency. Significantly, a report on "Sustainable Consumption and Production Patterns" was delivered that year, not to environment ministers but to ministers of finance, economy and trade at the OECD's highest level body, the Council at Ministerial Level.⁹⁶

Shortly thereafter, however, the tide started to shift in international discussions; the phrase "sustainable consumption" became increasingly associated with difficult North-South divides, including a call by some for developed countries to radically scale back their unsustainable consumer lifestyles. Many OECD country representatives saw this as an untenable call for them to reduce the living standards for people in their countries. At the time, increasing consumption was seen as one of the main drivers of a strong economy, so any discussion at the OECD – a strongly economics-based intergovernmental organization – that could lead to recommendations to reduce consumption quickly became unpopular. As a result, following further reports in 2000⁹⁷ and 2002,⁹⁸ the profile of OECD work on sustainable consumption faded. It was subsumed under work on specific policy instruments and policy mixes.

While policy instruments such as environmentally-related taxes, water metering and pricing, energy efficiency standards for homes and waste charges provide essential incentives and information to enable better consumer and producer decisions, there was careful avoidance of any explicit discussion on “sustainable consumption” in work delivered during this period. The focus, instead, was on how policies can help individuals be better informed consumers and consume differently, but not necessarily consume less. This reflected the view that the role of governments was not to tell consumers what to do (the so-called “Nanny State”), but rather to provide individuals with the information and options needed to enable them to make better, more sustainable consumption choices themselves.

Empirical Evidence for Better Policy Design

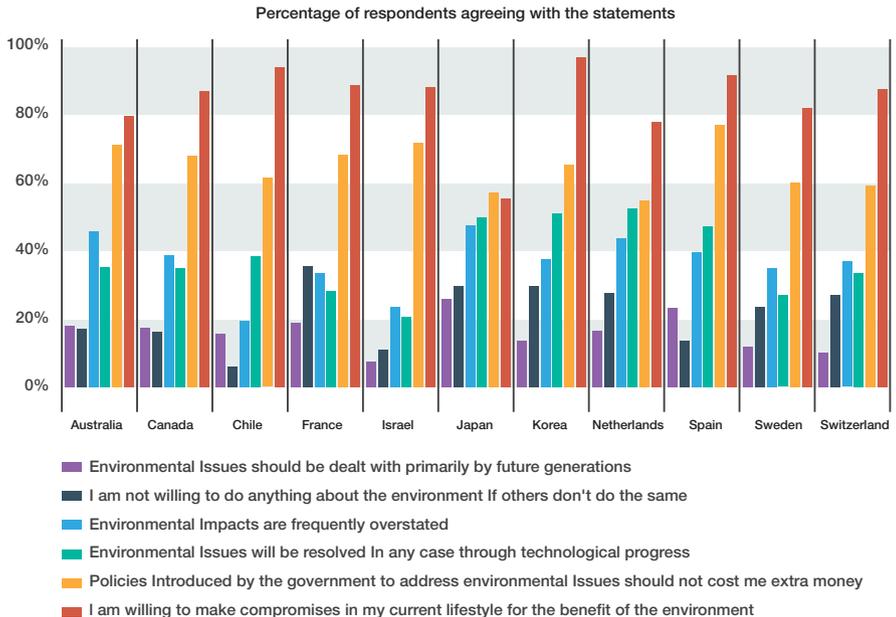
More recently, it has become increasingly apparent that individuals and households do not always respond to government policies, including environmental policy instruments, in the way that theory suggests they should. To help policy-makers better understand how their policies affect household environmental behaviour in the real world, the framework for analysing household decision-making needed to be broadened. The OECD responded to this challenge in 2008 by developing a ground-breaking survey of household behaviour on key environmental issues across a broad panel of households in different countries.⁹⁹ This survey represented a breakthrough in providing comparable primary data on household behaviour through using a common methodology, covered a range of key policy areas and adopted a wide geographical coverage.¹⁰⁰ As a result of this evidence base, the OECD is again actively contributing to international discussions on sustainable consumption and helping governments and stakeholders around the world better design and target policy measures.

While the work was not popular with all countries initially, it has gained increasingly broad-based support across OECD governments and with the private sector, and the scale of the project has expanded as a result. This is in part due to shifting the focus of discussions away from a high-level and theoretical debate on whether and who might need to “consume less” and towards a focus on an empirically-based analysis of how to design more effective and efficient policies to influence consumer and household behaviour. Importantly, this should be done while taking into account any potential social impacts of consumer policies.¹⁰¹ In the end, the practical and empirical basis of the approach has created a level of comfort with the work. This sufficiently countered concerns that the work might slip back into rhetoric that focused on simply reducing consumption.

Periodic OECD surveys on Environmental Policy and Individual Choice (EPIC) are now conducted in five key areas where households exert pressure on the environment: energy and water use, transport, food consumption and waste generation. Each new survey allows for the refinement of policy lessons learned, building on the experience gained from comparisons across policy areas and across countries.¹⁰² Moreover, the time series data that is being developed through these surveys will enable the tracking of eco-behavioural changes over time and the analysis of trends.

The second round of the survey was implemented in 2011 with more than 12,000 respondents in 11 countries.¹⁰³ While 80% of those surveyed say they are "willing to make compromises" as presented in Figure 9, what they actually do in their current lifestyle varies across countries.¹⁰⁴ As in the 2008 survey, this unique set of household-level data provides information about various types of policies that influence households. Examples of measures include economic incentives (e.g. waste charges, water pricing structure), eco-labels (e.g. energy efficiency, organic) and the environment-related public services available (e.g. recycling schemes, public transport). This also allows examination of differences in environmental behaviour across individuals and households (e.g. income, age, education) and the effect of personal environmental attitudes and norms. This information is critical for governments to better target their policies to the right people in order to influence consumer changes, for example focusing on specific age groups or income levels.

Figure 9: Do Consumers Care about Environmental Issues?



Source: OECD Greening Household Behaviour. Overview from the 2011 Survey (OECD, 2013)

A Mix of Policy Instruments Is Needed

Another important shift in the focus of the OECD's work on household behaviour took into consideration a growing awareness of the existence and quality of information available to consumers. This, in turn, helps to shape the environmental attitudes and norms that have been identified as so critical in influencing consumer choices. From the establishment of the OECD Environment Committee in 1970, the traditional focus of work had tended to be on the role of economic instruments as powerful tools in influencing decisions.¹⁰⁵

The OECD household survey served to confirm the importance of providing the right economic incentives to spur behavioural change, showing that pricing really does work: price-based measures and relative price changes (e.g. for electricity, water, fuel or waste disposal services) can be important tools for reducing emissions and waste, and providing incentives for more efficient use of natural resources. For instance, analysis of the 2008 survey shows that households charged for their water consumption on a volumetric basis consume approximately 20% less water than those that are not charged. In addition, they are more likely to invest in water-efficient equipment, such as low-flush toilets and water-efficient washing machines.¹⁰⁶ Overall, over one-third of OECD countries have reduced their total water use since 1990, despite continued economic and population growth in most countries, in part as a result of better water pricing policies.¹⁰⁷ Similarly, charging households for the mixed waste that they generate can be seen to increase recycling volumes across countries. The Republic of Korea's volume-based charging scheme is an example of a pay-as-you-throw approach implemented at the national level. Survey results indicate that waste generation tends to be between 20-30% lower with unit pricing.

Importance of Soft Instruments and Social Norms

However, the survey also highlighted the important role that "softer" instruments play to complement prices. For example, the provision of information to consumers and public education can help reinforce pricing measures to induce and enable changes in behaviour on the demand side. Thus, clear labelling about the energy- and water-efficiency of household appliances is critical to helping consumers choose the right appliances to minimize their electricity and water bills. The results of the survey indicate that the role of such soft policy measures is even more significant than earlier assessments of policy instruments assumed. This has contributed to a shift in environmental policy analysis at the OECD and elsewhere towards a focus on the mix or package of policy instruments that together can provide the right incentives for reducing environmentally-damaging behaviour. It is often said in environmental policy communities that there is no silver bullet, but silver buckshot might be more effective.

The OECD household survey work pays particular attention to the role of environmental awareness and households' concern for the environment, and the impacts these have on decision-making. It finds that respondents who express a particular concern for the environment relative to other issues are more likely to adopt "green" practices and make investments that reduce environmental impacts. For example, environmental awareness is found to be a main driver for water-saving behaviours and reduces the likelihood of a household owning a car.¹⁰⁸ Concern for the environment also influences demand for energy-efficient appliances and renewable energy, as well as consistency in waste recycling and decisions to consume organic food. This analysis suggests an increasingly important role for governments in bolstering information campaigns in order to raise people's environmental awareness and induce behavioural change.

The work also emphasizes the role of social and environmental norms more generally. Results indicate, for instance, that intrinsic motivations, such as a sense of civic duty, play a significant role in explaining households’ recycling efforts. As such, policy-makers need to take into account the effect of different policies on norms, for instance on how the public views an environmental good that is to be protected by government measures.

The findings of the OECD’s analysis show that, even if consumers are concerned about the environmental impacts of their purchase decisions, they may not have access to the information required to behave accordingly. Providing information on product characteristics to consumers allows them to make better informed decisions and, among other things, enables consumers who are willing to pay a premium for products that are produced in less environmentally-damaging ways (e.g. sustainable timber or fish, organic food) to do so.

This effectively creates a market for the “environmental good”. But eco-labels need to be clear and comprehensible to work and, as such, measures that encourage ease of identification and understanding of eco-labels are likely to be more effective. Trust in the information provided (and in the source of the information) is necessary for labelling schemes to be effective. Moreover, the labels prove to be particularly effective if they identify both “public” and “private” benefits. People are more likely to respond to eco-labels if they also identify direct benefits to the consumer, such as the potential for reduced energy bills resulting from energy-saving behaviour. The personal health benefits that many respondents associate with the consumption of organic food is another example.

Support through Infrastructure, Creativity and Patience

The analysis indicates that pricing and information-based instruments to shift individual behaviour are even more effective when they are implemented in combination with public investments in environment-related services, such as recycling collection services or the provision of public transportation. For instance, the survey findings confirm that the presence and quality of collection services for recyclables is found to increase recycling participation and intensity.¹⁰⁹ However, it is important to bear in mind the costs associated with the provision of such infrastructure, and to ensure that the overall benefits of their provision outweigh the costs.

The survey also identifies situations in which demand-side policies may be less effective, and when supply-side measures or policies designed to overcome market barriers and failures may be needed. Findings point to the fact that some environment-friendly decisions tend to be only weakly driven by demand, and governments may have to rely more heavily on complementary measures targeting the supply side to reach ambitious policy objectives. For example, relatively few households are prepared to increase their electricity bill by more than 5% to buy green energy. The results also indicate that home ownership increases the probability of installing energy-saving equipment, a pattern that can be explained because tenants have little incentive to invest in a property they do not own, particularly if they are not planning to occupy it for a long period of time. This highlights the need to address barriers to investments in energy-saving

measures in rental properties by policies going beyond pricing and information provision. Similarly, a number of countries are now putting in place government interventions to alleviate such barriers, but these must be designed with care. The UK Government, for example, aims to introduce a Green Deal scheme in October 2012 to encourage landlords to invest in the energy efficiency of their properties.¹¹⁰ In the Energy Efficiency Plan 2011,¹¹¹ the European Commission is also planning to bring forward legislative provisions requiring Member States to introduce measures to address the issue of "split incentives" between tenants and landlords and facilitate the upgrading of energy performance.

In addition, the analysis has highlighted how the design of policies targeting household behaviour needs to bear in mind the fact that households may adjust to the incentives only after a significant time-lag. This is particularly so in respect of capital expenditures as well as the location and characteristics of household residences. The short-term response to incentives may be limited until households make new investment decision to replace their stock of durables (e.g. cars or appliances) or change the location and characteristics of their residence.

Next Steps: Bringing Sustainable Consumption Concerns into Mainstream Economics

The results of the work to-date suggest that a mix of policies will be needed to spur behavioural change and that, to make good choices, policy-makers need to know more about what drives behaviour. So, in addition to the right economic incentives to make "greener" decisions, consumers need adequate infrastructure to support such choices and reliable information on products' environmental characteristics.

The implementation of different policy instruments can, however, come up against the existence of various behavioural biases. These are the subject of new OECD work rooted in behavioural economics. Recent studies in this area and on "nudging" have shown that theories relying on an assumption that people make rational choices may, in some circumstances, be a bad basis for economic reasoning in general, and environmental economics in particular.

Factors such as habit and inertia (e.g. reluctance to change energy provider) or loss aversion (e.g. reluctance to trade water rights for fear of "losing" something, even if it is something that's not needed) can be important drivers of behaviour. Consumer responses to environmental taxes or eco-labels may be significantly affected by such "psychological" factors. For example, some studies suggest that households tend to reduce their own energy consumption when receiving an energy bill comparing them with similar households that consume less. Understanding these behavioural traits and how policy "nudges" can influence them can provide a sounder basis for elaborating policy mixes to promote environmentally responsible behavioural changes and can also help to improve their political acceptability.

The next rounds of the OECD Survey on Environmental Policy and Individual Choice (EPIC)¹¹² will allow us to further analyse household responses to policy measures with a view to examining the possible barriers to greener lifestyles and

to identify some of the catalysts of behavioural change. To complement this survey-based work, applied research with field experiments in selected countries will be undertaken. Examples being considered include the use of reference information on energy consumption and the sub-optimal uptake of grants for water conservation devices. These will allow us to gain a better understanding of how responses and attitudes towards specific environmental policies can differ from those predicted by standard economic models of decision-making.

To better draw out country and policy-specific information, the analysis of the 2011 OECD household survey includes a section examining the specific policies in place in the individual countries surveyed. This reflects a key focus in OECD work on green growth – and mirrored in the discussions leading up to and at the Rio+20 Summit in June 2012 – on the importance of carefully tailoring environmental and green growth policy advice to fit the specific circumstances of individual countries. It is only by undertaking detailed, empirically-based analysis of the type that the household survey enables us to understand the complex interactions of factors motivating actual consumer behaviour. With this understanding, governments can then design the policies that can help shift this behaviour onto a more sustainable path.

Conclusion

The terminology and the focus of the OECD’s work has evolved over time – from a focus on driving sustainable consumption to better understanding the incentives underlying household behaviour with a new focus on green behavioural economics.

These shifts in focus reflect some of the difficult political battles around these issues that have taken place at the international level, as well as in specific countries. The new focus moves away from a perspective that governments should stand back and not interfere in consumer decisions, to one which sees an important role for governments in providing the information base and incentives consumers need to make better informed and greener choices, with the aim of contributing to a generally enhanced welfare for all.

For almost 40 years the OECD has steadily built up a robust understanding of how government policies can influence household and consumer behaviour. The result of this work is now becoming part of the mainstream economic approach to green growth across the work of the Organisation and it is contributing to the international debate. A key challenge is to better link this understanding of consumer behaviour to designing the right policy frameworks to promote greener lifestyles.

Policy frameworks also need to support businesses to deliver the services consumers need to reduce their environmental impacts at home and in transport. A number of innovative business models are developing that focus on meeting consumers’ needs in an environmentally sensitive way, rather than simply encouraging the purchase of more and more products.

The government policies that can facilitate the profitable and rapid spread of these innovative business models at scale are not yet in place. That is the next challenge.

Lessons from the Marrakech Process

- Adriana Zacarias Farah, United Nations Environment Programme

Adriana Zacarias Farah has been building the profile of sustainable consumption and production within the United Nations Environment Programme (UNEP) for over a decade. This experience has given Adriana a unique perspective on the possibility of voluntary agreements to produce tangible results. Over the past few years, she has shared her experience through active contribution to the Global Agenda Council on Sustainable Consumption.

A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and wellbeing depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes.¹¹³

I still remember those days at my university studying political science, when I was called the “eco-loca” (Eco-crazy). I was once asked why I was so interested in sustainable consumption. My genuine answer was: “It is common sense; we need to save resources to protect our planet.” Later on, I understood that common sense is not always so common.

At that time in the 1990s in Mexico City, we were surrounded by information about environmental degradation and the loss of biodiversity every day. I felt the urgency to do something, but I was not sure what to do. Soon, I realized that there was something I could do as a young urban student; it was through my consumption choices and lifestyles. This is indeed the power of individuals! Once the problems around products and consumption patterns are known, there are two choices: continue being part of the problem or be part of the solution.

I started my career as an environmentalist with a group of friends acting upon the same dream. We organized various projects to create environmental awareness, conducting workshops and participating in television and radio programmes on environmental protection and the ecological footprint. Voluntarily, we implemented recycling systems at our universities and founded various NGOs to carry on environmental projects and to increase youth participation at the national and international levels.

Later, I looked at environmental problems from the perspective of the Mexican Ministry of Environment and the Chamber of Deputies during a period when my country, like many others, perceived sustainable development as an obstacle to economic growth. Business was reluctant to consider any regulation or economic measure for environmental protection. Our task was to create awareness and identify win-win solutions and low hanging fruit to encourage governmental and business cooperation.

Some years later, I began working on policies for sustainable consumption and production from an intergovernmental perspective, first at the Organisation for Economic Co-operation and Development (OECD), analysing policies on sustainable household consumption, and then at the United Nations Environment Programme (UNEP). This is the journey I would like to talk about.

Sustainable Consumption and Production in the International Arena

Sustainable consumption and production (SCP) is nothing new. Its debate started long ago, beginning in the 1970s (or even centuries ago, if we go back to the discourse of Thomas Robert Malthus with his publication "An Essay on the Principle of Population" in 1798, or to Paul Ehrlich with his book *The Population Bomb* in 1968). The Club of Rome *Limits to Growth* report in 1972 became a milestone in the SCP discourse, as well as a controversial concept at the time.

Over the past two decades, various government and intergovernmental processes have acknowledged the importance of SCP. In 1992, at the Earth Summit in Rio de Janeiro, Member States recognized that, "... the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances."¹¹⁴

Ten years later, heads of state at the World Summit on Sustainable Development recognized that SCP is an overarching objective and an essential requirement for sustainable development. The Johannesburg Plan of Implementation (JPOI) called on all stakeholders to, "... encourage and promote the development of a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production to promote social and economic development within the carrying capacity of ecosystems ..."¹¹⁵

The Birth of the Marrakech Process

However, in Johannesburg various countries wanted to launch a "10-Year Action Plan on SCP" with specific goals and indicators. Negotiations were very difficult. The only possible agreement was for the JPOI to call for the development of a 10-year framework of programmes on SCP (hereafter 10YFP).

As Viveka Bohn, Co-chair of the Marrakech Process says about the 10YFP, "It was an important achievement, but then the Commission on Sustainable Development (CSD) decided [in 2003] to review the proposal for a 10YFP only in 2010 and 2011. Our Earth could not wait a decade for a 10YFP to be developed and implemented. Hence we – a small group of people from governments together with UNEP, UNDESA and a number of NGOs – organized an International Expert Meeting on the 10YFP in June 2003 in Marrakech, Morocco. ... This was the beginning of the Marrakech Process."¹¹⁶

What is the Marrakech Process?

The Marrakech Process can be described as a bottom-up multistakeholder process that had two main objectives: to support the implementation of SCP policies and projects at the regional and national levels, and to contribute to the elaboration of the 10-Year Framework of Programmes on SCP (10YFP) to be reviewed by the Commission on Sustainable Development (CSD) in its cycle in 2010/11.

UNEP, together with the United Nations Department of Economic and Social Affairs (UNDESA), acted as the Secretariat of this global process, with the active participation of national governments, business and industry, civil society and other stakeholders. The first meeting devoted to developing the 10YFP took place in Marrakech, Morocco in June 2003, hence the name of the process.

This coalition of the willing was unique and forward thinking; it triggered and became the heart of the Marrakech Process. I had the good fortune to start working at UNEP as an associate programme officer a few months before the Marrakech Process was launched. This was a very exciting and empowering period. I was working with Bas de Leeuw – also known as the father of the Marrakech Process – who was not only my supervisor, but who became my mentor.

When we launched the Marrakech Process, it was not clear to us what a 10YFP would look like, nor how the Marrakech Process would unfold. However, something was very clear: there was no blueprint or one-size-fits-all solution. It was also crucial for us to build linkages between poverty and SCP. That was the first battle, since a close partner who was intent on pre-setting the focus areas for the Process did not want to include the issue of poverty alleviation because it was part of another chapter of the JPOI. In the end we agreed, and the phases of the Marrakech Process were defined based on a bottom-up approach, as follows:

1. *Organizing regional consultations to promote awareness and identify regional SCP priorities and needs:* SCP means different things in each region and country. Hence, it was necessary to identify particular regional as well as global priorities.¹¹⁷ My first missions with UNEP were in Latin America and Africa, where one of the most important priorities was – and still is – poverty eradication. It was clear that these countries would not engage in the process if the terms poverty and SCP were not linked. Together with the Task Force on Cooperation with Africa, we developed a review paper entitled “Leapfrogging Possibilities for Sustainable Consumption and Production in Africa”.¹¹⁸
2. *Building regional strategies and implementation mechanisms:* The Process supported the development of regional SCP strategies in Africa, Latin America and the Arab region and collaborated with SCP strategies in Europe and in Asia and the Pacific. These strategies were developed with regional and national ownership and have been endorsed by the relevant regional institutions.
3. *Implementing concrete projects and programmes at the regional and national levels:* Over 70 initiatives were launched, including the implementation of 33 demonstration projects worldwide. These included 20 national SCP action plans and 11 pilot projects on sustainable public procurement involving ministries of the environment and of finance; the Green Passport campaign for awareness raising; and a global survey on sustainable lifestyles conducted in 20 countries.

4. *Using international review meetings to evaluate progress, exchange information, and build international cooperation and coordination:* Essentially the first international meeting in Marrakech (2003) launched the Process, and the second in Costa Rica (2005) closed the consultation phase, shifting the emphasis to implementation and the launch of the task forces. The third meeting in Stockholm (2007) was the beginning of the political phase, focusing on the development of a 10YFP proposal. The fourth meeting (an intersessional meeting on the 10YFP) was held together with the CSD in Panama (2011), where the draft proposal for a 10YFP was discussed.

The first six years of the Marrakech Process were the most inspiring and dynamic. They were based on voluntary initiatives, partnerships, awareness raising, technical assistance and capacity-building activities supporting the development of SCP methodologies and the implementation of concrete projects at the national and regional levels. Regions (Africa, Asia and the Pacific, Latin America and Europe) started to develop their own SCP strategies, identifying SCP priorities and gaining institutional support. The Process was funded largely through voluntary donor contributions mainly from the European Commission, Germany, Norway, Sweden, Switzerland and the United Kingdom.

What Was the Innovative Aspect of the Marrakech Process?

The most innovative aspect of the Marrakech Process was its participatory and bottom-up approach, giving strong ownership to governments, regions and stakeholders. Despite being an informal and voluntary process, it was very dynamic through its regional consultations and task forces.

The Marrakech Process task forces also represent an innovative model for partnerships. I still remember when Bas de Leeuw launched the call to develop them. This was at a very particular time – we had created momentum, and governments were ready to move into the implementation phase, but we did not have enough resources to support them. Additionally, working groups focusing on specific SCP themes and sectors were needed to help us communicate and implement SCP better. Most importantly, it was necessary to shift the ownership and leadership of the process to governments and stakeholders.

We were surprised by the positive response within the first few months, during which five countries expressed their willingness and readiness to launch task forces: France, Germany, Sweden, Switzerland and the United Kingdom. A few months later Finland and Italy joined.

In the end, seven task forces emerged in four categories: Sectors (Sustainable Tourism and Sustainable Buildings and Construction); Regions (Cooperation with Africa); Policy Tools and Programmes (Sustainable Products, Sustainable Public Procurement); and Social and Behavioural Issues (Sustainable Lifestyles, Education for Sustainable Consumption).

The task forces were voluntary initiatives, each led by one government engaging different stakeholders with a North-South balance. They set clear objectives and work plans, implementing SCP activities at the national and regional levels while giving ownership to partners. The task forces supported the implementation of regional SCP priorities and strategies. For example, the Task Force on Cooperation with Africa facilitated the development of an African eco-labelling mechanism – a third party certified eco-label (Eco Mark Africa, EMA) for agricultural, forestry, tourism and fisheries products. It aims to increase international market access for those products.¹¹⁹

What Were the Most Important Challenges?

SCP is naturally a cross-cutting issue. Hence, its communication remains a complicated endeavour requiring different narratives depending on the audience. One example is our experience in building cooperation with development agencies. We conducted a survey with 25 agencies. The results revealed that most of the agencies (79%) are not familiar with the concept of SCP or do not use it; however, most integrate SCP issues in their sectoral projects, such as energy and resource efficiency (86%), waste management (75%) and water and sanitation (76%). Most of their efforts focus on eco-efficiency and cleaner production (90%). It was inspiring to learn that most agencies perceive SCP as an enabler to help reduce future costs (79%) and contribute to poverty reduction (63%).¹²⁰

Another challenge was to break the myth that SCP is about consuming less. It is rather about making informed and smart choices and doing more and better with less. Finally, there continue to be misperceptions that SCP is only an issue for developed countries. This has been central to international negotiations for the last four decades – and was still present at Rio+20. Today, however, with the current consumption trends of the global middle class, it is clear that SCP is an issue for all countries, certainly with common but differentiated responsibilities.

Negotiations at the Commission for Sustainable Development

The second phase of the Marrakech Process was more challenging. In 2007, after the third international meeting of the Marrakech Process in Stockholm, the Process entered a more political phase, elaborating a 10YFP proposal and preparing the CSD negotiations. Parallel to this, my responsibilities increased, becoming UNEP's Coordinator of the Marrakech Process. This was an intensive and exhaustive period, building a common vision and structure for the framework. UNEP together with UNDESA drafted multiple proposals in close consultation with the Marrakech Process Advisory Committee, with a broad consultation process in all regions and with all stakeholders. This was extremely important and interesting for me, but at times also frustrating. It included relevant discussions between agencies during which we often shared different points of view.

The Marrakech Process gained political weight. With it, UNEP's institutional support also increased with strong commitment and leadership from our Director, Sylvie Lemmet, and Deputy-Director, Khalida Bouzar, in addition to continuous support from Arab Hoballah, Chief of SCP Branch, and Charles Arden-Clark, Head of Unit.

Since the Johannesburg Summit, very substantial preparatory work for establishing the 10YFP was undertaken by the Marrakech Process. As Switzerland clearly expressed: "This is actually quite remarkable and I do not think that, in the history of the CSD, it has ever been the case before that a parallel process has been ongoing for several years to prepare one particular topic on the agenda of the CSD."¹²¹

Negotiations on the 10YFP at the CSD 18th and 19th sessions in New York were at the same time the most enriching and disappointing experiences of my career. The progress achieved on SCP, especially through the Marrakech Process, was widely acknowledged by the G77+China as well as by the developed countries. The political profile of SCP was raised on the international agenda.

However, at the CSD 19th session in 2011, negotiations were tough, proceeding word by word. We worked on the negotiating text, often from noon until early morning. After this very intense negotiation, full agreement was reached for the whole proposed text of the 10YFP. Our happiness, however, was not to last. The next day, due to disagreements on other sections of the CSD document not related to the 10YFP, the Commission failed to adopt a decision.¹²² The 10YFP was kept on standby...

The CSD19 became the end of the Marrakech Process. The main objective of Member States and friends of the Marrakech Process was to persist and obtain a formal political commitment on SCP. The next and last opportunity for the 10YFP was the United Nations Conference on Sustainable Development (Rio+20) the following year in June, 2012.

Rio+20 Adopts the 10-Year Framework of Programmes on SCP

But the story of the Marrakech Process and SCP in the international arena does not end with a sad note from the CSD's 19th session. After one year on standby, the 10YFP was recently adopted by the heads of state at Rio+20.¹²⁵ It was worth waiting one more year, as the 10YFP became one of the few concrete and operational outcomes of Rio+20, lending it more political relevance and visibility.

The 10YFP is meant to be a global framework for action on SCP. It will strengthen and coordinate international cooperation, supporting regional and national initiatives and accelerating the shift towards SCP. It involves all countries and multiple stakeholders, encouraging innovation and cooperation. The framework will provide capacity building, technical and financial assistance to developing countries that support the implementation of SCP policies, and initiatives. The 10YFP builds upon the experience of the Marrakech Process and other existing initiatives.

How Long Does It Take to Mainstream a Concept and Take Action?

Forty years after the Stockholm Declaration in 1972, the world continues to speed down an unsustainable path, despite over 500 internationally agreed upon goals and objectives to support the sustainable management of the environment and improve human well-being.¹²⁴ Multiple studies indicate that business as usual is not an option. They call for imperative action to change the current unsustainable patterns of consumption and production, and resource extraction.

During these four decades, knowledge on SCP has increased and solutions have been explored and piloted. The answers are out there, but we lack implementation. In the 1990s, the focus was on environmental awareness and the power of consumers (the software). Today we know we must not only inspire but enable people to adopt sustainable lifestyles, requiring important changes in the "hardware" and "hard rules" of our societies. This includes providing sustainable infrastructure, appropriate regulatory frameworks, the right market signals, access to efficient and affordable products and a new collective vision for a better and sustainable world.

As a voluntary initiative, the Marrakech Process proved to be an effective mechanism to support the implementation of SCP policies at all levels. These outcomes were achieved with very modest resources but strong commitment. The 10YFP can be a turning point to expand the coalition of the willing and scale up implementation and replicate best practices. It is a framework for action open to all stakeholders to find synergies, develop partnerships and work together for this common vision.

Business engagement is crucial. It was present to some extent in the Marrakech Process through the World Economic Forum, the International Chamber of Commerce, and the World Business Council for Sustainable Development, but stronger business commitment supporting the implementation of sustainable policies and initiatives is still needed.

Looking back at my time as student and environmentalist, I realize how innovative all those actions were at the time, and how "eco-loca" I was indeed. I have seen with impatience how long it takes to mainstream ideas and transform them into normal practices for universities, government and business. During my journey, I have been given hope by the many eco-locos, innovative and inspiring projects and creative communities I have encountered along the way. We need more eco-locos and more action!

From Doing Less Harm to Solutions at Scale - John Kornerup Bang, A.P. Møller-Maersk

John Kornerup Bang is Lead Adviser on Environment and Sustainability Trends for A.P. Møller Maersk. With a strong background in civil society, in his essay John shares the story of an evolving interaction between trade and sustainable consumption, especially as it relates to the relationship between developed and emerging economies, including for the logistics sector.

“If the Chinese do not adopt higher environmental standards, we will simply have to block Chinese export into the European Union.”

It's 2006, and I'm in a dialogue meeting in Beijing between European and Chinese diplomats as well as representatives from civil society. The context is the bilateral European Union (EU)-China trade agreement. At that time I had been working on sustainability and the globalized economy at WWF for six years.

I was part of this EU-China dialogue meeting as a consequence of a substantial redirection of our strategy three years earlier, aiming at shaping international trade and investment relations in a way that enhanced China's potential as a solution provider. A basic feature of this new strategy was to match purchasing capacity in OECD countries with China's capacity to achieve scale and bring down the costs of sustainable products. Why this change in strategy? Sustainable consumption was, and still is, often considered in the narrow sense of what products consumers buy. It can be better viewed through the lenses of sustainable production and consumption patterns, including logistics systems as potential facilitators of an optimal production and consumption system.

The middle of last decade was a time when NGOs and companies had been working on market pull strategies for more than 10 years. The focus at the time was largely on niche product labelling, such as organic food, and certifications by the Forest Stewardship Council (FSC) and the Marine Stewardship Council (MSC), as well as working with the supply chain concentrated on code of conduct and chain of custody. Furthermore, with the strong emergence of the renewed climate change debate, an increasing notion was that the global logistics system was a barrier to a sustainable consumption system rather than a facilitator. On the metrics side, a lot of effort was put into how far a product had travelled. The notion of “food miles” was high on the agenda, suggesting that the less a product had travelled, the more sustainable it was.

In many ways, the emergence of the food miles discussion and its focus on one “random” part of the life cycle of a product was surprising, given how mature life cycle analysis had become since it really gained momentum in the 1990s. After all, the transportation part of a food system only contributes to around 10% of its carbon footprint¹²³ and the food miles concept doesn't even refer to the entire transportation element but only to the part from the primary producer until the product reaches the consumer in the supermarket. In fact, for shipped products,

the transportation of the product by private car from the store to the home may easily be the largest part of the transportation component of its footprint.

However, soon the food miles concept was met with counter arguments pointing to the fact that fruit and vegetables grown in greenhouses in northern Europe had a much higher footprint than sun-grown vegetables from Africa (even if transported by airfreight) and that producing and exporting such products gave important development opportunities to poor countries. This concept was most successfully put forward in the “Fair Miles” publication of IIED and Oxfam.¹²⁶

In any case, the “food miles – fair miles debate” added the social development side to the environmental debate, and pointed to the need for relevant numbers to understand systems and how to change them in a more sustainable direction. A simple focus on such a small part of the system was clearly not sufficient.

To me there was more to it than that. This product focus led to too much concentration on how to make current products more sustainable, but I saw a need to step back and ask how to meet our needs in the most sustainable way. I found that a service perspective rather than a product approach would be important if we are to move beyond incremental improvements to existing products to achieve transformational change in the system. Here again I came across the challenge of methodology: How can the right kind of numbers for this perspective be calculated? More on that later.

Exporting the EU Model Was Not an Option

Our effort in the new strategy around China and other leading emerging economies including Brazil, the Russian Federation and India (the BRICs) was also driven by a vision of shaping international trade and investment patterns through policies that would accelerate innovative solutions and their up-take, and hence maximize the potential for scale that the niche market labels could not achieve.

The quote at the beginning of this essay was typical of the atmosphere around China’s re-emergence as a global economic powerhouse: *China’s growth comes with substantial environmental problems that have to be minimized.* At the time, the standard solution for how this might be achieved was, to a large extent, the export of EU standards. So why was a global environmental NGO all of a sudden in opposition to this viewpoint? After all, EU standards were much better than Chinese norms, and major positive impacts in minimizing environmental damage could be achieved if the Chinese were to adopt EU standards.

The reason behind our new strategy and its focus on China (and the other BRIC countries) as solution providers was not due a lack of understanding or an acknowledgement of the huge environmental problems resulting from Chinese growth. Instead, the new strategy slowly emerged as we substituted the focus on minimizing environmental problems based on moral argument in favour of a focus on BRIC countries as global solution providers. This would come mainly through a combination of ability to get to scale as well as the need to rebuild large parts of the economy.

All this was (and still is) taking place in a context where global resources were already relatively scarce compared to the situation of abundance of resources when the current economic model was created and shaped to match a situation in which capital and labour were scarce. Since the 15th Conference of the Parties (COP 15) in Copenhagen in 2009, this notion of needing to rebuild the global economic model has gained some momentum in the mainstream debate, but in the beginning and middle of the decade it was a rather controversial idea in mainstream European policy debates.

That it was controversial is a little strange to think about today; after all, the numbers were clear even then. Humanity's total global footprint was already exceeding the capacity of the planet by almost a fourth¹²⁷ and three additional planets would be needed if all people on Earth were to live like Europeans. We NGOs and thought leaders, including Lester Brown,¹²⁸ had been saying that for quite some time, but it was an argument with little effect, probably because everyone was quite aware of the fact that everybody else did not live like Europeans, nor did they have any real prospect of doing so in any foreseeable future.

However, the landmark discussion paper from Goldman Sachs, "Dreaming with BRICs: The Path to 2050"¹²⁹ from 2003 really changed my perspective. It was now clear that a realistic scenario could be that a large proportion of "everybody else" might actually get to live like Europeans or, even worse from a sustainability point of view, like Americans. This was extremely good news for enhanced social opportunities for poor people around the globe in the short to medium term, but at the same time implied huge challenges for the planet and, as a consequence, for social opportunities for everybody in the medium to long term.

The EU was and is a leading political entity when it comes to raising environmental standards, and a country like Denmark, for example, can take considerable pride in the success of growing the economy by 75% while keeping energy consumption constant. While undoubtedly a remarkable achievement compared to global standards, the average CO₂ emissions per Dane was still 10 times higher than needed, should everybody on the planet have the same opportunities for enhanced welfare, while at the same time keeping global warming under 2 degrees. That would leave a tonne per person on the planet while Danes emitted 10 tonnes per person.

It was clear to me that working on a strategy to optimize European standards, which would then be exported to or imposed on other economies, would be a programme doomed to fail.

Business First, Policy Next?

Getting off the ground with the new strategy was not easy. The idea of approaching BRIC countries as solution providers was viewed with even stronger scepticism in 2003 than represented by the quote at the beginning of this article in 2006 both internally at WWF and by external partners in public administration in Europe. In fact, it was not even an easy pitch in the BRIC countries. China, for example, has a long tradition of looking inward and the idea of China having a global leading role to play was not an obvious one. Furthermore, the intention to work on and within the key economic space was also an obstacle. Being WWF, we were routinely referred to the ministry of environment when approaching ministries of finance, trade or economy.

The first milestone was a first-ever NGO partnership with the Chinese ministry of commerce, MOFCOM. The deal was brokered by my erstwhile colleague, Dennis Pamlin, who together with Tom Crompton and myself had been the key architects of the new strategy.¹³⁰ This first partnership with MOFCOM resulted in a report on rethinking Chinese investment, which was jointly launched in 2006,¹³¹ initiating work to connect the main dots in the global economy. Since then, the role of domestic Chinese consumption and thus the Chinese consumer has increased dramatically whereas, at the time, China was mainly in a manufacturing role; raw materials came from developing and OECD countries, with the EU in the role of the main consumer, having the largest purchasing power.

The Chinese administration came to us with a clear and strong focus on the need for innovation, and rapidly improved resource use. The EU, however, had difficulty shifting its perspective from one of exporting EU standards and technologies to China to one of using instruments such as trade policies or public procurement as strategic levers to accelerate innovation, scale and cost reduction in China and other BRIC countries.

The case of EU anti-dumping duties on Chinese energy-efficient light bulbs (integrated compact fluorescent lamps, CFL-i) became symbolic of trying to change perceptions in this direction. Since 2001, the EU had imposed anti-dumping duties on CFL-i from China. They consumed 20% of the energy of normal incandescent lamps and lasted five times longer. The climate case was clear, and a total switch could save 23 million tonnes of CO₂ per year in Europe. IKEA had invested and boosted production in China and the prices had decreased rapidly so the case was good. However, European jobs, especially in Germany and Poland, were at stake and it took until 2008 before the anti-dumping duties were abolished.

Although we would like to think we were able to influence European trade policy at that level, we clearly could not. The decision-makers did not have real policy space to make this climate-friendly decision due to resistance from companies and unions especially in Germany and Poland, based on concerns for European jobs. It was clear that when the political climate finally became ready to abolish the anti-dumping duties, it was because IKEA had built a business around CFL-i's from China and thus other European business and job interests could counter the concerns of OSRAM and others.

A big international company had developed its business around delivering a service in a more environmentally-friendly way through production in China by enhancing sales in Europe, making energy efficiency cheaper, and by doing that it had created policy space for politicians to choose the greener political decision.

Thus the mechanisms leading to the abolishment of the anti-dumping duties were an interesting learning experience in the context of developing strategies to enhance more sustainable consumption and production patterns. It was business first, policy later.

Sustainability as a Driver for Profit and Innovation

These and similar experiences surely altered how I viewed the possibility of driving change first and foremost through policy. I came to believe, and still do, that the case can be made that the primary source of dynamic change when talking about transformative change must come from companies and their ability to innovate both technologies and business models in their search for profit, which opens up space for legislators to move the regulatory framework.

However, that required a change in approach to companies. Companies are normally – even by themselves – viewed as problems or simply as polluters when it comes to the environmental debate, and the job is then to minimize their pollution. Of course companies pollute as they produce, but at the same time they are also the ones that will develop and produce the solutions we need, at a scale we need. But it was not a simple task to begin to view companies as solution providers.

This takes us back to the question of numbers and methodologies. Footprint methodologies, as mentioned, were mostly designed to put numbers on a level of pollution. But how could the possible solutions be evaluated? No sector illustrates this better than the information and communications technology (ICT) sector. Green ICT at the time was about how to minimize the carbon footprint of the production of devices, and also increasingly in their use phase.

But we were taking another perspective. A simple example is videoconferencing equipment. Normal footprint numbers would serve to compare two different videoconferencing equipment systems and evaluate which one has the lowest footprint. However, in our perspective, videoconferencing equipment can substitute flying to meetings and thus delivers a similar service in a different manner. A 5% reduction in the use phase of videoconferencing equipment is good but minor compared to the reductions in CO₂ it creates in the wider economy every time it substitutes flying, because it allows people to meet without flying. That is not to say efficiency gains in current value chains are not important, they surely are. There is so much that needs to be done and can be done while making a profit.

However, part of the challenge we face related to sustainable consumption implies rebuilding large parts of the economy. For that purpose it is crucial we have numbers that allow us to understand parts in the system in light of their ability to transform the wider system. Or, in other words, we need numbers that facilitate comparison not only between like products, as we have now, but between different ways of delivering the same kind of service or meeting the same kind of need.

As a result, I increasingly engaged in a range of company partnerships, starting together with those companies to test methods to calculate the carbon positive contributions of their products and services. In collaboration with Novozymes, we found that a full up-take of enzymes from industrial biotechnology could save up to more than 2 billion tonnes of carbon every year through biofuel, enhanced efficiency in multiple industrial processes and the emergence of a biomaterial industry.

We spent substantial resources ensuring a sound methodology, and included universities and held stakeholder workshops to gather solid numbers. But we were obviously feeling our way in the dark as no standard for this kind of calculation existed, nor does it today. Numbers from a range of companies on carbon positive contributions began to appear and the need for coherence, transparency and standardization has been growing ever since.

In my current role at Maersk, we are faced with this very problem of the lack of real and relevant metrics that could drive and demonstrate the potential for solutions as well as address the difficulties in how to engage in dialogue on how to change the wider system we are a part of.

When evoking container shipping, the first picture that comes to mind is obviously one of large container vessels. However, viewed from a distance, container shipping is essentially not about ships but about connecting production and consumption in a globalized economy. Hence shipping potentially has a substantial role to play in making the global production and consumption system more sustainable.

A first major effort lies in greening the actual shipping industry itself. We have taken a leadership role in the industry and, through a range of such innovative solutions as spearheading slow steaming, we are on our way to eliminating 25% of carbon emissions per container moved by 2020.

However, although technically and operationally complicated, minimizing the footprint of container vessels is not the hardest part. While a major polluter due to volume, long-haul container shipping is also by far the most efficient way of transporting goods from one location to another. Hence the wider potential of shipping lies in its ability to optimize its service in a way that shifts cargo to shipping from other modes of transportation, in particular airfreight.

Again, obtaining numbers becomes a challenge, and even the numbers needed to compare the different modes in general are not easy to obtain. We engaged in a low-carbon leaders project with the United Nations Global Compact and WWF to work on conceptualizing and quantifying the carbon positive potential of various sectors. In the *Transformative Solution Leadership* publication, we compared different modes of transportation within certain ranges, concluding that international container shipping is between 15 and 90 times more efficient than flying, and suggesting that the term "food miles" be substituted by the concept of "*carbon distance*", asking how much climate impact there is when transporting a tonne one kilometre with different modes of transport.¹³² This will help decision-makers prioritize infrastructure investment and planning in the most climate-friendly way. Not all goods can be transported by ship, but the

possibilities are increasing. We at Maersk put a lot of effort in developing various refrigerated technologies, such as Starflower and Aqualife, which allow fresh cut flowers and live fish to be shipped rather than transported by airfreight, again enabling development opportunities in developing countries. New carbon footprint methodologies focusing on the positive potential of solutions that deliver a service in a different way are needed to understand the full climate potential of such technologies.

The world population is approaching 9 billion; an extra 4 billion in the consuming middle class is becoming a reality. No sector is under as much pressure as the agricultural sector, which needs deep changes. By 2050, agricultural output will have to increase by 75% and production in developing countries will have to double. Given the strong influx of sun around the equator, major opportunities for sun-grown, low-carbon food production in developing countries exist, providing growth and jobs, with subsequent shipment across the globe.

What is a shipping company's role in such a transformation? Surely it requires making changes across the system (or indeed across many systems). Apart from quantifying the impact, it must also access the platforms where cross-sectoral dialogues can take place and where ideas can be explored. We have found the World Economic Forum's platforms, on such issues as sustainable consumption, a new vision for agriculture and transportation ecosystems, very suitable because companies across different sectors can explore innovative ideas in a safe environment.

Achieving real sustainable consumption within the limits of our planet still seems a tremendous task, one that I don't feel certain we will accomplish in time to avoid major disruptions. However, progress in methodologies and enhanced dialogues provide hope. On a more personal level, I feel that 15 years of experience has made me better equipped to advance this important agenda. Taking a systems approach is crucial, cross-sector and cross-actor dialogue is a prerequisite, and the development of new and relevant metrics to drive systems change is a task we must not shy away from. What gets measured gets managed, and what gets managed gets done.

Recalibrating the Business Compass to True North - Peter Lacy, Accenture

Peter Lacy is Managing Director of Accenture Strategy and Sustainability Services for the Asia-Pacific region. Peter previously held the same role for the EMEA and Latin America regions. At the World Economic Forum he was nominated as a Young Global Leader in 2010, and he chairs the YGL Innovation and Business Models in a Circular Economy Task Force. He is also a fellow at Oxford University's Smith School of Enterprise and the Environment. Peter worked very closely with the Forum in his role as Project Adviser to the Sustainable Consumption Initiative in 2011-2012, a role that he agreed to extend through 2012-2013 as the work to explore the gap between consumer intentions and real-world actions continues. In this thought piece, that draws from work at Accenture, with the Forum and with Oxford's Smith School, Peter steps back from the project work to explore the overall direction of business progress on sustainability and sustainable consumption.

Many of us were involved or watching carefully as events unfolded at the United Nations Conference on Sustainable Development (Rio+20 Summit) on 20-22 June 2012 in Brazil. Twenty years on from the original Earth Summit – which saw the first real systematic engagement of business on the sustainability journey – Rio+20 created an important and timely juncture to reflect on the state of the business contribution towards sustainable consumption.

For me, Rio+20 also marked a very personal milestone and pause for reflection. It was exactly a decade on 5 July 2012 since I began focusing exclusively on the impact of social, economic and environmental issues on strategy and business performance, having taken time out of full-time strategy consulting to launch and become Executive Director of the Academy of Business in Society – a partnership between Shell, Unilever, IBM, Johnson & Johnson, Microsoft, the European Commission and many of Europe's top business schools, such as INSEAD, London and IMD – to develop better quality management research and education on sustainability. I had worked on sustainability in various guises before – dating back to a six-month spell on a renewable energy project with the Costa Rican Government in 1997. However, since 2002 – with the Academy, McKinsey and Accenture – my focus has been working with CEOs and leaders from global companies, international organizations, governments and NGOs to align the power of markets to sustainable development outcomes at the macro level (through public policy) and to align social and environmental issues with competitive advantage and value creation at the micro level (through corporate, business and functional strategies).

With doubts about the ability of the intergovernmental process to deliver meaningful progress and frameworks to address the systems challenges to deliver sustainable consumption, focusing on the role of business leadership and innovation seems critical. And I say this not as a businessman sceptical of government or regulation per se, but one that believes that, well structured and

implemented, it can be a major part of the solution. It also seems critical against the backdrop of the cold hard facts and figures of sustainability and consumption trends, which suggest that very little progress has been made at an aggregate level and that we are still hurtling along a business-as-usual trajectory towards either global shocks, conflicts or the onset of systems collapse.

In the year leading up to the Rio+20 Summit, I was given another perspective through my involvement as Project Adviser to the World Economic Forum’s initiative on Sustainable Consumption. Through this project, I had the opportunity to work with leading companies and offer my experience across a range of sustainability issues and explore how our efforts could positively impact consumer goods companies and their networks up and down the value chain. While the analysis that came out of this work was strong, I was most inspired by the company champions and the CEOs we interacted with who give reason for hope that business can lead the way out of a stalemate with policy-makers. This piece has been inspired by these and other interactions.

In getting our bearings right to address the challenges associated with our unsustainable consumption, we need to set the direction to “True North” and the transformational change and innovation required to align the power of market forces with sustainable development. True North innovation on sustainable business means resetting our direction from the misleading, frequently distracting and often over-celebrated “Magnetic North” of incremental change (or at least the idea of incremental change as an “end” rather than as a “means” upon which to build). True North means advancing the sustainable business agenda beyond examples of innovation by pioneers at the margins, to rethinking and reinventing the way we live, work, play and interact as societies. It means leaders asking the questions that reorient sustainable business towards scale at speed by triangulating strategy with science, stakeholders and an appreciation of the complex, adaptive and interrelated systems that make up our world. True North means transition and transformation to a sustainable and bright new future.

Taking Stock on Sustainable Business

Taking stock on sustainable business, some progress has been made, but much still remains to be done. First, some good news. Sustainability – in its social, environmental and economic sense – is increasingly a top agenda item in boardrooms around the world. For example, in a recent study I led for the United Nations and Accenture,¹³³ more than 93% of chief executives we spoke to from 800 global companies spanning 100 countries and 25 industries said that they see sustainability as “important” or “very important” to their future business success (see Figure 10). And this isn’t just a bourgeois, Western, advanced industrial economy concern. Among the nearly 150 CEOs we spoke to from emerging and developing economies, many of them in Asia Pacific,¹³⁴ more than 98% told us that they regard sustainability as a business imperative for their companies. This reflects not just long-term concern for global socio-economic and environmental issues, as perhaps we see in Europe and North America, but a gritty and realistic “lens of proximity” fixed on short-term business necessities in areas like pollution, energy, water, waste and poverty alleviation.

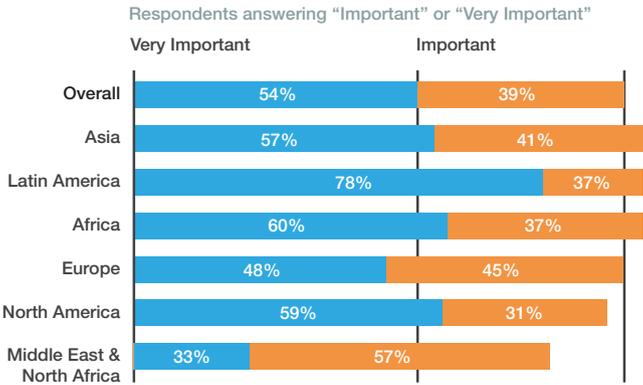


Figure 10: How Important Are Sustainability Issues to the Future Success of Your Business?

Source: United Nation Global Compact CEO Survey 2010 (Based on 766 completed responses)

Put simply, sustainable business, and efforts on sustainability more broadly, are not keeping up with what the science tells us we need to do. And studies ranging from the Stern Review for the UK Government or the United Nations TEEB report (The Economics of Ecosystems and Biodiversity) show that this matters from a global economics perspective, as much as from any environmental concern. According to the UN and Trucost, the cost of environmental externalities – or, put another way, the full cost of doing business picked up by society at large – of the 3,000 largest companies in the world is already US\$ 2.2 trillion per annum, a sum greater than the GDP of all but seven countries in the world.¹³⁵

This story is pretty much true at any aggregate industry level of analysis. Despite real relative gains in areas of environmental performance in industries, the pace and breadth of global growth have more than counterbalanced the gains. Take the global transport industry – a space that has seen real innovation in efficiency across modes of transport, from air to rail to sea to road, and is responsible for around 15% of total global greenhouse gas emissions (and 23% of total global carbon emissions from fossil fuels). Global CO₂ emissions from transport grew by 45% from 1990 to 2007. They are estimated to grow by another 40% between 2007 and 2030.

With a closer lens, real progress on sustainable business looks questionable. The extent of the challenge appears not to have fully penetrated mainstream discussions, and objective performance assessments reveal a mixed bag. A recent study by CERES on US companies' progress on sustainability makes for a stark reality check.¹³⁶ Despite good examples, few of the 600 companies assessed against sustainability leadership criteria had made anything more than minimal progress against their four-tier performance measures. Furthermore, a cold hard look at the numbers in many industries on issues like carbon and

natural resource use shows that, while efficiency is improving and there are real pioneers, in most sectors growth continues to mean that absolute emission levels continue to rise. Social issues, such as human rights and labour standards, come up against even more obvious tensions against prevailing economic incentives (lacking the obvious direct "efficiency" benefits of natural resource management), and show a similar questionable trend of improvement at an aggregate level.

Research also suggests that, while many executives have made genuine progress on sustainable business, the level of awareness and understanding on the implications of what sustainable business means now and in the future for their industries and companies is still unclear. Of the 766 CEOs we surveyed for the United Nations Global Compact, 96% believe that environmental, social and governance issues should be "fully embedded into the strategy and operations of a company". Sounds promising. However, 81% felt that they had already done this in their organizations. Now there are many ways to interpret this data. Definitions can be difficult to pin down. What did CEOs mean by environmental, social and governance issues? What did they mean by "fully integrated"? We also need to recognize the strengths and weaknesses of the data. Clearly there is a sample bias as all of the respondent CEOs were already members of the UN Global Compact and had agreed to give up either an hour of their time for a face-to-face interview or 30 minutes to fill out a survey. So it would be reasonable to assume they are indeed leaders in this area. Moreover, if the definition of "fully integrated" means that sustainable or responsible business is a part of strategy, operations and supply chains in some way or another, then I would expect that kind of response level.

From my own experience of more than a decade of working with many of the leading companies in the world on this agenda, at a guess, I would say that less than 1-2% could honestly say they have fully integrated sustainability into strategy and operations, and those companies probably wouldn't make that claim because they understand what it really means and that it's a journey of continuous improvement and renewal. I genuinely don't believe, contrary to what some commentators would like to believe, that this was a collectively dishonest response. It's certainly not the sense I had in the one-to-one discussions. Rather, I think that CEOs have not been exposed to or have not absorbed the scale of the transformational change challenge we face (perhaps not helped by those ready to fawn at the signs of any kind of progress at all). Either way, it is an interesting and thought-provoking finding on how to help leaders understand the nature of the problem of business and sustainability.

Reflecting on conversations in the boardroom and behind closed doors, I would also say three other trends are playing out. Companies are increasingly worried about the future but confident that we can put off starting the journey a little longer while we sort the worst of the economic crisis out (particularly true in Europe and North America, in my experience). They are also overwhelmed. Some leaders want to make progress, but the daunting prospect of tackling a multinational company that has a myriad of products, factories, channels, supply chains, etc., feels "too big to tackle". Then there's the "maybe capitalism isn't going to work?" question that rears its head at the fringes of gatherings such as at

the World Economic Forum’s meeting. It is sometimes framed as a question of whether or not liberal democracy and markets are going to be replaced by benevolent, technocratic authoritarianism and markets – just because they deliver better citizen outcomes, and sometimes as a more fundamental questioning of whether they are a viable form of global organization. It is always too frightening for business leaders to contemplate beyond an intellectual exercise, so it gets placed back in the box of “things to think about later”. But to give a number of pioneering business leaders the credit they deserve, some companies are beginning to genuinely ask the tough questions, questions that get to the core of their strategies and even to their core purpose. When faced with some of those challenges and re-examining what success looks like, the recognition exists, as one business leader put it to me recently, that “maybe we’re not doing so much after all.”

Finding “True North” on Sustainable Business

So where does this leave us? It is clear that we are not headed in the right direction on most key sustainable development metrics, and the sustainable business compass does not appear to be set to get us to where we need to go. Perhaps slightly more worryingly, collectively, and here I include many people involved closely on sustainability including myself, we have tended to celebrate “incremental change” while recognizing that “transformational change” is required in innovating ourselves towards new systems. This is understandable. Some examples can be celebrated, but we need to ensure that we don’t celebrate progress so much that it takes us off course. To put it bluntly, despite some good activity and some things that could even be called “ground-breaking”, even the best of those efforts – and certainly business and government in general – are dramatically undershooting the target of what we know really needs to be done. In fact, these minor progresses are probably diverting attention away from the real efforts required to drive a meaningful business contribution to sustainable development. This is almost the “dirty little secret” whispered, in various guises, among those working on sustainable business at all levels, that “it’s better, but we know it doesn’t add up”.

For me, navigation provides a useful analogy. Those sailors or trekkers out there, or indeed anyone who has used a compass, will know that “True North” and “Magnetic North” are easy to mistake, but can send you a long way off course on a long journey. The gap between True North and Magnetic North is called “magnetic declination”. Put simply, True North is the direction in which the North Pole is located along the Earth’s rotational axis, while Magnetic North is the direction towards which the compass needle points. If you were to travel across the United States, the gap, or “declination” varies from 20 degrees west in Maine, to zero degrees in Florida, to 10 degrees east in Texas – meaning a compass adjusted at the beginning of the journey would have a True North error of over 30 degrees if it wasn’t adjusted accordingly.

Why is this relevant to sustainable business and sustainable consumption? I think in the rush to celebrate progress on sustainability, we sometimes risk confusing True North and Magnetic North. We need to be careful that we don’t mistake

some of the examples we currently see, good though they are, as the kind of shift that will be required to drive systems change towards sustainable development. Magnetic North on sustainable development is about creating “sustainable businesses”, whereas True North is about the kind of innovation and transformation that leads to “sustainable systems”, whether those systems are energy, food, water, buildings, banking, etc. Don’t get me wrong, Magnetic North is a better direction than a “business-as-usual” trajectory.

So how do we avoid getting thrown off course on sustainable business? We need to urgently close two gaps – an “execution gap” and a “transformation gap”. Let me explain a little more about the differences, and why they matter.

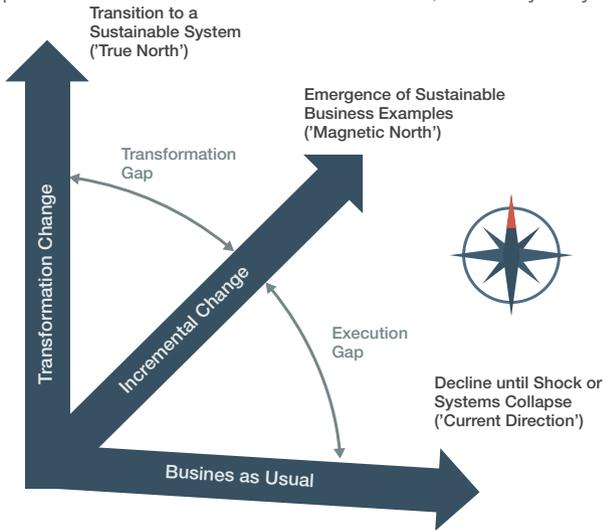


Figure 11: True North Innovation and the Sustainable Business Journey

Closing the “execution gap” is about delivering real progress against established targets, whether they are national targets, such as those within Kyoto, or, in this case, the strategies and targets set by industries and individual companies. They may not be “enough”, but they are realistic and they get us moving in the right direction. Consensus building around goals also exists, and a growing number of companies can show the way in making a success out of sustainable business. This is about embedding sustainability into the heart of organizations – into marketing, R&D, supply chains, IT, HR, finance, etc. – and using our business toolkit to get serious about delivery and shifting us off the business-as-usual trajectory, which risks the collapse of social and environmental systems at the most extreme end of the spectrum (for those interested in precedents, Jared Diamond’s book, *Collapse*, makes for sobering reading). Put another way, the “execution gap” is about “walking the talk”. Although in the ultimate analysis, these changes may only deliver “incremental change”, they get us moving.

Closing the “transformation gap” requires rethinking the systems in which we live, work, play and interact at a more fundamental level and the role that business can play in delivering the products and services people want, need and desire in new ways. It ranges from looking at governance, business and financial markets, all the way through to values and behaviours. As explored in the World Economic Forum’s report on sustainable consumption entitled *More with Less: Scaling Sustainable Consumption and Resource Efficiency*, it means influencing supply, demand and policy at the same time to create systems change.¹³⁷ If the “execution gap” is about driving “incremental change”, then the “transformation gap” is about driving “transformational change”. It is about transition. Building on an emerging but increasingly promising body of knowledge on how large-scale change happens, Mick Blowfield at the Smith School of Enterprise argues that transition is the shift from one dynamic condition to another. It is a permanent and irreversible shift during which one view of common sense is replaced by another. The “level” of that shift or “grand transition” is interesting. In my view, this can be looked at through at least four lenses and at four levels. Primarily in this paper I am talking about the transition from an incremental, often efficiency-based argument, to a more fundamental rethinking of systems that implies transformational change.

This is still within the realms of the idea that technology, policy and economic and business model innovation can drive sustainable development. However, at the third and fourth level of “transition”, I acknowledge that you end up looking at whether we need to question if we can achieve “prosperity without growth” as Tim Jackson¹⁴⁰ and others have, or even whether markets – aligned as they are with nation states – are suited to global economic organization. This goes beyond even ideology as we see markets aligned with liberal democracy in the West as much as with the blend of “Maoist-Marxist-Market” that we find in China. I think the challenge with level three and level four – no growth or fundamental global shake up of ideologies – is that I just don’t see it happening, not in a world that still has so much economic development ahead of us to balance out the emerging and developing economies, and not given the apparent resilience of the global governance paradigm. So I think the real “site of action” is to rethink sustainable growth even in the context of the global economic crisis, which has at least caused some to pause for thought. Controversial perhaps, but a realistic agenda.

Asking the Tough Questions to Close the “Execution Gap” and the “Transformation Gap”

To illustrate the point, from my experience with CEOs and top executives, closing the “execution gap” requires asking tough questions and managing trade-offs in creating change within the existing business paradigm. Going beyond a first-generation business-as-usual focus on narrow definitions of value creation, these second-generation questions focus on driving incremental change and a move in the right direction:

1. How can I generate **demand** for product and service lines that have sustainability embedded in their core?
2. How do I develop the right **talent** and capabilities to manage sustainability as a core business agenda?
3. Can we measure **performance** using existing tools and techniques to value non-financial impact on enterprise value?
4. How can we drive efficiency through engaged **supply chains** to manage inputs and resource use?
5. With uncertain **regulation**, how can I make the right long-term sustainability investments?
6. How can I communicate clearly with **investors** so they reward me for my sustainability strategy?

However, closing the “transformation gap” towards transformational change in systems requires asking questions that challenge and potentially even disrupt and transcend the business paradigm (one of the driving principles behind the YGL Task Force on Innovation and Business Models in a Circular Economy). Put another way, business as unusual. Or for those of us who believe that there is enormous creativity and adaptability intrinsic to well-structured markets, “business as extraordinary”. Neither is this a developed-world model. Many of these questions are equally applicable to state-owned enterprises, large family businesses and conglomerates founded in developing and emerging markets.

“True North” questions on sustainable business are focused on new thinking, models and disruption. These are third-generation questions:

1. **Circular Economy Innovation** – How can we rethink our end-to-end value chain in a way that eliminates the concept of waste, is based on closed-loop business models and cradle-to-cradle use of resources? How can we re-engineer or build new sustainable, intelligent cities? How can we drive new waves of innovation on sustainability that decouple growth from natural resource use and environmental impact? How can we ensure this spans products and services, new business models and new approaches to management? Could we shift from a product to a service-based industry? Could we explore shared ownership? Could we rethink research and development, manufacturing and logistics to design for disassembly?

2. **Convergence, Collaboration and Competition** – How can we shape new types of partnerships that sit across traditional industry and sector boundaries as we see convergence of issues, interests and solutions – including in our own value chain, but also across civil society, academia, government and entrepreneurs? What does this mean for ownership and governance structures? How do we balance the need for collaboration with competition? What new hybrid business models could emerge?¹⁴¹
3. **Redefining Value** – How can we go beyond traditional definitions of value creation to deliver for shareholders and owners, while explicitly delivering for stakeholders and on the environment? How can we measure and communicate that value and engage stakeholders in the process? What would consumers really value from sustainable products and services? What information, aspirational lifestyle or emotional connection would it take for sustainability to drive demand in the same way price, availability and quality do?
4. **Next Generation Public Policy Partnerships** – How does business support national and supra-national policy-makers to make global decisions quickly and effectively? How can businesses overcome the collective action dilemma of industry associations? How can we form new collaborative governance models that drive verifiable impact?
5. **Leadership** – How can we set clear visions and goals on the journey to both execute and transform, amidst ambiguity? How can we make it exciting and inspiring? How do we lead top-down and bottom-up and foster new forms of leadership such as “intrapreneurship”? How do we use the tools available to take stakeholders on the journey with us (e.g. engaging consumers with the marketing mix to both shape and respond to our business environment on sustainability)? How do we turn transformation and disruption into “our” future advantage?

Certain leaders in the business world are asking these questions. Some of the corporate leaders who really stand out include Paul Polman at Unilever, Ian Cheshire at Kingfisher, Alessandro Carlucci at Natura, Marc Bolland at Marks & Spencer, Mark Parker at Nike, Feike Sijbesma at Royal DSM, Muhtar Kent at The Coca-Cola Company, Stef Kranendijk former CEO and Chairman of Desso, Marjory Yang at Esquel and David Rosenberg at AeroFarms. With such leadership driving change, there is an opportunity for answers and actions to add up quickly.

If industries aggregate their impact and actions, the effects are comparable with the impacts of entire countries and continents. The top 50 consumer goods and retail companies emit as much CO₂ as France and Germany. Or put another way, the consumer goods industry is the world's sixth largest source of CO₂ emissions if these companies were a country. The top 50 consumer goods and retail companies have combined revenue of almost US\$ 3 trillion. Investing just 1.2% of that in a step shift in manufacturing and logistics for producing and transporting consumer goods around the world would match European investments in clean energy in 2011. The circular economy, which shifts to a world of sustainable, closed-loop production and consumption, could be worth between US\$ 340 billion and US\$ 630 billion per annum to the EU economy by 2025 according to research by the Ellen MacArthur Foundation.

A New Industrial Revolution and a New Era for Business

Undertaking the transition to a sustainable global energy context alone – e.g. tackling climate change, energy security and energy access to power economic development – will require not just sustainable businesses, but a new energy system and, indeed, probably a new industrial revolution. It will create new winners and losers as companies compete and collaborate for new markets, products and services, and as rising resource costs force them to rethink operations and global supply chains. However, the power of aligning market forces with sustainable development outcomes in creating a new industrial revolution is a tantalizing and exciting prospect.

As we reflect on whether sustainable business has delivered more or less success than meets the eye, the answer is probably both. Progress over the last 20 years has been slower than we might have hoped; in fact, in some areas, we have made no progress at all in real terms, and many challenges of speed and scale still exist. However, looking at the problem with a different lens, many examples and signs of the solutions already exist, and many of the business models that can close both the “execution gap” and the “transformation gap” are already available to us. We don’t have all the answers or combinations and we don’t yet know the roadmap. But we must make a shift from incremental to transformational change in order to begin the transition – all the while staying focused on delivery, but at the same time rethinking systems back to their fundamental principles.

So reflecting back on 20 years since the first Rio Summit, and more than 10 years on my own journey supporting the alignment of markets and sustainable development in policy and business spheres, I believe that is the way to find our bearings on the journey towards “True North” on sustainable business, not the potential distraction of incremental “Magnetic North”. That is the journey towards the grand transition required for a new and exciting era of business and unleashing the awesome power of markets and business innovation. That is the journey towards transformational change and a sustainable future. Rather than the doom and gloom often associated with sustainability, at a personal level I relish the challenge while recognizing the extraordinary scale of the challenge and the need to step up the pace and recalibrate the business compass on that journey. The journey needs to begin now.

Paddling Upstream - Mark Halle, International Institute for Sustainable Development

Mark Halle is Vice President, International, at the International Institute for Sustainable Development-Europe (IISD). Mark's renowned expertise on international processes and environmental governance has been invaluable for guiding sustainability initiatives at the World Economic Forum and other processes such as the UN Secretary-General's 2011 High Level Panel on Global Sustainability. In this piece, Mark tells a very personal story about how he came to approach policy and politics as key levers to deliver a more sustainable world.

Like so many in my generation, action to address the problems of the planet meant going where the problems occurred and fixing them. If villagers were cutting down their forests for firewood, they needed alternative sources of fuel. If farming on steep slopes was causing massive soil erosion, farmers needed to terrace the land or plant trees to retain the soil. If water was growing scarce, a new borehole could solve the problem. For each of these issues, a best practice existed somewhere that could be introduced, adapted and transferred, leaving the community better off and firmly on a road to a sustainable future. The satisfaction of seeing real, visible problems addressed and resolved was palpable. Surely sustainable development could be achieved by scaling up this sort of intervention, leading to a snowball effect to address problems and right wrongs.

In reality, however, this supposition rests on an assumption that does not stand up well to the test. It assumes that villagers, local actors, bear their problems stoically because they do not know where a solution might lie. They pursue destructive courses of action because nobody has pointed out to them that alternatives exist. They do not experiment and find solutions on their own because they are locked into tradition, lack education and exposure to fresh ideas, or are simply unaware that simple remedies have been tried and tested elsewhere. They act against their interest because they know no better.

It does not take long working on the ground among communities and villagers to learn that this assumption is badly flawed. Indeed, those living at the subsistence level have a very keen sense of where their interests lie, and their actions – including the destructive practices – are not taken out of ignorance but more often represent a rational strategy given the circumstances in which they find themselves. The worst mistake we can make is to assume that we know better, that the challenge is to overcome ignorance and to offer solutions they never thought of; if you don't understand the reasons governing their behaviour you will, in all likelihood, never find solutions that actually work.

Instead, the opposite assumption is more appropriate and almost always more accurate. If villagers are behaving in a certain way – even in a way that is demonstrably destructive – they are nevertheless acting in line with their perception of where their interests, and that of their families and often of their communities, actually lie. Success in development at the ground level requires

understanding those perceptions and, where they lead to destructive behaviour, helping to change them. Indeed, urging people to act against what they believe to be their interests will cause frustration and even rejection of what is being suggested. Only by shifting the perception of where personal or community interest lies can one make progress. It is a safe starting assumption that people have a very keen sense of where their interests lie and act accordingly.

This interest is not, of course, merely economic. It can be social, cultural or religious. People will, for example, act in ways that undermine their economic well-being if it improves their social standing. They will harm themselves economically to gain power over others or improve the prospects for their children. Assuming that income or access to food is the overwhelming priority is often wrong, even for people living at a subsistence level.

The same is true of consumers whose individual actions have negative environmental or social impacts. It is a mistake to believe that price is the only determinant in consumer choice, or that there is a trade-off between price and quality. Consumer behaviour is affected by a multitude of factors – social, cultural, contextual – affected by advertising, by the example of peers, by viral social phenomena. It is anything but a simple process.

Nor should it be assumed that most of the levers allowing development to progress are to be pulled at the local level. Anyone working at the village level soon learns that many of the factors affecting behaviour locally relate to realities determined at the national or even the global level. I was involved in a project on natural resource management in the inner delta of the Niger River, in Mali. There, the river opens up into a vast floodplain that each year turns into a lake before the waters recede, leaving fertile land to be planted. One aspect of the project was to work with villagers on sustainable harvesting of wood, forest products, honey, wildlife and medicinal plants. However, our work was stymied by the local forest guards who would fine villagers if they took any wild products, even if harvested at sustainable levels.

It was clear to us that we had to change the behaviour of the forest guards from that of a police force to that of rural extension agents, working hand-in-hand with the villagers to ensure that any use of wild resources was sustainable and repressing only destructive behaviour. The approach was a total failure, and we soon learned why. The forest guards received no salary from the State and had been instructed to raise their income by levying fines. Their motivation to promote cooperation in the interest of sustainable resource use ran contrary to their clear interest in securing their income and that of their families. Unless this baseline reality could be changed, there was no hope in our chosen approach ever working.

An honest assessment of much field conservation, undertaken after a decade or two, would come to the bleak conclusion that even successful projects tend to unravel after a time, and it is often because they have failed to address the factors that lie beyond the control of villages and communities and that, nevertheless, are critical in determining what can work and not work. Field-level activity offers the satisfaction of visible change, but the assumption that change lasts is illusory.

This is best illustrated by a project I was involved with in Honduras. A short distance from the capital, Tegucigalpa, lies a cloud forest reserve called La Tigra. Not only are cloud forests increasingly rare in Central America, they are exceptionally rich in species, many found nowhere else. Further, La Tigra is a major source of drinking water for the capital and provides the water at a fraction of the cost of other sources. Cloud forests act as "wells in reverse", drawing water from the passing clouds and offering it without the need for large engineering structures. It was calculated that, were La Tigra to be lost, replacing the water would cost 28 times as much as the water drawn from the reserve.¹³⁸ Clearly maintaining La Tigra intact was not only a conservation priority, it was an economic priority.

We were called in to help the authorities protect the reserve. What they had in mind was a traditional conservation approach – fencing the boundaries, training and equipping guards, putting up signs, opening an education centre, etc. Before agreeing to that, we wanted to understand better why the park was under threat and whether the measures requested would deal with that threat adequately.

The basic problem was that *campesinos* in the areas surrounding the park were cutting trees for construction and firewood, and farming on steep slopes that were eroding quickly, creating gullies that were reaching up into the park itself. The future of the park, it seemed, depended on stabilizing land and resource use in the surrounding areas, and that meant working with the *campesinos*. We met with them, offering help in terracing the slopes to increase yields on a sustainable basis, and in planting trees to supply firewood and building material. However, a survey we undertook revealed that the *campesinos* had no tenure on the land they were farming. Planting trees meant making an investment they could not be sure they would realize; they might no longer be there in two or three years. Further, terracing would increase the value of the land, making it more attractive to people with better political connections – a real risk given the proximity of the national capital.

So, far from acting out of ignorance, the *campesinos* were following a strategy that made sense in light of the reality they were living. Actions to conserve the park were unlikely to succeed unless they could address these factors. The problem was, of course, that like most conservation practitioners, we were ill equipped to deal with the problems that lay outside our field and experience.

What I learned in Honduras proved to be a turning point. As I broadened my horizons, I began consistently to pose questions about whether the policy framework surrounding any project was enabling or at cross-purposes and, in the latter case, to ask who held the levers by which the framework might be shifted. My work shifted from conservation to the broader field of sustainable development, and from a focus on field-level achievement to one of seeking the conditions that would make such efforts a lasting success. What are they?

In reality, personal behaviour – and by extension consumer behaviour – is affected by a wide range of considerations. These include objective factors such as price, direct and indirect incentives, taxes and charges, regulatory requirements and the like. They also include social factors – products associated with one's heroes, or the ones chosen by one's peers, or featured in one's favourite magazines. And they include, of course, cultural factors such as association with cultural symbols,

taboos or religious motifs. In short, the psychology of consumer choice is complex and beset not only with the sum of relevant factors but by the organic interplay among them in an ever-changing kaleidoscope of movement. How, then, can a sensible course of action be plotted that will influence the policy framework, that will shift it in ways that are supportive of sustainable development?

I have sought to apply three criteria: first, pick the policies that are most damaging to sustainable development over those whose negative impact is milder. Second, pick those in which even a minor shift will yield a major impact. And, finally, pick policies that are, for political or other reasons, ripe for review or revision.

In the 20 years I have focused on the policy framework for sustainable development, my work has focused on a number of topics, each in its own way responding to the above three guidelines. In the late 1990s, for example, we picked up on a highly-critical review of the World Bank's investments in hydropower development, conducted by its own, internal, Operations Evaluation Division. The significance of the report was not that it pointed to a bleak record on the part of the Bank – with seriously under-par development results, massive corruption, time and cost overruns, etc. The significance was that this report joined a swelling flood of criticism of large dams coming not only from radical NGOs but, increasingly, also from the mainstream across the dam stakeholder spectrum. The time, it seemed to us, was ripe to seek a better balance and more good sense in the energy options debate.

Our efforts resulted in the World Commission on Dams, an independent group comprising representatives from the entire spectrum of the dams debate – from die-hard dam builders and ministries of hydropower development through to activist NGOs whose members put their lives on the line to block dams being built ... and everything in between. The starting point for all was the same question: are there ways to plan, construct and operate large dams that would satisfy the requirements of engineering and economics while at the same time advancing social equity and sustainable use of the environment and ecosystems? In short, is it possible to make hydropower (and water retention for agriculture, industry and domestic use) compatible with the tenets of sustainable development? Put another way: is it possible to negotiate a peace treaty among the different and increasingly hostile stakeholder groups around hydropower development?

The resulting report – *Dams and Development*¹³⁹ – represents something of a constitution on dam-building, an international and generally-accepted set of criteria to be followed if dams are to contribute in reality to sustainable development, bring all constituencies along on the ride and avoid the controversy that had, for some time, translated directly into time delays and excess costs.

I took the experience to the mining sector soon afterwards. A group of major mining houses established a global process of consultation and research aimed at plotting an approach which, if followed, would lead to mining projects being broadly considered to be acceptable. The report – *Mining, Minerals and Sustainable Development*¹⁴² – again sets a new global benchmark on the process and criteria to be respected if mining is to shed the social and environmental controversy that increasingly besets its activities and make an optimum contribution to economic and social development in the countries in which mining takes place.

As encouraging as these two examples might be, each addresses only a fairly narrow sector of economic activity and success has done little to shift the baseline policies that continue to undermine the search for sustainability. Each responded nicely to the first and third criteria above, but rather poorly to the second. Shifting mining practice can be a big step forward for affected communities and certainly an important step in the right direction in terms of sustainable production and consumption. Further, such sector-based processes are replicable in other sectors; should enough of them bear fruit, it would change the face of the planet.

For my part, we need to go even further. In 2005, on the back of the experiences with dams and with mining, we launched the Global Subsidies Initiative, aimed at identifying and reforming public expenditure that seriously undermines sustainable development. Subsidies solidly meet my three criteria. They are vast – well over a trillion dollars is spent every year by the world's governments in ways that undermine the planet and compromise its future. Shifting subsidies has a huge effect in that it not only removes negative incentives for unsustainable behaviour, it releases vast sums of money for better uses. And the action of the G20,¹⁴³ APEC¹⁴⁴ and, more recently, Rio+20¹⁴⁵ along with key countries like Iran¹⁴⁶ suggests that the political environment has never been more favourable to subsidy reform.

Subsidies to fossil fuels alone amount to between US\$ 600 and US\$ 900 billion annually.¹⁴⁷ And to take just one of the negative impacts they generate, these subsidies represent a massive incentive for the consumer to give preference to carbon-based fuels over the alternatives. This flies directly in the face of efforts to wean the planet off fossil fuels in the interest of avoiding catastrophic climate change. Expenditure on fossil fuel subsidies is roughly equivalent to the 1% of GDP that Lord Stern¹⁴⁸ thought would be necessary to stabilize the carbon dioxide at 450 parts per million in the atmosphere. It is six to nine times the amount that the world's governments are seeking to amass in a Global Carbon Fund, and it has an effect diametrically opposed to the direction that the world's governments have determined they need to take.

Nobody thinks that subsidy reform is easy to pull off. Indeed, we are well aware of the challenges.¹⁴⁹ At the same time, we know that subsidy reform is possible and that there is a great deal of positive practice in all parts of the world. More important, we know that failing to address subsidy reform – and the many other examples of perverse public policy – means that we will surely fail in our efforts to place development on a sustainable footing.

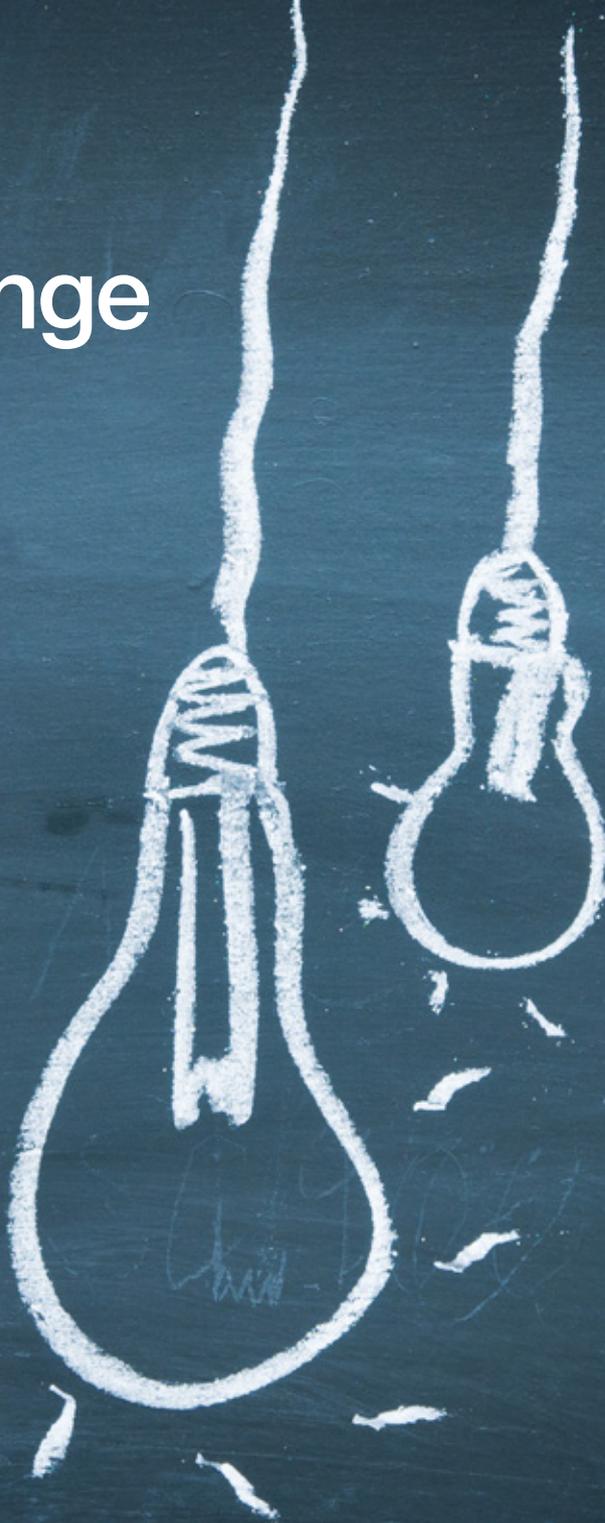
So what are the implications for sustainable consumption? I would suggest that the key issue relates to an undervaluing of the importance of the overall patterns of incentives and disincentives, perceptions of reward and punishment, and the complex range of economic, social and cultural signals that the consumer will absorb and filter in making a choice among competing products. If the immediate factors are well understood, the underlying policy framework, the signals that it inevitably gives and the way in which that, finally, determines consumer choice, is the new frontier in the struggle to induce our societies to move towards more sustainable patterns of production and consumption.

This new frontier has deep implications for producers; beyond looking at the ways in which they can clean up their act and push the new norms upwards to their suppliers and downwards to their distributors, they need to look more closely at their behaviour as corporate citizens, at the influence they and their professional associations have on public-policy choices, and at how their government affairs budgets are being spent. I suspect they will find that they are barely scratching the surface in terms of the influence they can have in helping to construct a more favourable enabling framework of public policies.

UNEP's Green Economy report¹⁵⁰ carries a wide range of recommendations on how to shift production and consumption to more sustainable patterns and what advantages lie before countries that choose this path. It makes for exciting reading. But the report also recognizes that none of this is likely to happen at the scale necessary unless the broad framework of policies, laws and regulations that make up the incentive environment within which we all make our consumer choices is shifted so that it is favourable to the goal we are trying to reach. If, in attempting to move towards sustainability, we encounter enormous obstacles in the form of perverse incentives that tempt us in a direction opposed to where we wish to arrive, we will never shift to sustainability.

In my own personal journey, I feel I have now paddled sufficiently upstream and have arrived at the place in which real, transformative action finally becomes not only a possibility, but an exciting, realistic option for human endeavour. It may have taken me a long time – most of a career – to get to this place but in some ways it seems not too different from where I started out: each grain of experience has contributed to this journey, and I am now convinced that I am addressing the real agenda, the one that will, if implemented with commitment and energy, finally shift the planet onto a sustainable course.

Making The Change Happen



Society will need to continue a scale-up of existing initiatives and examples of sustainable consumption, but there remains a critical question: how can countries, companies and consumers be enabled to grow wealthier with significantly less resource intensity and environmental impact at scale?

To answer this question, scale needs to be understood in the context of modern society, rather than through the lens of sustainability. We live in an era of scale. Today's US\$ 65 trillion global economy is powered by US\$ 210 trillion of financial assets. Over five billion mobile phones are in circulation, with penetration rates rising by 35% each year. In August 2012, 4.8 billion people, or 70% of the world's population, tuned in to watch the London Olympics over a period of just two weeks.¹⁵³ A new vision of scaling up efforts to decouple growth from resource impact requires using public policy, business initiatives and citizen action, and putting the citizen at the heart of efforts.

The multistakeholder ethos of the World Economic Forum, suggests that different stakeholders must be engaged to collaborate and trigger change at scale. Governments can provide clear, stable and long-term policy frameworks, and use their scale to enable the creation of new markets. Consumers can engage more actively in redefining consumption and growth, and technology developments can continue to drive efficiency and connectivity.

Business, however, also has a leading role to play. If consumer goods companies, for example, aggregate their impact, their efforts could have an effect as large as many countries. The impact of businesses across sectors moving together could be even greater. Research conducted as part of the Forum's work, for example, shows that a percentage in greenhouse gas emissions reductions from the top 50 consumer goods companies across their value chains would be broadly equivalent in volume to the equivalent percentage emissions reduction of France and Germany combined.¹⁵⁴

Interviews with CEOs uncovered an impatience for change and a strong desire for more action-orientated engagement. It seems that many business leaders increasingly recognize that their companies can and must act to enable scale and to ensure the success of their own businesses. Harnessing the power of business to achieve scale while securing competitive advantage in a resource-constrained world, would necessarily require transformational change across multiple dimensions. This includes organizational change and innovation in corporate culture as well as sustained and inspirational leadership.

Over the following pages, several of these dimensions are explored first-hand; as illustrated by each essay in this volume, progress is made when leaders work persistently and live through their values. Personal values tend to represent personal guiding principles, influencing how different people think and act. Past experience, risk tendencies, cultural and social norms all shape these values and how people allow them to influence their lives. Decades of scientific research have identified a number of consistent human values, and more recent studies have found that these values are related to each other.

Recent work by Common Cause, a network of environment NGOs in the UK, suggests that self-direction, creativity, benevolence and tradition are intrinsic values. Other values are centred on external approval or rewards, such as wealth, material success, prestige and social power. These two sets of values are certainly not mutually exclusive, but shared and intrinsic values seem able to present a more authentic style of leadership, one that comes from within. This research suggests that intrinsic values will be a strong beacon than extrinsic factors to help guide any process of change, strengthening the recognition that “authenticity” is key for the legitimacy of leaders, as well as for the conviction of individual citizens.

Consequently, the journey to sustainable consumption may best start with a deeper sense of an individual’s core value system. As already apparent from the preceding pages, the journey can be driven by life experiences and by a belief in working towards something greater than the self. This final series of essays contains contributions by leaders from business and civil society, each reflecting not only their own values but also the changing values of the leaders around them.

The views expressed herein represent a collation of various viewpoints from participants in the World Economic Forum Sustainable Consumption Initiative, the World Economic Forum Global Agenda Council on Sustainable Consumption and viewpoints from other invited contributors. The text and the individual contributions do not necessarily reflect the views of every individual participant nor do they necessarily reflect the individual institutional viewpoints of any of the participating companies, institutions, organizations or their members, or of the World Economic Forum.

When Do Ideas Count? - Simon Zadek, International Institute for Sustainable Development

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Changing Times, Evolving Ideas

Birmingham, UK, the summer of 1998: the G7, still in its prime, meets, and alongside it is the amazing spectacle of The People's Summit.

The Other Economic Summit (TOES) has been held alongside the G7 (now G8) Summit since 1984, when the New Economics Foundation was created by a rainbow coalition to promote an “economics as if people and the planet mattered”. The People's Summit, the name given to TOES at the G7 that summer in Birmingham, had joined forces with the Jubilee Campaign. Together, they mobilized tens of thousands of people who formed a human ring around the entire G7 venue, demanding that “third world” debt be written off and development assistance be increased. Neither of these demands was met in Birmingham, but they both came to fruition a few years later at the 31st G8 Summit in 2005 in Gleneagles, Scotland.

The People's Summit included at its core a one-day conference on sustainable consumption, organized by the New Economics Foundation. As Development Director of the New Economics Foundation, the conference was chaired by me and framed by an accompanying report, “Purchasing Power: Civil Action for Sustainable Consumption”.¹⁵² As the title suggested, the topic had perhaps less to do with decoupling consumption from natural resource use, and more to do with the emerging power of consumers to get businesses to do stuff that governments were either unwilling or unable to act on. But the tradition of “more with less” was a deeply rooted part of the Foundation's philosophy, informed by the great British economist, E. F. Schumacher, author of one of the most elegant economics treatises of the 20th century, “Small is Beautiful”.¹⁵⁵

Our focus on the power of purchasing was spot on, with the subsequent decade and a half demonstrating repeatedly the potential of mobilizing citizens as consumers to act in the public good. Unfortunately, our lack of focus on how to reduce the amount of stuff we were all consuming proved equally prescient. Wealthier consumers have got smarter, more conscious and in some ways more ethical, to be sure. But their addiction to “more” has not been addressed to any significant measure – this, despite the ample evidence then, and even more so today, of the deadly implications of such collective, pathological behaviour of planetary proportions.

The world’s richest 20% account for over 75% of private consumption while the poorest 20% account for barely 1.5%. The numbers are similarly bleak for water, as 12% of the world’s population uses 85% of consumed water, while 1.1 billion people have inadequate access to water, and 2.6 billion people lack access to basic sanitation. On the environmental side, the ecosystem services provided by our planet are being depleted and cannot cope. The United Nations Environment Programme estimates that annual environmental costs from global human activity already amounted to US\$ 6.6 trillion in 2008, equivalent to 11% of global GDP, and would, without action, make up an estimated 18% of global GDP by 2050.¹⁵⁶

Davos, Switzerland the winter of 2012, the World Economic Forum Annual Meeting

Amidst record snowfall, the Forum launched its fourth report on sustainable consumption, *More with Less: Scaling Sustainable Consumption and Resource Efficiency*.¹⁵⁷ And once again, I was present: participant and witness, researcher, co-author and presenter at the Annual Meeting. Unlike Birmingham, truth be told, thousands did not turn out to welcome the report. Maybe the lack of mass response had something to do with the report’s very different tone and content compared to its predecessors. Rather than calling for less, the report acknowledges the need for more consumption, albeit positively decoupled from natural resource use and pollution. And rather than viewing consumption as a source of poverty and inequality, the report takes as its starting point that lots of consumption is the key to fighting poverty, a view far more closely aligned not only with business but with the views of those focused on the international development agenda.

Said simply, the report was about what people should be offered to consume, and only a little about consumers. It was a report designed for business leaders and perhaps some policy-makers, offering a largely technical or managerial solution to consumption’s negative externalities. After all, it is really the Occupy movement, hardly the Forum’s Annual Meeting that has inherited the legacy of the People’s Summit. And indeed, while the Forum’s report on sustainable consumption was being aired on the magic mountain, hundreds of thousands if not millions of Occupiers across the world were echoing the long-forgotten People’s Summit in calling for the end of greed and unfairness.

Curiously, a call for more sustainable consumption was largely absent from Occupy's banner demands. Maybe the tented communities sensed that the broader citizenship to which Occupy sought to appeal would hardly be attracted by calls for abstinence or the rejection of cheaper products and services in favour of more sustainable, but pricier alternatives. Yesterday's notions of false consciousness have morphed, at least in the business-focused mainstream, into modern concepts such as cradle-to-cradle, decoupling and closed-loop production systems. Today, there is little talk at the Forum's meeting in Davos of a self-imposed discipline of "less".

And the spirit and practice of Occupy, similarly, has moved away from the calls more fashionable in the 1980s and 1990s of "enough", and have focused on institutional rather than individual baddies. Not surprisingly, particular attention has been paid to the financial community, deemed at best the root-cause of modernity's malaise. Elsewhere, of course, the task of sustaining consumption is equally if not more absent. Commodity-rich, developing nations are praying that heightened levels of natural resource depletion will push up the value of their mineral resources, just as China is moving to implement a development phase focused on growth through accelerated domestic consumption. Quantitative easing, meanwhile, from Washington and Tokyo to Delhi and Sao Paulo, is hell bent on getting consumers up their game at any cost, while the few remaining countries unwilling to promote consumer binging, such as Germany, are accused of culturally-reinforced protectionism.

Ideas for the Zeitgeist

When does an idea's time arrive? Why and when do some ideas become mainstream practice, while others languish in the margins of debate, condemned to be history's "junk DNA"? And what then happened to the idea of sustainable consumption over the past 15 years; is it languishing in history's margin, or flourishing in its mainstream?

This question is more than of passing interest to someone such as myself who does not dig holes, design buildings or repair unhealthy people. I am a storyteller, at heart and in practice, seeking to create change by telling stories about what others have done, or of what might have been, or might be tomorrow if my audience were to act with courage and insight. I am, in short, a purveyor of ideas. But this topic is far more than of concern because of my personal satisfaction or career prospects. The history of ideas and, more importantly, tomorrow's history of today's unacceptable ideas, is the very stuff of sustainability.

What happened to the unsung ideas that momentarily seemed suitable candidates for mainstreaming, but somehow failed to discover the alchemy of success? Was their failure a sign of an evolutionary fitness at play? Certainly it matters little that off-beat innovations such as British inventor Clive Sinclair's doomed three-wheeled car did not garner sales – such cases hardly count as lost opportunities in striving for a better world. Yet other ideas form the basis of profound changes to society and the lives of its citizens. After all, the very ideas of the emancipation of slaves or equal opportunity for women were, and still are in many communities and nations, deemed preposterous. Such righteous rejection had to be overcome to make both, and many other of our greatest civilizing developments, a reality.

Perhaps we can lay claim to some order by natural selection: only the best survive in the marketplace for ideas. Democracy, after all, one of the greatest ideas of all, has survived numerous assassination attempts, somehow continuing to flower in the most inhospitable circumstances. But while offering comfortable refuge from the actual maelstrom around us, such an argument is altogether unconvincing. There is no natural order to the pre-eminence of ideas. Consumption is good for some, bad for others, and may well in aggregate destroy the very ecosystem within which we all survive. Its place in society is an outcome of a veritable dogfight between folks with diverse interests. And Mancur Olson, in his cold-hearted thesis, *The Logic of Collective Action*,¹⁵⁸ sets out with mathematical precision why we should not expect crowds over time to make smart decisions, even when their very futures are at stake.

Or is there something more sinister afoot – vested interests favouring one solution over another irrespective of the public good? Should we join with Noam Chomsky's views expressed so eloquently in "Manufacturing Consent"¹⁵⁹ of a conspiracy theory of success? After all, why has it taken so long to move the auto industry away from its addiction to the profoundly inefficient combustion engine, and what force of nature has led us to build such inhumane cities that now accommodate half the world's population? Why is it just now, many years after the invention of the long-lasting light bulb, that policy engagement combined with business interest has pushed them into the limelight and scaled up adoption?

History, perhaps, has its own clock, choosing which ideas come of age when. The great Austrian economist, Friedrich Hayek, appeared positively cranky when he challenged John Maynard Keynes in publishing his seminal book, *The Road to Serfdom*,¹⁶⁰ in the pre-war context of the European 1940s. Yet Hayek's thoughts, traced forward through think tanks, business people and would-be politicians, provided the intellectual underpinnings for Thatcher and Regan's neo-liberal revolution half a century later. And today's quantitative easing, or more simply described as government pump-priming of demand, represents a return to Keynes' prescriptions for an economy profoundly out of balance. As one old adage goes, politicians' newly-minted, economic insights are most usually the rehash of some theory of a long-dead economist.

Unnatural Selection through Leadership

Much to the surprise of folks surrounding the G7 Summit in Birmingham, an invitation to talk was extended through the armed and helmeted police by the Summit's host, the fresh-faced, newly-elected Prime Minister Blair. Remember, the world then was a far cry from Davos' glorious chaos that blends grassroots fighters with billionaire bankers and political leaders. Less than two decades ago, such interactions were simply not part of the political landscape, the very idea had in practical terms not become common currency. Indeed, when we at the New Economics Foundation decided to engage with BP following accusations of its complicit involvement with murderous security forces in Colombia, we saw the departure of significant numbers of the Foundation's members in disgusted rebellion.

In retrospect, the pathway of ideas from the mainstream to the margin seems elegant and rational. But looked at through the lens of where they came from, pathways looks a lot messier. Leadership clearly has a role to play in navigating the mess. Without the reluctant and ultimately destructive partnership between Messrs Blair and Brown, would we ever have landed debt relief to impoverished nations? Without the wealth of Mr and Mrs Gates, enriched by gifting the world with a quarter century of the Windows operating system, would the global health agenda have gained in such prominence, evidenced by the tens of thousands of people alive today who would otherwise not have been with us?

Notable individuals, such as the late Anita Roddick, founder and Chief Executive of The Body Shop, clearly changed the world for the better. When in early 1996 her company published the world's first sustainability report, suitably audited by myself, the business community dismissed it as a marketing ploy that would "never catch on". But today, as a testimony to Anita's vision, the International Integrated Reporting Committee, made up of some of the world's most powerful corporate and auditing regulators, is working to deliver a globally accepted approach to integrating sustainability into statutory corporate reporting.

Sometimes leadership comes from rather unexpected places. It was John Browne, formerly Group Chief Executive of the oil major BP, who publicly endorsed anthropogenic climate change in an infamous Stanford Business School speech on 19 May 1997. At the time, the global energy, chemical and automobile industries maintained a powerful media and lobbying position that human-induced climate change was a myth. On that day, John Browne announced his and BP's considered conclusion that climate change was indeed linked to our actions, and that companies such as BP had a role to play in moving us beyond our carbon-civilization. "The time to consider the policy dimensions of climate change is not when the link between greenhouse gases and climate change is conclusively proven, but when the possibility cannot be discounted and is taken seriously by the society of which we are part." Today, less than 20 years later, it is hard to imagine the extraordinary impact of this speech on our lives. It was a bold move to make that speech against the express wishes of every one of his peers, indeed against the grain of the entire international business community at that time.

Collusion for Action

The mainstreaming of ideas happens, I suspect, when there are co-benefits to collusion by players with very different visions and aims. Mainstreaming is rarely about common purpose, just as multistakeholder partnerships do not work because participants have the same views of the world, or even similar goals. The environmental movement of the 1980s was the enemy of the business community until it became clear that the eco-efficiency element of the agenda, surgically separated from its problematic cousin, eco-justice, was manageable and potentially profitable within a traditional business model. Consumption, comparably, could well become more sustainable as the rising cost of natural resources creates advantages for businesses and nations to do the right thing.

The power of collusion should not be underestimated. For a branded business to take responsibility for labour standards in its (purely contracted) global supply chains was viewed as utterly absurd in the 1980s, an alien extension beyond the legal boundaries of responsibility. Yet today this is the norm, but not only because of the need to defend reputations. Crucially, as an article I authored pointed out using Nike as an illustration,¹⁶¹ higher labour standards are needed to evolve a shift in factory working cultures towards a more participative model. This is, in turn, a prerequisite to the effective implementation of highly profitable “lean manufacturing” principles and practices. Stakeholder engagement as an integral part of a new model of social accountability was (and still is) seen by many businesses as an unacceptable erosion of the rights of management to manage. Yet as it has become clearer that stakeholder relations is “just another aspect of management”, this potentially empowering engagement of a wider range of stakeholders has taken off in mainstream practice.

Leveraging the power of collusion is a powerful image and practice. We advocate smarter risk assessment to investors when they refuse to price carbon, and speak of the financial benefits of community spirit in encouraging extractive companies to do the right thing. Our colluding, Trojan horse-style approach does deliver results, and might well advance the sustainable consumption agenda in the right direction. Yet only the most extreme optimists view this approach as adequate. We can and must applaud such moves but not confuse them with success in achieving the pace of change that is required.

Imagine If...

Ulan Bator, Mongolia, the autumn of 2025

Celebrations took place in Ulan Bator today as Mongolia was declared the first nation to have achieved ecological neutrality on the World Sustainability Forum’s Global Sustainability Index.

Mongolians should rightly feel proud of their achievement, a sustainability miracle from such unexpected quarters. Beyond such pride, however, are of course more tangible rewards to such celebrations of success. Bond markets, weighing the positive impact on Mongolia’s capacity to trade forward its growing excess ecological balance, responded overnight by upgrading Mongolia’s sovereign credit rating one notch to AA+. Equity markets, likewise, bumped up share values of the country’s exporters in the expectation that they would as a result face reduced natural resource border tariffs.

Mongolia’s resolution to avoid the pitfalls of the wealth derived from its extensive extractive industries was without doubt its historic turning point, requiring leadership and a national partnership across political parties, business and civil society. While there is considerable debate about the drivers that underpinned this turning point, there is no doubt that leaders’ appeal to the country’s deeply-felt independence, exemplified in its stoic nomadic culture, played a key role in securing popular support.

More visibly, Mongolia's failure, early in the second decade of the century, to secure access to China's electricity, triggered the crisis that eventually led to an investment compact between the government and the mining companies to build out the nation's energy system. That this system was based entirely on renewables was not, as those around at the time will recall, an easy decision. Germany and Japan's commitments to renewables at around the same time helped, as did the contemporaneous breakthroughs in battery technology. That an excess of green energy would lead Mongolia to become the breadbasket of Asia was perhaps the most unexpected piece of the equation, with its eighth generation hydroponics providing water efficient, climate-resistant food to its own citizens and a decent portion of its neighbour's burgeoning population...

The Journey of Corporate Culture - Mike Barry, Marks & Spencer

Mike Barry is Head of Sustainable Business at Marks & Spencer In this essay, Mike tells the story of how Marks & Spencer came to embrace sustainability first as a market differentiator, and then as a growth engine.

Wrong title and byline: borrowed from previous piece!

Sustainable consumption is a long-term journey. It will take decades to build a truly sustainable business model and it is very clear to me that we have far more steps to take on this journey than any company has taken to date. This humility in approaching the challenges ahead will be critical but, before we plunge into the future, it's equally important that we understand the lessons we've learned so far.

As Marks & Spencer seeks to be much more sustainable across its whole value chain, its supply chain, its operations and the customer use/disposal of its products, it has formulated a detailed plan, known as Plan A (because there is no Plan B for the one planet we have). This effort has become reasonably well known, and in less than 10 years we've reinvented our whole approach to being a "responsible" business. We've shifted from a model dominated by philanthropy at the turn of the century, through a brief but necessary dalliance with the world of corporate social responsibility (CSR), to today's much more ambitious and challenging plan to build a sustainable business and have sustainability embedded into the core of our operations, culture and business model.

If I am to be blunt, in 2000 we were not even at the races. We had a generous charity programme handing out millions of pounds to hundreds of charities, but that created little true value for the recipients or for us. We'd missed the big shift in the late 1990s when businesses were increasingly asked not how they disbursed some of their profits each year to charity but how these profits were made in the first place. Perhaps most importantly of all, we were out of touch with our stakeholders, avoiding engagement and debate. The result was a growing number of NGO campaigns, negative media headlines and, most worryingly of all, a customer who had started to doubt us.

Like many businesses that hold a position of relative leadership today on the sustainability journey, we let things get bad before it was possible to shake off the tried and trusted approach and try something very different.

It was a long, hard pull out of this hole – two years visiting and engaging with a very sceptical stakeholder community, put off by our previous arrogance and distance. We benchmarked against our competitors and peers to show starkly how far off the pace we were, and created an internal network of believers – senior and middle managers who knew we had to change although they lacked direction from above and assumed they were alone in believing that environmental and social issues mattered to our future success.

The momentum started to shift. Campaigns and boycotts were replaced by stakeholder praise. Tactical responses were replaced by strategy. Informal structures became more formalized. In a couple of years we'd built a CSR approach to be proud of, one recognized by Business in the Community (BITC) when they named us responsible company of the year in 2004. A warm, complacent glow enveloped the business as we settled back safe in the knowledge that risk was being managed effectively and the day had been saved.

We'd got to CSR late though. It had already been around for a decade and without realizing it we'd jumped into a very leaky boat. At heart, CSR is about protecting the status quo, ensuring that business as usual doesn't have too many negative impacts on people and the planet. It makes no allowance, though, for the fact that business today might literally be unsustainable, in need of radical reinvention.

It took a unique leader, Sir Stuart Rose who joined the business as Chairman in 2004, to say that the CSR phase of our journey built rapidly and exhaustively was already out of date. He demanded we ditch CSR and develop an ambitious plan to set M&S on a long-term journey to become truly sustainable. This wasn't about protecting today's business model, it was about creating an entirely new one.

In three frantic months, Plan A was developed and launched in January 2007. Plan A acknowledged that we needed to systemically and substantively improve our performance on every social and environmental issue facing us. It stated that we would tackle these issues across our entire value chain from field and farm to factory, lorry, store and customer. It sought to demonstrate that good for planet and people also meant good for our bottom line and, most importantly of all, it aimed to make sustainability everyone's responsibility in the business, not just that of a small corporate team.

What did Sir Stuart see that others hadn't? The economy of 2007 still seemed to be booming; why strike out to change a system that was "working"? I remember the conversations with Sir Stuart, his sense that something wasn't quite right. Al Gore's "An Inconvenient Truth" had opened his eyes to the finite capacity of the planet to provide resources and absorb pollution. He also looked beyond the environment and saw emerging social inequality and scepticism about the motivations of business.

Over the last five years, much of this "sense" has come to be. High and volatile raw material, labour and energy costs despite much of the world being in recession suggest that the planet is struggling to keep up with today's demand for its environmental and human resources. This will be even more drastic in 20 years as developing-world consumption takes off. A crisis of confidence in business, financial and political systems continues to unfold. Social media has evolved from being "just another communication channel" to a fundamental shift in how we live our lives, enabling a new economy based on transparency, sharing and recommendation to emerge and threatening any business model locked into the "old way of doing things".

Sir Stuart recognized a new world was coming. He also recognized that the sustainability journey would be too long to be overseen by any one CEO. It would require the consistent attention and support of multiple leaders each passing the baton to their successor. In the traditional, ego-driven world of the leader, taking someone else's legacy, building on it and smoothly passing it on to the next generation cannot be assumed. Sir Stuart and his successor, Marc Bolland, have managed the first baton exchange on Plan A. Marc has built on the firm foundations of Plan A with a focus on engaging the customer in activities such as “shwopping” that encourage people to move beyond disposal fashion and always recycle or reuse clothing they've finished with.

But this consumer engagement is only possible if the foundations remain firm. For a retailer, a firm sustainability foundation means work on multiple social and environmental issues behind the scenes or, as our external advisory committee termed it, “below the line”. These foundations are hidden from day-to-day view, often very technical and hardly the stuff of a marketing campaign. Yet without them, there is no systemic change, there is no business case and any consumer engagement risks being dismissed as “greenwash”.

We have done much to make sure our own operations are becoming more sustainable by driving down energy use per square foot of floor space by 28% in five years and then becoming carbon neutral; reducing waste by over 30% and sending none to landfill; collecting nearly 150 million coat hangers for reuse and recycling. All these are substantive achievements that have won us awards and saved us money, but we know that as a retailer, our largest impacts occur beyond the stores, warehouses and lorries that make up our own operations – they lie in a huge global supply chain.

It's worth pausing for a moment to understand the scale of retail supply chains. Marks & Spencer is not the world's largest retailer, far from it; other retailers may be 5, 10 or even 20 times bigger than us. But despite this our supply chain is still very big, with over 2,000 factories, none of which we own, manufacturing 35,000 different types of food, clothing and homeware products for us. About 20,000 farmers produce fruit, vegetables and meat for us, some to be sold fresh but much to be used as ingredients in prepared food. Beyond the farms are more basic sources of raw materials – cotton fields, forests, palm oil plantations, to name but a few. In total some 2 million workers are involved in this global operation. Without the engagement of this supply chain, a much more sustainable M&S is a pipedream.

It's a daunting challenge, with thousands of locations, multiple sustainability issues requiring a wide variety of solutions, very different cultures, varying levels of understanding of the sustainability challenge. Faced with this level of challenge, it is important to work very strategically:

First we created a narrative as to why change is necessary. Working in a big supply chain is difficult. It's competitive, fast moving and has many interlinkages. Running the day-to-day operations is tough enough – why would one embark on a long-term journey to some uncertain endpoint called sustainability? Yet suppliers understand rising costs of raw material and energy. They understand price volatility. They understand the immediate disruption that can be wreaked by

extreme weather. They understand the challenges of securing and retaining skilled and motivated workers. Put together in the right way, these trends can create a compelling narrative that puts the need for change into context for suppliers.

The narrative is a necessary beginning but it rapidly needs to be turned into something more directional, a plan. A plan brings clarity, direction and prioritization. It needs to be based on sound science, good stakeholder insight and a benchmark of what other actors in similar supply chains are doing. In 2007, Plan A set out 100 very clear five-year targets, which gave us and our suppliers a clear set of initial steps to take on the sustainability journey. For suppliers, the detail and clarity of a five-year plan is probably more helpful than a long-term aspiration to be “zero carbon by 2050”.

Now at this stage, it’s tempting as a retailer to sit back and say, “Over to our suppliers, done our bit”. Well, it’s not quite that simple. It’s necessary to take a long hard look in the mirror as a retailer and be honest: one get the supply chain one deserves, it’s a reflection of one’s strategy, buying and behaviour. Systemic change of the supply chain will only come from systemic change of the retailer’s buying process.

For the first couple of years of Plan A, we struggled to get traction at scale with our supply chain because we were struggling to get traction at scale with our buyers internally. When we updated Plan A in 2010, we introduced a new commitment, that all 2.9 billion individual M&S items sold each year would by 2020 have a Plan A attribute, a sustainability story to tell beyond the marketplace norm, for example Fairtrade bananas or Marine Stewardship Council certification for fish. We also set an intermediate target of 50% by 2015. Every commercial category in the business must have a plan to show how they will do this and how their suppliers will help them deliver it. In turn, business directors have annual targets linked to their bonus to increase the percentage of their products that have a Plan A attribute. The link to performance and reward has proven to be critical. While financial reward cannot be the only motivator, bonuses concentrate minds and cement behaviours through the buying groups and into their supply chains. Only when we have created the right behaviour inside our own business can we turn to the practical challenge of actually creating a much more sustainable supply chain externally, beyond our immediate control.

How do you make a factory more energy efficient, pay a fair living wage to workers, source sustainable palm oil, trace cotton back to the field, and select the right renewable technology to use? A myriad of choices! Inspired by our internal approach to greening our 700+ stores, we decided to create a small network of external pilot factories and farms to intensively trial as many innovations as possible. We could then rapidly identify those that worked and could be rolled out more widely and those that required more trialling before widespread adoption. Our suppliers created these pilot facilities across our global supply chain. They included clothing factories in China, Sri Lanka and Bangladesh; furniture production in Wales; and chicken processing in the UK, as well as farms there too. The pilot factories helped tackle one of our suppliers’ biggest concerns, fear of the unknown, taking a risk to create new ways of production with unproven technology and processes. They needed to see real, practical demonstrations and business cases to reassure them that change was possible.

The pilot facilities could only be as good as our ability to spread the message to the rest of our suppliers, beyond the few that clearly “got” sustainability. To help spread the message, we created a Supplier Exchange that drew together all our requirements and the lessons learned from Plan A to be shared with all our suppliers. The Exchange is a Web-based tool to enable ease of use globally, but crucially it is supported by conferences where face-to-face contact is helpful. This effort culminates each year in our annual Plan A Conference for about 1,000 suppliers. It enables us to show top-down support via a CEO speech, offer many practical breakout sessions and, perhaps most importantly of all, demonstrate the sheer scale of our ambition and that no one is alone on the sustainability journey.

I’ve already noted that we are not the largest retailer in the world, but even if we were we would still acknowledge that the sheer scale of the sustainability challenge means no one business can solve it alone. Retailers and fast-moving consumer brands often share supply chains and must work together to develop sustainability solutions. From using one consistent standard to define sustainable fish – the Marine Stewardship Council – to collaborating to address deforestation caused by the palm oil industry via the Roundtable on Sustainable Palm Oil (RSPO), businesses are finding more and more ways to collaborate to share the burden of change. The Sustainability Consortium (TSC) is playing an important role in creating one common global sustainability language and suite of assessment tools for retailers and fast-moving consumer goods companies to use with their suppliers, aiding efficiency and consistency.

Partnership will be increasingly important as we seek to scale sustainability, but we should never lose sight that a sustainable future demands a step change in our current approach. That step change is inspired, in part at least, by innovation and the competition it brings. We’ve created a Plan A Innovation fund for our commercial teams and their suppliers to bid for funding to investigate step change in how products are made, used and disposed of. Examples of innovation success include new manufacturing processes to reduce food waste, zero-emission hydrogen-powered forklift trucks and new ways of providing medical support to workers in clothing factories along the supply chain.

And so we come full circle. Having created a plan to give direction to a large global supply chain, we need to ensure that we are tracking our performance in delivering the plan. The hidden strength of Plan A has been the detailed tracking systems that our Head of Plan A Delivery, Adam Elman, has created and implemented to follow our progress in delivering multiple commitments across multiple product areas and their associated supporting supply chains. Without the construction of this system and the attendant control and buy-in it has created across our business and supply chains, we would have made a fraction of the progress we have made to date.

So that’s the Plan A supply-chain journey to date – creating a narrative to explain why change is necessary; setting a plan to provide direction; aligning the way we buy and the signals we send with our sustainability aims; creating a network of pilot facilities to show change is possible; scaling these solutions through the supply chain via our Plan A Supplier Exchange; creating partnerships beyond our immediate supply chain to share the burden of change; while never forgetting to create the incentives to innovate to create step change.

We've learned, sometimes the hard way, how to create this structure, and now our challenge is to scale and accelerate change in our supply chain, preparing it and us for a very different future.

Making It Personal: Communicating A Sustainable Future - J. Carl Ganter, Circle Of Blue

Journalist J. Carl Ganter is the Co-Founder and Director of Circle of Blue and Vice Chair of the Global Agenda Council on Water. Carl's leadership at Circle of Blue was recently rewarded with the Rockefeller Foundation Centennial Innovation Award, given annually to global innovators addressing the world's most pressing challenges. In this essay, Carl demonstrates how fact-based storytelling conveys complex ideas by making them personal and relevant.

It was here, the vast grasslands of Inner Mongolia, where Genghis Khan brought his armies to mend their wounds, swim in the Nine Bendings River, fatten livestock and forge their swords. The legendary Mongol conquerors battled the elements, living in the teeth of the wind in their felted gers,¹⁶² founding the nomadic communities that, for dynasties, have raised sheep on these highlands

On the December day when I visit, centuries and civilizations later, frigid blasts of razor-sharp ice crystals – some of them blackened from the dust of nearby open-pit coal mines – blow across the horizon, stopping only to swirl and tear at exposed flesh.

Wu Yun, 23, tucks in her mittens and pulls on furry boots to help her father feed the livestock. She hunkers down, unlatches the gate and lets the lambs out to graze on the fragile, brown stubble. Like minnows, these woolly beasts dart and weave for the open field, protesting the harsh wind with loud baas. An old ram coughs against the cold, stopping for a scratch on the chin.

Wu Yun looks out over the plains, where in summertime she rides her stout horse above the dust. Today the acerbic rasp of smoke from nearby coal-fired power plants is whisked along upon the air. It seems to draw a line between the old and the new that is mirrored on the land below. On one side, gers and sheep. On the other, 300-metre-high (1,000-foot-high) buttes made of tailings from Datan International Shengli Mine, China's largest brown coal mine, which officials say could become China's largest open-pit mine in a few years.

Brown coal, which has lower energy content than black coal, is the fuel of choice in this part of Inner Mongolia. It is the power source for giant electrical generating plants. It is also piled outside the smallest rural homes, including Wu Yun's, where it is used for cooking and heating.

Her father, Bao Zhu, swings a hammer to break loose a few pieces of the frozen coal mound outside their front gate. They carry it in together and feed it to the fire in the kitchen where a pot of milk tea boils on the stove. The heat begins to melt the frost on the windows.

This shepherd family's life is still guided by the rhythms of the seasons and of the hardy sheep, shaggy cows and swift horses able to withstand the -30C (-20F) temperatures and fiercely biting wind. But the pile of coal that heats their home in

winter is an unmistakable sign of the growth and impact of the consumer society, eroding cultural traditions in the swift current of consumer dreams. For in the valley below, in nearby Xilinhot, they see Inner Mongolia's future.

Modernization in an Energy Economy

Xilinhot – an outpost of 177,000 residents that is 600 kilometres (373 miles) and a 12-hour train ride north of Beijing – is at the forefront of the world's energy and consumer economy. Just 30 metres (100 feet) below the family's fields are the rich veins of the coal that power a nation and drive global markets.

Within the next three years, say Wu Yun's parents, the mining company will come to develop the seam under their feet. There will be a fair offer they can't refuse, they tell me, and they will accept it willingly. They will pack their giant pot of milk tea, sell their horses, cows and lambs, and move to the city, to an apartment near relatives who have already made the migration.

"When family comes here to visit from the city, they catch cold," says Bao Zhu. "When we go to the city, we are too warm."

Xilinhot is at the centre of the Xilin Gol Grassland, one of China's largest prairies and livestock production regions. The Xilin Gol Grassland has suffered severe sand encroachment and desertification. And now the timeless lifestyle of pastoral farmers faces yet another challenge: the city will also need more water to hydrate its thirsty mines as well as the growing population. Already, Wu Yun's family well has gone dry, drained by the mines, and they have to use a tractor and trailer to fetch water from 15 km (9.3 miles) away.

Xilinhot has proven coal reserves of about 30 billion metric tons (33 billion short tons),¹⁶³ and provincial and academic authorities say its unproven reserves total to hundreds of billions of metric tons, which alone could power the country for 425 years. Xilinhot's bounty travels to power plants as far away as the Yangtze River Delta region, making the city a strategic energy supplier.

Additionally, more than 30 kinds of minerals have been found in the area, one of which is germanium. The rare-earth mineral, a semi-conductor metalloid, is a by-product of the pulverizing process of Xilinhot's brown coal. The crushed coal rumbles along kilometres of conveyor belts in the local mill. The factory hisses and moans in the frozen sunrise, churning out the white powder, which, ironically, is a key ingredient in the production of solar cells and the circuitry that controls the high-tech and cleaner energy alternatives such as wind farms and smart grids.

Wu Yun puts down her cup of milk tea and gazes out the frosty window toward Xilinhot's smokestacks. She is part of the urban movement, and she's already made plans. Wu Yun is studying accounting and wants to open an upscale clothing store to serve the city's newest residents, the families of the well-paid miners and workers who come to dig the coal. She represents a new generation, severed from tradition, pulling up roots in the grasslands and seeking success where it is defined not by what you can grow but by what you can make and what you can buy.

Two months before I visited Xilinhot, in comparatively balmy Beijing, I found myself in a sea of umbrellas in the Sanlitun shopping arcade, brand-conscious stores nested in an urban mall. Outside the Apple store, hundreds of people awaited the unveiling of the first-generation iPad. Chered by Apple employees wearing blue T-shirts, the customers, many who had encamped for hours, dashed through the doors to capture the coveted tablet. The world, their dream, is only a touch away.

On the surface, Chinese consumerism is bright, bold and blatant. Branding is everywhere, and the iPhone, with which I photographed the Apple crowd, is a symbol of status and constant connectivity. “In Chinese consumer culture, there is a constant tension between self-protection and displaying status,” wrote Tom Doctoroff, author of *What Chinese Want: Culture, Communism, and China’s Modern Consumer* and the North Asia director and Greater China CEO for J. Walter Thompson, a global marketing communications brand. “Material similarities between Chinese and Americans mask fundamentally different emotional impulses.”¹⁶⁴

According to a recent McKinsey study, “Meet the 2020 Chinese Consumer,” published in 2012, “consumption, rather than investment, will be the driving force in Chinese growth. It will account for 43% of total GDP growth by 2020.... By 2020, some 850 million people, representing about 60% of the total [Chinese] population, will be living in urban areas, up from about 650 million in 2010. Around 20% of these 850 million will be first-generation migrants from rural areas.”¹⁶⁵ Each of these migrants, like Wu Yun, is an individual making choices in response to a changing world. Pushed by the loss of grasslands and pulled by the lure of the city’s treasures, she lives a story that is a metaphor for a tidal shift in a nation’s culture.

“Design is hope made visible,” says Brian Collins, a branding expert who has shaped the dreams and desires of a generation. “By creating a tangible vision of what could be, we can see, touch and examine the future before it arrives.” At Circle of Blue, our journalists and scientists delve deep into the narratives that set trends and chart new courses for the future.

Some of these stories are subtle, some are shocking, but all reveal the connections between the conditions in which we live and the choices that we make – choices that in turn affect the conditions and options for the future. In the same way we learn about Wu Yun and her family, we gather the empirical data that shape the context of their lives. We understand them at a human level while also making the information useful and relevant to scientific analysis. Both approaches are vital for enabling the will and the ability to make informed choices.

Throughout history, journalism and storytelling have defined civilization. Journalists are the first responders to global crises, the pointers to important trends and the translators between disciplines. Good journalists seek out knowledge, ask thoughtful questions, listen carefully and tell unforgettable stories. The art of the story, well-told, is a powerful force because it compels the resilience and connectedness of humanity.

In China, we have one of the richest, most complicated stories unfolding that the planet has ever seen. The country is the second largest economy after the US, and its economy tripled between 2000 and 2010. China's GDP is expected to grow by more than 7% each year over the next 10 years.¹⁶⁶

Yet our reporting found that the priceless energy beneath Wu Yun's family grasslands may be trapped. China faces severe constraints to its GDP growth because it may not be able to continue to mine and process its coal at current rates.¹⁶⁷ Mines use copious amounts of water to extract and process coal, and as water supplies dwindle, production will slow.

Just as the account of Wu Yun's life and choices framed the reporting that introduced the existence of water and energy stresses in Inner Mongolia and China, lives of people offer keen insight into the challenges and opportunities of sustainability, consumption and the dreams that drive them.

A Thirsty World

In Australia, rice farmers gave face to an epic drought as they walked with us, kicking dusty clods of dirt that used to be their rice paddies. An Aboriginal elder, Beryl Carmichael, took us aside and fed us stewed kangaroo meat while sitting on the edge of the desiccated Darling River. She gave voice to the legends of stewardship of the drying region, how cultures over thousands of years survived the water's ebbs and flows. In recent times, Australia's post WWII boom tested a delicate balance of nature, and perhaps could have found clues to resiliency in both data and lore. Water scarcity has forced a national re-engineering of the Murray-Darling River Basin, the country's breadbasket, and rethinking about which crops are grown where. Often, behind the obvious, is a struggle to tell a story everyone seems to know. Bronwen Wade, a reporter for ABC "Riverland Today," told us the drought confounded her own reporter's instinct, often for the same reasons it challenged those of her Australian audience. Before one news broadcast, Wade said she started to cry. She had been warned that many farmers in her rural community were on the edge of suicide. Simply turning on the microphone and reporting the news could be deadly to her listeners, whose lives and dreams were evaporating as quickly as the water.¹⁶⁸

In Mexico, we brought together leading journalists, photojournalists and development experts to learn from the people of the Tehuacán Valley, a region facing declining aquifer levels under increasing pressure from industrial water extraction. The competition for scarce water between small farmers, whose wells were going dry, and industrial agriculture and textile production, revealed a hidden connection between the dissolution of family culture as children left their ancestral hillside farms to find work in Mexico City and the United States. The tears of Francisca Rosas Valencia were searing as she told the stories of her son and nephew leaving the village. They were bound for the US, but she had not heard from them in more than a year. Sitting in her kitchen as she shared deeply personal moments revealed a valuable piece of the story puzzle: Drought and resource scarcity were driving immigration and tearing at the social structure.¹⁶⁹

In the United States, we explored the sustainability-complex of water, food and energy, working to bring systemic thinking to this constantly shifting nexus, the push and pull between core resources. In an era of climate change and water scarcity, meeting the nation's energy demand is confronting major impediments. We found new data, new sources and otherwise hidden voices that define a resource challenge that is testing the country's ability to respond effectively. And the speed and force of the collision is occurring in the places where growth is highest and water resources are under the most stress: California, the south-west, the Rocky Mountain West and the south-east.¹⁷⁰

Telling the Story

By instinct, a reporter works in iterative ways, pursuing leads, sources and stories. In many senses, journalism is scientific – testing theories, confirming facts. But the ad hoc web of experts, participants and audience that we form for a story is rich with lasting value. Our data comes in many forms: empirical, anecdotal, sensory and emotional. As we work to understand inflection points in sustainability, consumption and connected, transformative shifts, we need to listen better. We need to monitor the change, again and again. The perspectives, insights, inspirations and aspirations are not often obvious. Sometimes they are just waiting for the right questions.

When we returned to Ningxia, China, to present our findings from Choke Point: China, our series about the water-food-energy challenge, our driver, an eager university professor, greeted us at the airport. The car slowed to a crawl on the highway when he couldn't contain his enthusiasm about our visit. He talked excitedly – his life's work has been the study of the interplays of water, food and energy in his province. Yet, until now, no one had asked him for his research data, which was sitting on his office shelf in neatly ordered folders. When he came to greet me at the hotel the next morning, at 5.30 sharp, to take me to the fields where farmers picked at expansive fields in the sunrise, his eyes were red and tired. He had brought his work, which he had painstakingly copied all night. Sometimes the simplest questions and conversations lead to treasure; his numbers synchronized perfectly with nationally significant conclusions we had drawn from other sources and regions.

The implications of our China findings struck a chord and captured attention from policy-makers, businesses leaders and risk managers. More than 1,100 people came to hear our Ningxia presentation, which was moved to a basketball arena to accommodate the large audience. Since then, we have hosted dozens of presentations at embassies, agencies, boardrooms and scenario sessions. The water-food-energy story is ongoing and transforming quickly; to keep pace, our reporting is drawing support from the Asian Development Bank, Skoll Global Threats Fund and Packard Foundation, among others.

The research, narrative stories, compelling imagery and the people behind them combine to create powerful feedback loops, connecting large-scale waves of causality with the tiniest of cultural ripples. The storytelling builds better understanding and paints realistic scenarios of what is and what could be. At the core are strong collaborations that combine shared vision with complementary

talents. We work with Google Research and its structured data team to develop new tools like Fusion Tables, which is “big data” for the rest of us and allows us to map trends and test theories. Our 10-year partnership with the Woodrow Wilson International Center for Scholars and its China Environment Forum provides access to global networks of scholars and experts who study the links between security, resiliency, politics and environment. Others, such as the Institute for Globally Transformative Technologies at Lawrence Berkeley National Laboratories, give new insight into the world of technological innovation and those who are inventing new ways to manage and use the world’s resources.

About a year after visiting Wu Yun’s family, I sent an e-mail to see how they are getting along. How are the horses, the sheep? I ask. I imagine the hot tea on the stove, a family living on the edge of tradition and consumerism, where the green grasslands fade to brown and coal is scraped from open pits and sent to power the country’s urbanization and industry. I think about the small windmill they use to charge their batteries that power their cell phones and television that connect them to the world.

Wu Yun responds with a text. She invites me back to visit, to see the grasslands and their horses in early autumn. She includes pictures of her family framed by the sweeping blue skies. Standing next to her mother, who is dressed in the traditional robes of Mongolian shepherd culture, Wu Yun’s brother wears designer jeans and a Salvatore Ferragamo T-shirt.

“I am seeing the London Olympic Games,” she types. “Wishing you a happy heart every day.”



Wu Yun, 25, stands atop sand dunes that are advancing across her family’s farm in the grasslands of Inner Mongolia. (Photo: J. Carl Ganter/Circle of Blue)

Epilogue

Two months after receiving that text, I arrive at the Xilinhot airport. The familiar gritty haze of the coal mines cuts into the morning sky.

Wearing trendy sunglasses and a bright red shawl, Wu Yun bounds out of a borrowed car with her boyfriend in tow. We head for breakfast and milk tea in the city and she tells me she got a job as an accountant at the hospital. Our language barrier quickly gives way to smiles, nods and the new tool of 3G globalization: Google Translate. As phrases and questions cross our minds, our fingers glide across our smartphones.

At dawn the next morning, after camping in a ger on her sister's farm on the grasslands, I hike up a nearby bluff. A ribbon of fine sand, this is the edge of desertification, where the dust swirls its way to Beijing and on to Los Angeles when the winds blow hard.

On my last night, Wu Yun's family takes me to an Xilinhot restaurant where her friends, daughters of other shepherds, perform traditional Mongolian songs on a small stage. Behind them, in the nearly empty room, are videos of vibrant green grasslands, graceful horses and dancing rivers.

"Maybe next time we can go to these places?" I type on my iPhone. But I can tell my question cuts deep and a wistful sorrow crosses her face. The pastoral traditions are fading as the grasslands turn brown from extended drought, declining aquifers and drifting sand. "Is no longer," her phone's screen says in English, "Not since the Disaster," a reference to the climate induced drought and desertification that is taking over her corner of Mongolia.

Being Reasonably Unreasonable - Fokko Wientjes, Royal DSM

Fokko Wientjes is Director of Corporate Sustainability at Royal DSM, a global science based company active in health, nutrition and materials. In this essay, Fokko describes the last six years in which he has been closely involved in the sustainability transformation at DSM.

A global shift is taking place towards the East. A change is needed to deal with the many challenges, including the climate, energy and resource constraints we face. We need a more circular economy based on renewable energy and renewable or recycled raw materials. We also see a growing emphasis on health and wellness, an ageing population and a growing middle class, and yet still over two billion people are malnourished worldwide. These shifts in the world translate into big business opportunities for companies that can deliver solutions.

In 2006, DSM began to recognize that sustainability is not only about risk reduction and compliance and not only about doing less bad – the company's drive was to shift from a compliance mindset to *securing value* and to *creating value* in a tangible way. New thinking permitted us to link the added value of sustainability to our products and look for new opportunities. This agenda could allow us to enter new markets, attract new customers and better serve existing customers, and therefore I pushed to have it be part of our Innovation, and Marketing and Sales efforts.

Jumpstarting Sustainability at DSM

When I moved into the role of Director of Corporate Sustainability after 18 years at the company, as in many companies the position was close to Public Affairs, and sustainability was mostly a reputation driver. The vision was to begin integrating “value creation” thinking by engaging DSM's senior business management, marketing and innovation departments. For sustainability to be a success and become embedded in the company, these core functions needed to recognize the potential business value of sustainability.

Throughout the past 100 years, our company has reinvented itself a couple of times. DSM originally operated as the state-owned mining company until 1973 when the last mine was closed. From there, we went on to become a petrochemical company and then in our current incarnation, a life sciences and material sciences company. As an organization, DSM has learned a lot from these transformational processes and has become quite good at them. We have done it so often now that the concept of reinvention is no longer scary.

Integrating Sustainability Internally and Externally

While building a sustainability culture at the company, my motto has been to be reasonably unreasonable. In making change, one must stand for something one is passionate about and drive home the message. To start, I needed to form a “coalition of the willing” to make the transformation happen. According to the bell curve of organizational change, often 5-10% of individuals are laggards. They are not typically driven by change and are thus able to drain all the energy of such a movement. On the other side of the bell curve are 5-10% of people interested in this type of change; people who want something new and are willing to go and look for it.

These were my allies. To embed sustainability from the very start, I looked for willing people who had a natural connection (i.e. whose business had sustainability-relevant items locked in). The idea was to translate this into a value proposition to stakeholders, specifically our customers. We still have a lot of work to do to increase the connectivity of the organization to societal needs. Business management needs to consistently assess how products and services serve society’s immediate (and long-term) sustainability needs. This is where we see a major business driver going forward.

In my view, sustainability should not be designed institutionally as a separate item – treated as a programme. We will have achieved success when we no longer need a special sustainability department because it becomes embedded in all parts of the business. Though the end is not yet visible, we are absolutely beyond the tipping point. Real success will occur when this stakeholder value thinking is fully mainstreamed into our businesses and becomes a natural consideration in product development.

In a growing, multi-sector and diverse international company, it is also a challenge to ensure an adequate degree of external awareness. The traditional approach of creating value only for one’s shareholders is no longer applicable, nor are short-term relationships and goals. It is becoming more crucial for a company to consider the priorities of a wider variety of stakeholders who have an impact on its success. We are trying to make it part of the company culture at DSM to consider multiple stakeholders when making business decisions. This will institutionalize and sustain the change.

The eradication of global hunger and malnutrition is one of the major causes supported by DSM, and one that has become a part of the company culture. As a leading manufacturer of vitamins and minerals, we understand the importance of micronutrients for healthy mental and physical development and I try to advocate personally for this cause whenever I can. I believe it works best when a company aligns itself with a cause where it can add value. In this case, given our sizeable knowledge in the field of nutrition, DSM can have a major impact.

Forming Partnerships and Coalitions

On the world stage, the role of governments is beginning to fade in importance due to political gridlock while the roles of companies, NGOs and coalitions are increasing. Public-private partnerships are becoming more commonplace and beginning to play a major role in shaping the future. Collaboration among many and diverse actors is what is really needed today – UN Secretary-General Ban Ki-moon said at the 2012 Rio+20 Summit that the world’s problems are too big to be solved by one organization or one company.

To make a wider impact as DSM, we seek out the influencers and similar-minded parties to cooperate so as not to go it alone. In much the same way that we built our internal “coalition of the willing”, we work with external front-runners at the World Economic Forum and the World Business Council for Sustainable Development to move the global sustainability agenda forward.

Traditionally, the private sector has not enjoyed the warmest of relationships with other sectors and, still now, our motives as a sector are sometimes questioned. Non-governmental organizations and civil society are key to creating value and increasing legitimacy through multistakeholder coalitions. Civil society can be very adept at using advocacy and lobbying on behalf of wider society to solve problems for which a technical or scientific solution is often already available but which has not yet been widely applied. At the same time, business regularly must shelve innovations due to lack of demand when a market is still immature or there is a dominant existing solution. Sometimes, civil society can be the catalyst necessary to launch a new solution to the market.

One interesting example we experienced was the effect of a lobbying campaign from Greenpeace for greener electronics, including a push to move away from halogenated flame retardants and polyvinyl chloride (PVC) for cable coatings.¹⁷¹ The success of this campaign pushed private-sector companies to seek out environmentally friendlier alternatives, and it so happens that DSM was able to develop a broad portfolio of “halogen-free” high-performance materials. In this case, it was simply paying attention to the concerns of our buyers that opened up a new sustainable business opportunity. At the time, we were ahead of the competition in bringing solutions to the market, and this gave us a very favourable competitive position in working with this industry. We were able to work with the electronics industry to implement solutions that are halogen-free and satisfied all parties. Our external orientation paid off in more than just product sales, as some of the leading electronic companies now consider us to be their prime adviser on materials. It has proven to be a strategic advantage to move from part of the supply chain to an integral part of the system, and be not only a material supplier but an adviser and trusted expert as well.

Finding the Right Partner: A Mix of Trust and Competencies

In the last couple of years, we have seen a new era of transformative public-private partnerships. If parties share a common objective, they can start working together to drive towards it. The emphasis must be on the alignment of competences needed to get the job done – regardless of whether these competences are in government or in the private sector. I've learned trust is the single most important factor in this agenda. As a company, building trust in what you bring to the market and building trust internally have been critical in shifting the sustainability agenda from risk aversion to a core business opportunity.

For example, five years ago we founded our partnership with the UN World Food Programme (WFP) to determine how we could improve its food basket and bring better nutrition to its 100 million annual beneficiaries. The natural alignment with WFP's mission and the clear added value we could bring through our research and development knowledge in nutrition made this the best fit of competencies: WFP has the biggest food aid distribution and DSM is the leading nutritional ingredients company.

As WFP shifts to bringing its beneficiaries more nutrient-rich food rather than simply a minimum number of calories, DSM can assist by advising and co-creating tailor-made products. Our original ambition was to reach 80% of these beneficiaries with improved nutrition. Today, we are proud to have reached over 12 million beneficiaries worldwide. We're still far away from our target but we continue to scale up and innovate to be able to make an extremely big impact in the lives of millions more.¹⁷²

In addition, the partnership has resulted in the creation or improvement of nine new products, has provided nutrition-related assistance to six nutrition-focused country offices and even helped influence WFP nutrition policy. Nutrition training materials have been written for 12,000 WFP employees and 52 DSM employee volunteers, and secondees have visited 16 WFP country offices to help build capacity in a variety of projects. Moreover, the partnership has also produced 36 nutrition-related academic papers and 17 academic and advocacy events.

This partnership has delivered very tangible results and proves it is possible to make an impact through public-private partnerships. The key is to overlook backgrounds and focus on competencies. The WFP can achieve things we as DSM would never be able to do. I recall being invited to a roundtable in Kenya with 15 different organizations whose goals and activities needed to be aligned. The private sector often doesn't have the skills to do that, but an agency working in complex conditions such as WFP does. It also has a distribution network that is far better in very remote regions than ours. Meanwhile, DSM provides technical and scientific expertise, high nutrient products and financial assistance to increase the micronutrients in WFP's food basket. We have the competencies through our research and development facilities to come up with new or improved nutrition products.

By bringing these strengths together, the result is a powerhouse for innovative products, engagement, advocacy efforts and much more. Our partnership has given us greater reach and legitimacy in bringing the message of the importance of nutrition to a larger audience. Policy-makers have begun to see that eradicating

malnutrition is a feasible goal and are taking steps to change their policies accordingly by prioritizing nutrition. President Obama recently addressed food security and nutrition at the G8 meeting, which resulted in a focus change by policy-makers to start including nutrition in their programmes.¹⁷³

A sign of success in this partnership would be that an outsider sitting in on a WFP-DSM partnership team meeting would likely not recognize who is from DSM and who is from the WFP. It is one team trying to achieve one shared goal. The exit scenario for both partners is that eventually the beneficiaries will become part of the global economy by earning a decent living and being able to afford products and services. From a company perspective, we hope that by the time they recognize the importance of nutritious food and have the means to start buying it, we can ensure that this food will be available on the shelf to be purchased.

We would like to build relationships with other NGOs that provide clear signals of what is important to them. For example, we see a strong alignment in the issue of biodiversity with an organization like the International Union for Conservation of Nature. As a company, we rely on ecosystem services, such as water and biomass (especially in light of our strong focus on bio-based energy and material solutions), so we have a social duty but also business case reasoning to ensure the sustainability of important ecosystems.

Partnerships and coalitions will grow in the future and we encourage parties to join in and start helping solve real issues. Identifying opportunities to capitalize on the value of our solutions, creating its value for future needs and mitigating risks at an early stage are crucial for a company looking to partner. Creating an environment that is conducive to market demand for our solutions via strategic advocacy is the basis of the whole stakeholder strategy.

Defining New Segments

In 2005, when General Electric pioneered its Ecomagination initiative, there was a lot of scepticism. GE persisted as they, and others that soon followed, saw this as their future growth potential. This opportunity for innovation and new markets was the inspiration for our own internal programme called “Eco+”. Currently, 42% of revenue is generated by Eco+ products, defined as products that have demonstrably more ecological benefits than the mainstream competing solution. The ambition is to grow that to 50% of the revenue of our global portfolio by 2015. The ecological benefits can be created at any stage of the life cycle – from the raw material, manufacturing, use, to potential reuse and end-of-life disposal. Eco+ solutions create more value with less environmental impact. Typical Eco+ products are coatings for solar cells, waterborne paints, bio-based products, food and feed enzymes, etc. We believe that Eco+ products provide a greater value proposition overall to our customers.

Looking at the mega trends mentioned earlier, future performance will be strongly dependent on Eco+ innovation, and we would like over 80% of our innovation pipeline to meet these stringent qualifications in 2015. In 2011, 94% of our innovation pipeline was Eco+. Achieving these targets in 2015 has also been integrated in the remuneration of the company’s Managing Board and supports DSM’s commitment to make a tangible difference for the planet.

After the Eco+ implementation within DSM to drive innovation and marketing from an environmental viewpoint, the logical next step was to develop social or people aspects of sustainability. The difficult first question was how to determine the impact of our products on people's lives. Many standards exist for corporate social responsible reporting but methods for impact measurement at the product level are scarce – a certification like Fair Trade is more difficult to apply to an engineered product than it is to a banana. We began building an instrument to measure the impact of our products and value chains on society in close cooperation with industry partners and NGOs based upon UNEP/SETAC life cycle guidelines and ISO standards. It measures the impact of products on individual end users' health improvement or well-being, and also their impact on workers and communities, such as fair pay and job creation.

As for Eco+, we also needed to make People+ tangible by developing products that have superior "people impact". For example, our MixMe sachets contain essential micronutrients designed for malnourished children in developing countries. These essential micronutrients support the physical and mental development of children. Another product example is our paint resin, which is free of legal but sometimes hazardous solvents and prevents professional painters from illness while also featuring a smaller ecological impact.

We recognize various positive spin-offs of these developments as marketers and innovation managers identify new product differentiators for their value propositions. These programmes are also becoming a driver for the development of new products and innovations. Recognizing this value also helps to contribute to employee engagement and bring our customer discussions to a strategic level.

Acting with a Long-term View

Feike Sijbesma, our CEO, says that we cannot be successful or call ourselves successful in a society that fails. He reminds us that we don't own this company; we are just part of this journey for a number of years, during which we have a duty to make sustainable change happen. When the current crop of employees and executives came on board, we found this company in an excellent state but, when we leave, it needs to be in an even better state – that is the drive of the leadership at DSM.

The main challenge we face today is urgency; how do we elevate the issues so they become important and people have to respond to them? Transparency will be one part of the strategy to trigger that change. We saw that, for example, during the 2008 Olympics, when China suddenly became more exposed on the world stage and shut down polluting companies to increase the air quality in Beijing. We similarly aim for transparency with integrated reporting, which is part of the thinking of an integrated approach.

Looking to the future, we see the increasing importance of the circular economy. While consumption should not be a bad thing, we must ensure we preserve our resources. We have found ways to base our production on renewable materials, and we recognize the importance of recycling. As businesses and consumers, we need to arrive at a new model where consumption is sustainable. This requires both a shift

in the way companies manufacture and view resource use, and a change in the way we consume products. In both cases, we need a shift from simply consuming a product and its associated resources to borrowing those resources and using a product for a certain time period, after which the materials are fed back into another life cycle.

When I look back many years from now, I'll feel not only that we've delivered business results, but that so many people contributed to a group effort that really made a difference. We are making a bigger difference in the world today with the prospect of creating a much more sustainable world tomorrow.

Collaborative Use of Resources - John Wilbanks, Ewing Marion Kauffman Foundation

John Wilbanks is Senior Fellow at the Ewing Marion Kauffman Foundation. He runs the Consent to Research project, enabling the sharing of research data to increase the utility of ideas, in much the same way people are sharing cars to increase their use. While sustainable consumption is not John's primary focus, collaboration over information sharing is a key enabler for scaling sustainable consumption innovation as he explains in this essay.

Since the explosion of management consulting as a modern field in the late 1960s, understanding where a business sits in comparison to its competitors has been essential to strategic planning and execution. George Stalk of Boston Consulting Group, a key theorist of consulting, summarized this argument neatly: "The goal is to identify and develop the hard-to-imitate organizational capabilities that distinguish a company from its competitors."¹⁷⁴

CEOs and boards thus focus on market segmentation, the comparison of costs of manufacture, price, value chain and more against those in their markets and in adjacent ones. This focus on strategy created a significant and longstanding boom in efficiency and profits. In the strategic pursuit of more competitive position and advantage, manufacturing has been broken into pieces and globalized, and shipping and logistics have evolved to precision levels that support the assembly of complex real-world products for far lower unit costs than were possible in the pre-strategy world.

And the result to the consumer, at least in the developed world, has been an explosion in the quantity and variety of products available, married to a relative reduction in prices. But this explosion in cheap, varied goods comes at a cost in resource consumption. Raw materials must be extracted, secondary materials must be manufactured. Shipping comes with enormous costs in fuel consumption and pollution. Goods are often disposable, including components with toxic elements.

Competition is part of the equation that places most of these impacts outside the markets for the products themselves. Adding new products every year, creating relationships where upgrading is the focus of the customer relationship, packaging in "convenient" forms (from a consumer perspective) all dictate that internalizing the costs of cheap, varied consumer products are bad for one's competitive standing in the market. But the reality is that this focus on competition alone goes against the grain of an interconnected world in which resources are shrinking while global population is increasing.

Almost at the same time as the emergence of strategic consulting and its focus on competitive understanding, the digital network was born. And it (or more accurately, its extensive family tree) has similarly wreaked enormous change on the world. We no longer talk of going online, but instead, of going offline. We carry access points to the network around with us, in mobile devices that should no longer properly be called phones.

In an increasingly connected world, we need the corporate world, and its strategy, to begin rigorous study on the impact of sharing and collaboration on resource consumption, manufacturing and the distribution of consumer goods. Because the family tree of networks doesn't just lead to more networks. It leads to new expressions of innovation forms that have been with us since long before bits were part of our business language, as well as innovation forms that could only have been created at global scale thanks to the network. We need to see just how powerful these approaches might be for sustainable consumption.

I don't come to attack strategy – far from it. But I do come to argue that one of the imperatives of a digitally networked world with limited resources is that understanding one's competition is only one part of a sustainable strategy. A firm can collaborate with its competitors – say, in sharing truck space to a common retail location, thus decreasing both direct costs and carbon emissions. A firm can engage its user base in design, selling back a personally customized product – thus increasing price, decreasing turnover and building deep affection in the customer. And a firm can allow users to modify their products – thus allowing those closest to their problems to make delightful products, taking the position of distributor and retailer rather than filing lawsuits against its own customers.

But none of these are behaviours that necessarily come naturally to firms. I've worked on processes very similar to each of these with firms ranging from large to small, for profit to non-profit, even academic research centres. The instinct to compete, to separate, to litigate is not just powerful – it's entrenched.¹⁷⁵

User-driven innovation, where a person with a local problem creates a local solution, is perhaps the oldest form of innovation there is. We've been making tools for as long as we've been human. But the digital world dramatically enables the user to innovate at much larger scales than was previously possible. First, cheap technology enables the individual with a solution to achieve design capacity that used to be the exclusive realm of the large firm. Open source software (or simply low-cost closed software) allows individuals to design complex objects to solve complex problems, not just hack together a few pieces of locally available hardware. Second, the individual can now tap into the same network of disaggregated supply chains that competitive firms use to manufacture not just prototypes, but consumer-grade goods, for funding levels that are within the reach of groups of individuals and not just large firms or investors. Third, the network allows the inventor to tap into groups of individuals for investment, incremental design improvement, and more. Designs can propagate to broad communities instantly, without having to go through the intermediate step of acquisition and manufacture by a traditional firm.

But the digital network has also unleashed new forms of innovation. Perhaps the clearest example of this is in distributed innovation systems, where complex knowledge products that used to be the product of a single firm become disaggregated public goods. In Wikipedia, in free software, we see that through the participation of vast numbers of individuals, each working on a small piece of the problem for their own reasons, something that used to be a deeply centralized work product can emerge from the noise.

Distributed goods are very dependent on the network. They are created by individuals, connected and collaborating through practices mediated by technology. These are products governed by a mixture of property licenses and norms that together replace the centralized command and control structures of the firm.

Despite popular perception, products emerging from distributed innovation are not necessarily all “free” or “open”. Craigslist is a good example of a distributed, user-generated good that is anything but open, constantly banning third-party use of its content and imposing punitive terms on its own users relative to its image. But the overall contours of the products’ creation are similar whether the output is free or not.

The emergence of the radically empowered user-innovator and the collaborative digital product force a rethinking of the ways that copyrights, patents, trademarks, trade secrets and consumer relationships should be constructed. Both of these innovation forms cut against many of the corporate practices implemented in pursuit of competitive advantage in a non-digital sense – not to mention the ability of the network to force transparency onto supply chains, environmental impacts, working conditions and other elements of the global manufacturing economy that allow low prices and varied goods.

The idea of “sustainable consumption” is a bit of a paradox, but there is a common thread, the idea that novel forms of innovation enable consumption with a lower footprint, higher recycling capacity and higher efficiency. Another common thread is the idea of new innovations replacing older, less sustainable products and the formation of relationships between citizens and firms that go beyond simple purchase and consumption.

The question is how a firm can actually engage in these novel forms of innovation in a way that truly increases sustainability, maintains a consumer base and creates new products. A manager who has spent a decade understanding how the firm compares with competitors and where the differences lie suddenly also needs to know where he or she is in comparison to collaborators. It’s often not easy.

Indeed, attempting to tie into these forms of innovation can be quite hard for a firm whose muscles are built for competition and quarterly returns. Very few managers know how to effectively identify projects and products that might benefit from engagement or distributed improvement, or have been trained to share. There is a serious cost to making an internal project or product available: annotation, support, the filtering of results, sharing the benefits and access to the outputs, and more. Corporations attempting to share are too often like bodybuilders in a beginning yoga class, stretched far beyond their comfort zone in a place where muscles can do more harm than good.

At least three existing methods can be implemented by firms wishing to increase their sharing as part of a push towards sustainable consumption. One is profoundly digital – sharing data. The second is a mix of the digital and the physical – sharing intellectual property and know-how. And the third is profoundly physical, though digitally enabled – sharing underutilized tangible goods and services.

Sharing data is a tantalizing opportunity. “Big data” has gone from novel term to tired cliché in record time, encapsulating the idea that our capacity to generate and store data has exploded far beyond the ability of individuals to keep up. Industries as disparate as healthcare, baseball and politics have all adopted data-driven approaches to reveal underlying patterns of business, identify underperforming or undervalued assets, and increase efficiency. Sharing data across the various major Web advertising businesses is normal practice, and consumer data is widely aggregated and shared. Machine-based integration, processing and analysis are at the core of the value that data is generating in these industries.

In the consumer products space, there are spots throughout the value chain where data sharing could yield sustainability benefits. Estimating the potential environmental impact of a product before its commercialization¹⁷⁶ through Nike’s Considered Design Index is wonderful – but tapping into databases from a wide range of consumer sectors would enable far more accurate costing of products from outside Nike’s supply chain. It’s also easy to imagine how Goldcorp could run a contest to look for hidden gold, not by looking in the ground, but by sifting through data to find unseen lumps in the supply chain that could have large impacts on resource utilization.¹⁷⁷

Sharing intellectual property – primarily patents and copyrights, but also sometimes branding and trademarks – is a more complex matter. Copyrighted material is the easiest to share from a transaction cost perspective but in the consumer products space it often appears as documentation or packaging for the product itself. The advent of the mobile ecosystem has led some companies to develop apps, which as software are copyrighted and can also be shared at a low transaction cost. But most of the consumer products’ impact from sharing copyrighted works comes less from the documents themselves, which carry the copyright, than from the “intellectual capital” those documents contain. The sharing of ideas, know-how, ratings systems, indices and so forth is enabled by the posting of copyrighted documents but the sharing comes less from a liberal licensing strategy than from simply making the ideas available.

Sharing patents is far more complex. A patent is just a description of an invention, giving the owner the right to prevent others from practising it. But actually taking an invention and manufacturing it for consumers, even if the owner grants the rights, is often a daunting physical process. The exclusionary nature of a patent (i.e. “I can prevent you from making my invention”) means that even if a large group of patent owners choose to share their property rights, a single patent holder with the right claims can prevent that entire group from practising, no matter the desires of the group. This is one of many reasons that efforts to share patents, ranging from complex pools to clearinghouses to standard licensing

systems, are more notable to date in their original goals than in their observed impact on innovation. This rather negative assessment includes patent sharing systems that I've played a large role in creating. It's simply a tough problem that has as yet refused to yield to a sharing-based solution.

The third area where sharing might impact sustainability is in the push of collaboration into the physical world. Products that are profoundly non-digital, like limousines or apartments, represent underutilized capacity that can be found and used with the right kind of collaborative approach. Entrepreneurs are increasingly finding these slack areas and leveraging them to create entirely new markets.

This is an intriguing model for sustainable consumption – what goods are present, but poorly utilized, that can be digitally represented in a way that allows users to tap into them and revenues to be shared with the individuals who invested in them? This can create a higher value for goods, while also lowering the need to create more goods that will themselves go underutilized.

There is enormous potential for network-enabled forms of collaboration to change the scale and type of consumption in ways that may well enable sustainability – but to date the conversations have been academic and hypothetical. For sharing-based models to enable sustainable consumption, we need not only to understand the hard-to-imitate organizational capabilities that distinguish a company from its competitors, we also need easy-to-adopt organizational capabilities that allow a company to collaborate rapidly with its industrial partners as well as its consumer.

The Road Taken: A Personal Sustainability Journey¹⁷⁸ - Mindy Lubber, Ceres

Mindy Lubber is President of Ceres, a business and investor network advocating leadership on sustainability. In this essay, Mindy explores the choices she made that led her down a path less travelled toward a career promoting sustainability in business in parallel to the journey of a large company and its evolution in sustainability, and how their two paths have interconnected.

In 2011, when the Obama Administration sought to raise average fuel economy standards for cars and trucks to 54.5 miles per gallon by 2025, it found unlikely allies in Detroit. The so-called “Big Three” auto-makers – General Motors, Chrysler and Ford – having survived a near-death experience in the financial meltdown of 2008 following years of mounting losses, were slowly rebounding, GM and Chrysler, with federal assistance. For decades, every effort in Washington to raise fuel economy standards had been met with stiff opposition from the car-makers who argued it was too costly, too difficult and would result in cars Americans wouldn’t want to drive. By 2011, that had all changed.

Peruse the sustainability section of Ford’s website today and you will see a company working to integrate sustainability principles into every facet of its enterprise – from the boardroom to its substantial supply chain. The company is measuring and disclosing carbon emissions from its production facilities, its supply chain and its vehicle fleet and setting emissions targets based on a rigorous examination of scientific data so that it contributes to climate stabilization. You’ll see a company on the leading edge of the development of a new generation of hybrids and electric cars, a company deeply engaged with a range of stakeholders, listening to their concerns and advice and integrating them into strategy. You’ll see a company measuring and reducing its water usage worldwide (down 8% per vehicle made between 2010 and 2011 with a goal of a 30% reduction by 2015) and helping ensure access to clean water for people in water-stressed regions of the world. And you’ll see a company where the commitment to sustainability starts at the top and runs through the entire enterprise.

Ford’s evolution – its journey along the road to sustainability – didn’t happen overnight; it began long before the global financial crisis of 2008. And it hasn’t been driven by a CEO’s spiritual conversion or a desire for a corporate image makeover. For Ford, sustainability is a core business strategy that is improving competitiveness in a global market, creating jobs and adding to the bottom line;¹⁷⁹ it’s about preparing the company to succeed in a global economy that will be profoundly shaped by climate change, water scarcity and the other sustainability challenges of the 21st century.

When I joined Ceres as its President in 2002, it was a major step in my own sustainability journey, begun more than a quarter century before.

As a college student in the early 1970s, I joined “Nader’s Raiders,” a cadre of idealistic young people who volunteered to work as foot soldiers for the consumer advocate Ralph Nader.¹⁸⁰ Nader had made a name for himself as a thorn in the side of American auto-makers, lobbying for safer automobiles and vehicles that didn’t have what was famously called “built-in obsolescence”, cars built not to last so that consumers would return a few years later to buy another. Nader’s 1965 book, *Unsafe at Any Speed: The Designed-In Dangers of the American Automobile*, was to consumer activism what Rachel Carson’s *Silent Spring* was to environmental activism: a book that spawned a movement.

I knew then that what I most wanted to be was an advocate, a crusader: someone like Nader. As with many of my generation, my ambitions weren’t modest: I didn’t just want to make a difference; I wanted to change the world.

I may not have been quite sure how to go about fulfilling that ambition when I graduated college in 1976 but looking back now it seems that every step I took, every career choice I made, led, inevitably to Ceres where we are marshalling the power of institutional investors, large corporations and other capital market players to build a sustainable global economy.¹⁸¹ This may seem an odd group of actors to describe as allies in the struggle to build a sustainable economy; for decades they have been the antagonists, foils and targets of the environmental and social justice movements – at least that was the common assumption. But, while it’s far too early to declare victory, tectonic shifts are under way in how many of these influential actors, such as Ford, are responding to the most critical sustainability challenges of our time.

By the time I became Ceres’ president in 2002, Ford had been a member of the Ceres coalition of companies for two years and the relationship was a work in progress.

As often happens, the connection between Ceres and Ford owes much to the relationship of two people. Bill Ford, Jr., the company’s namesake and then-CEO, and Ceres’ then-executive director, Bob Massie, had been Princeton classmates. Ford’s decision to join Ceres and, by doing so, adopt the Ceres Principles, a set of commitments to environmental performance well beyond that required by law, had been years in the making, the result of dialogue among senior executives at Ford, Ceres and Ceres coalition members including the Sierra Club and the Interfaith Center on Corporate Responsibility (ICCR), a group of more than 250 faith-based investors.

When a company joins Ceres, its sustainability journey is often just beginning. Committing to a set of principles is one thing; fulfilling that commitment is another and that is the essence of our work with companies such as Ford. We travel the road to sustainability with them by offering expert advice, convening meetings with various stakeholders, bringing their investors into the discussion, sharing best practices and challenging companies to elevate their sustainability commitment and performance.¹⁸²

Shortly before taking the helm at Ceres in 2002, I was with the entire Ceres board in Detroit for a meeting with the leadership of the company. At that meeting, Ford proudly pointed to the company's significant effort to "green" the operation of its 84-year old River Rouge plant, a major manufacturing facility in Dearborn, Michigan, which had recently been fitted with a "living roof", 454,000 square feet of sedum, a low growing plant, that would keep the facility warmer in winter and cooler in summer, greatly reducing energy consumption. "This is not environmental philanthropy," Bill Ford had said in November 2000 when the US\$ 2 billion overhaul began. "It is sound business, which for the first time balances the business needs of auto manufacturing with ecological and social concerns."

Though Bill Ford's personal commitment to environmental issues was strong, the long-term goal of our relationship was to have the entire company view sustainability not as a handful of "green" projects, such as the living roof, but as a principal, guiding force to be integrated into every aspect of company governance, strategic decision-making, supply chain, operations from production processes, materials sourcing, waste treatment and, most importantly for an auto-maker, into its *raison d'être*: the vehicles it sells. After all, Ford is a global manufacturer of a carbon-emitting product and motor vehicles are a leading source of carbon emissions worldwide. To be a sustainability leader, Ford couldn't just build a greener assembly line; it had to transform the cars and trucks rolling out the factory door. It would take another decade of intense engagement by Ceres, some of its investors and other stakeholders before Ford was able to move a comprehensive agenda addressing environmental and social challenges.

To change the world, I equipped myself with an MBA and a law degree earned at night while working at my first post-college job with an advocacy organization – the Massachusetts Public Interest Research Group, or MassPIRG. One of MassPIRG's signature campaigns in the late 1970s and early 1980s was for legislation to require beverage manufacturers to sell certain types of drinks in returnable, deposit containers in order to reduce solid waste going into landfills and encourage recycling. It seems hard to believe today, but this "bottle bill", now law in Massachusetts, was very controversial and hard-fought at the time, pitting consumer and environmental activists against manufacturers and retailers who didn't want to have to set up facilities and procedures for handling the millions of returnable bottles consumers would be recycling every year. The goals of all this campaigning, lobbying and filing of lawsuits to limit toxics, support renewable energy, reduce air and water pollution were the same as the goals of Ceres, but the tactics were quite different. We weren't engaging, as Ceres does, with large companies and the world's leading investors to bring about the change we sought.

By the late 1980s, after a decade of these and similar battles, it felt as if the world was changing, if it was changing at all, only in very small ways and only after very protracted, acrimonious and costly fights. There must, I thought, be another way.

For eighteen months before the US presidential campaign in 1988, I thought electoral politics might be that "other way", a potentially game-changing opportunity.

Michael Dukakis, the governor of Massachusetts, was an honest, progressive and highly capable leader and the Democratic Party nominee to face Vice-President George H.W. Bush in the 1988 presidential election. As Dukakis' Director of Scheduling, I had to make hundreds of decisions every day about how to best deploy the candidate and hundreds of staffers to meet the countless demands of a national presidential campaign. Dukakis lost that election and when he returned to Boston to complete his term as governor, I remained as his Communications Director until his term ended in 1990. We'll never know how a President Dukakis might have reshaped our world, or what role I might have played in a Dukakis Administration, but his electoral defeat forced me to think of other ways I might affect the large-scale social and environmental change I believed was necessary to save the world, not least because I now had another role in life and another reason to fight the good fight: I was the mother of a newborn son.

Wherever I looked, I saw polarization. The Soviet Union was coming apart after decades of a chilling East/West standoff and no one knew what would follow in its wake. The gap between rich and poor, both in the United States and worldwide, was growing ever wider, creating a world starkly divided between haves and have-nots. On environmental issues, it was always good guys versus bad guys, the virtuous versus evil-doers. The very notion of dialogue to find common ground was seen as selling out on one side, or acquiescing to the "tree-huggers" on the other. Demonizing the other side wasn't changing anything, however, least of all hearts and minds.

If only we could harness the power of capital and the zeal of environmentalists, maybe there'd be some progress, I thought. The flow of capital, after all, determined whether we invested in fossil fuels or solar power, SUVs or small cars, in public parks or industrial parks. Capital shapes our world in countless ways, large and small. Underlying it all, however, was a fundamental, immutable truth: every business, every corporation relies on natural resources and if they deplete those resources faster than they can be replaced, they are sowing the seeds of their own failure and of the economy writ large. I was sure there was a powerful economic case to be made for environmentalism and I decided to test that argument as the founder in 1991 of Green Century Capital Management (GCCM), a family of environmentally screened mutual funds.

I had no experience managing money, but I hired good people and we set out to manage money in an environmentally responsible way, investing only in companies that were good environmental citizens, either because they demonstrated corporate responsibility when it came to environmental stewardship or were developing environmentally-friendly products and services. Thinking about companies in this way, it was clear to me that environmental issues were, fundamentally, economic issues. A case in point was a high profile battle being fought between General Electric Corp. and citizens in Western Massachusetts over clean-up of the Housatonic River where for decades GE had dumped carcinogenic polychlorinated biphenyls (PCBs). A decade later, as New England Regional Administrator of the US Environmental Protection Agency (EPA), I would play a role in the clean-up settlement the federal and state governments reached with GE, a settlement that cost the company hundreds of

millions of dollars.¹⁸³ As environmental issues became public health issues and an aroused and concerned public demanded action, they were also fast becoming important bottom-line financial issues that corporations ignored at their peril.

I had now considered environmental issues from the perspectives of advocacy, law, electoral politics and investment. As a senior policy adviser, and later New England Regional Administrator for EPA in the second Clinton Administration, I saw the issue as a regulator. It was here that the philosophy that guides my work at Ceres, as exemplified by our work with Ford, really came into its own.

Traditionally EPA had been seen by business as an antagonist, an environmental super cop focused on catching violators and enforcing the law through a series of punitive measures. It was essentially the same dynamic I saw at MassPIRG: a standoff between the good guys and the bad guys. While there were, and are, some bad actors who need that kind of policing, I've learned that more often than not companies, and the people who run them, want to do the right thing and it's necessary to understand their world and their constraints. If the willingness to listen and to work with them rather than against them is made clear, surprising things can happen.

This approach made EPA more effective, too. By taking a less adversarial approach wherever possible, and enlisting the resources, imagination, expertise and intellectual capital of the private sector in the search for solutions, EPA could achieve its goals. While we insisted on meeting legally required targets, we were flexible about how they were met. We transformed adversarial relationships into collaborations, taking money we once used for litigation to work with companies to develop solutions and, in some instances, getting measureable and impressive results.

Ceres' work with Ford and other companies follows a similar philosophy. There are disagreements, pushing and pushback, but ever since Ford signalled its desire to become a sustainable company by joining Ceres in 2000, we have known we are working towards a shared goal, even if we sometimes disagree about how to get there and how fast we need to move.

Making the economic case for sustainability isn't always easy at the micro level, but the macro case is straightforward and readily understood: in a world of finite resources on which all economic activity depends, it's economic suicide to consume those resources faster than they can be replaced. But how do we make that case? To whom do corporations answer? The answer is obvious: to their owners, the shareholders. That's where the leverage is and some of Ford's investors have played an especially important role in pushing Ford to take ever-bolder action to strengthen its position as a sustainability leader, a strategy that is at the core of how Ceres operates.

For example, in 2005 Ford agreed to issue a report on its efforts to reduce carbon and other harmful emissions at its plants worldwide, but only after shareholders, led by the Connecticut State Treasurer's Office and the Interfaith Center on Corporate Responsibility filed a shareholder resolution seeking to compel such a report. (The resolution was withdrawn when Ford agreed to write the report.) But even as late as 2006, Ford was losing as much as US\$ 5.8 billion a quarter, laying off thousands of workers and closing factories, having continued to bet on gas-guzzling SUVs over "green" vehicles such as those built by foreign competitors including Toyota and its Prius hybrid. Despite Bill Ford's personal commitment, the company fell short of embracing sustainability as a core business strategy.

As Daniel Esty, professor of environmental law and policy at Yale Law School, wrote in *The Wall Street Journal* in December 2006, "Ford had eco-initiatives, but they failed to address the company's real vulnerabilities. In fact, Ford's River Rouge manufacturing facility had state-of-the-art environmental features including a grass roof and natural ventilation. And the company contributed millions of dollars to rainforest protection. But Ford's problem wasn't pollution at its factories, and it certainly wasn't deforestation of the jungle. No, Ford's focus needed to be on its vehicles... If you're an auto-maker, fuel efficiency and tailpipe emissions have to be at the heart of your strategy."

By early 2007, Ford appointed a top level executive to establish a long-term sustainability strategy, even as investors continued to press in May 2007, through shareholder resolutions, not only for a stronger commitment to greener vehicles but a more activist stance in favour of public policies to reduce carbon emissions. Though Ford opposed the resolutions,¹⁸⁴ it vowed to continue to work with investors and stakeholders to improve its environmental performance. The very next month, Ford added its weight to the US Climate Action Partnership, a coalition of NGOs and two dozen of the world's largest corporations calling for federal climate legislation that includes mandatory greenhouse gas reductions.

The power of investors was also apparent in Ford's decision in April 2008, again in response to shareholder resolutions, to report back to shareholders with a plan to reduce greenhouse gas emissions from its vehicle fleet by 30% by 2020. By 2011, as we've seen, Ford was backing dramatically strengthened federally mandated fuel economy standards. And today, Ford is 'focusing on leadership in advancing vehicles technologies in the hybrid and electric car markets in part with a US\$ 135 million investment in an advanced electrification centre in Dearborn that will employ a thousand engineers. In short, with more fuel efficient, less polluting vehicles, Ford is driving towards the destination consumers have signalled they want to go.

This has been Ford's journey to sustainability thus far, one it has taken with the support, and sometimes the criticism, of its investors and organizations such as Ceres. But this approach of constructive engagement has paid off, both for Ford and for the planet. As John Viera, Ford's Director of Sustainability & Vehicle Environmental Matters, has written, Ford works closely with Ceres "to not only disclose and improve our sustainability performance, but to embed sustainability expectations across our business model". This work can be both collegial and

hard-nosed at the same time. We are always pushing Ceres companies to do more, but as an ally not an adversary. Ford today is a sustainability leader because we have worked together, *changing the paradigm of how the business of sustainability gets done.*

When I became president of Ceres a decade ago, all of my previous experience in the trenches of environmental activism had convinced me that the big piece missing in the arsenal of social and environmental change was the engagement of the private sector, particularly major market players – corporations, institutional investors, stock markets, securities regulators and asset owners and managers. Creating the large-scale change needed to address the most critical sustainability challenges of our time required not only their participation but their leadership: we had to become partners, not adversaries. To do that, we had to make what I believe is the unassailable case that the future of our economy is inextricably linked to our ability to meet the sustainability challenges of climate, clean energy, water scarcity and sound natural resource stewardship.

Our theory of change had to evolve in order to get results. We could continue to lock horns or work to find common ground and give ourselves a fighting chance to make real progress. Ceres' work over more than a decade with Ford shows what is possible when advocates, companies and shareholders meet on the playing field of good faith and when the power of the economic case for sustainability is used to leverage change.

As I write this in the summer of 2012, the United States is in the midst of one of the worst droughts in modern history. Half of all counties in the country have been declared disaster areas by the US Department of Agriculture, making federal loans and funds available to farmers who are seeing virtually the entire US corn crop wither to dust. Corn, one of America's staple crops, and one on which so much of our agricultural and food industries depends, is now being imported for the first time in our history.¹⁸⁵ This drought comes on the heels of record heat and a long-term warming trend so continuous it couldn't possibly be attributed to natural fluctuations in temperatures. And 2011 was one of the most destructive in the nation's history in terms of major severe weather events (that is, weather events causing at least US\$ 1 billion in damage). These extremes are not limited to the US by any means. In July 2012, over just four days, Greenland saw the percentage of its ice sheet undergoing melting rise from 40% to 97%; typically each summer about half the ice sheet experiences melting. The list of how Earth's climate is changing, and changing fast, goes on and on. As one scientist said of recent events, "this is what climate change looks like." If ever we needed a perfect example of how energy use (particularly fossil fuels), food demand and water scarcity collide, we have it now.

Life on Earth depends on water and so does the entire global economy: every business, every community and every human being is water dependent for its survival. Human-caused climate disruption is changing the environment in countless ways, but its impact on both fresh and ocean waters may be our biggest adaptation challenge. With rising seas, prolonged heat and drought in some regions and climate-driven storms of greater intensity and frequency in others, we are facing problems of too little water in some places and far too much in others. And with these changes will come economic disruptions that could well make the global financial meltdown of 2008 look tame by comparison. As companies such as Ford come to recognize this and other sustainability challenges, no longer do they dismiss the concerns as simply those of tree-huggers. They are a major threat to their businesses.

Given the scope of the challenge, are we moving fast enough to head off the worst impacts of climate change, water scarcity and other sustainability challenges? Are our economies prepared for the disruptions to come? Are governments taking the necessary steps they need to take to prepare for this new world of risk? Are businesses? Are investors?

The short answer to each of those questions is “no,” but there are reasons for optimism.¹⁸⁶ More and more companies such as Ford, once dismissive of these issues, now understand that their future, and the future of the global economy, depends on putting sustainability at the core of business strategy. More and more investors with enormous capital are weighing the climate and water risks in their portfolios and understand that sustainable consumption of natural resources is essential to the global economic future.

When I first came to the World Economic Forum Annual Meeting in Davos eight short years ago, fewer than a dozen people attended the climate change and sustainability workshops. Now more than 500, including the CEOs and other senior executives of some of the world’s largest companies and financial institutions, pack these sessions. In the United States, after decades of opposition, the Big Three auto-makers have embraced stronger fuel economy standards formally adopted in October 2012 by the Obama Administration and 27 states require that a significant percentage of energy consumed in those states come from renewable sources.¹⁸⁷ Enough? No. Encouraging? Surely.

We have a very long road to travel to be sure, but change is brewing. Governments, particularly those of the countries that consume the most resources, are the laggards. We cannot wait for them to act: intergovernmental efforts to address climate change and other sustainability challenges have, to date, been a failure. That is why it is up to capital market players to lead the way to a sustainable prosperity and how my own sustainability journey and Ford’s converged in a Detroit boardroom in 2002.

Accelerating Progress Through Changing Mindsets - Aron Cramer, Business For Social Responsibility

Aron Cramer is President and Chief Executive Officer of Business for Social Responsibility (BSR) For two years, Aron chaired the Global Agenda Council on Sustainable Consumption and was instrumental in guiding the progress of not just the Council, but the wider direction of the Forum's project on sustainable consumption. In this essay Aron discusses some of the changes he has seen among CEOs and other leaders over the past few years.

In 1992, the Cold War was just ending, and I was living in Paris, writing and teaching, after some years practising law in San Francisco. It was clear that the world was changing, and fast, but it was not clear exactly where things were heading. In those days, the world's attention remained focused on the last in a series of classic 20th-century battles: European integration, Middle East wars related to oil, the rise of America as the "lone superpower". China, India and Brazil were still considered "third world" nations. As 20th-century dilemmas being played out, they were largely exhausted, and new questions had not yet emerged. Remember: this is when "The End of History"¹⁸⁸ was a concept that convinced a great many people that great battles – philosophical, economic and geopolitical – had been resolved for generations to come.

But in that same year, new questions were beginning to come to the fore. That year's Earth Summit in Rio de Janeiro, in some ways, marked the arrival of 21st-century questions. Sustainable development strode onto the world's stage with nothing less than an entirely new vision of the world's agenda. Promise and peril were redefined – the promise of prosperous lives for all the world's people, and the peril of climate change and other environmental damage that began to be understood more widely.

Twenty years later, this world has come into much higher definition. And it is now clear to many (though regrettably, too few of my fellow Americans) that sustainable development is in fact the dominant challenge – and opportunity – we face globally.

The organization I now lead, BSR (Business for Social Responsibility), was founded in that same year, 1992, as part of an early wave of efforts to strengthen the business community's commitment to sustainability. As part of our 20th anniversary activities, we are taking stock in 2012 of what has been accomplished over the past two decades and, in doing so, it seems to me that everything has changed...and nothing has changed.

There are many reasons to be pleased with what has transpired in the past 20 years.

Compared to the state of affairs in 1992, sustainability has come into the mainstream. When BSR held its first conference, no big company CEOs were ready to speak; today, we are in the happy position of having multiple business leaders seeking to use the “bully pulpit” to trumpet their accomplishments. Sustainability has also entered the boardroom. As I write this, I am returning from briefing a company’s Board about human rights. This company is only one example of many that have established Board committees focused explicitly on sustainability and that are holding CEOs accountable for their performance, marking a sea change in the ways companies think about issues that were nowhere on the corporate agenda when I joined BSR to start our human rights programme in 1995.

But these changes, as important as they are, relate to process; even more crucial is that progress has been made in peoples’ lives. Most important is that hundreds of millions of people – if not more – have moved out of poverty in the past quarter century. And we have seen renewable energy become more and more widespread – too slowly, to be sure – but the foundation of a low-carbon economy is being created, with vast amounts of capital flowing to sustainability. None of this was happening 20 years ago, and it provides reason for hope.

And yet.

Far too many indicators are pointing in the wrong direction. Most importantly, our climate continues to warm, risking feedback loops that make catastrophic impacts ever more likely, if not inevitable. Water stressed regions continue to multiply, and battles over land are shaping up to be more intense, as the race for food and energy intensifies. Governments and financial markets continue to be stuck in short-term thinking. And consumers are focused more on consumption than well-being, with the rise of type 2 diabetes, depression and other lifestyle diseases correlated with increasing affluence and consumption, which are now on the rise in emerging economies.

These challenges are, by now, very familiar. And the vision – sustainable prosperity for a world heading to 9 billion people – is familiar as well. In this context, our collective challenge is to build on the successes and take our solutions much further, recognizing the complex systems changes that are needed to make that happen.

Doing that requires changed mindsets as much as anything else. The good news is that there has been significant progress in the past few years. In many ways, this is surprising, given the global financial crisis, stagnating wages in the West and a headlong rush to consumption-based development in the rising economies.

But something truly has changed. At the World Economic Forum Annual Meeting 2008 in Davos-Klosters, I helped run a workshop on sustainable consumption, a topic that was little known, poorly understood and not fully embraced. I thought to myself that this might be the sustainability version of a suicide mission, but then it was also a perfect opportunity to redefine the business agenda, which is what BSR is all about. And the Forum, as is always the case in Davos, succeeded in bringing numerous CEOs into the room to devote three hours to a concept that many of them clearly either did not understand or thoroughly rejected. The conversation moved ahead, but there were some really basic questions, some snide comments and lots of checking of watches.

Somewhat to my surprise, that session proved a good start. It was only at subsequent meetings in Davos that the success of that first gathering was evident. In the years since, many of the same CEOs have been on prominent panel discussions advocating for new models for delivering value to consumers without relying on massive use of natural resources – exactly what we were aiming for in that first session.

It is clear then that perspectives had begun to change.

Miraculously enough, CEO interest in sustainable consumption seems to have grown after the financial crisis hit. Maybe sustainability wasn't an extraneous, feel good luxury after all.

I have multiple theories about why this has happened. First, the run-up to the recession coincided with spikes in commodity prices and increasing uncertainty of supply, increasing the cost of goods sold and sending many companies scrambling to secure critical inputs from energy to cotton. This caused many CEOs to see that the “enviros” who were predicting exactly this outcome were in fact right, and that they needed to adopt sustainability as a strategy for protecting against basic economic risks. Second, the financial crisis so dented the reputation of business that business leaders and Boards realized they have a huge investment in ensuring that trust was restored. Third, the technology revolution happened. Radical transparency has redefined the way companies and broader society interact. Transparency used to be an act, now it is a condition.

But most interestingly, mindsets changed as sustainability began to be redefined as an opportunity for innovation and inspiration. Business leaders like to create, they like to compete and they want to build a legacy. For whatever reason, a light went on in the heads of many business leaders who realized that sustainability was not about less, but about better, and about capturing the future that looked very different from the past. When I interviewed Nike's Mark Parker for my book *Sustainable Excellence*,¹⁸⁹ he spoke about how he requires sustainability to be part of every design brief. John Donahoe of eBay speaks regularly and eloquently about how his company enables the “circular economy” that generates new value from existing products, rather than an endless stream of production of new products.¹⁹⁰ All this means that purpose is considered along with profit as business leaders think about what their companies do.

But the journey is not easy and progress is not linear. We will need business leaders who excel at skills that have not been the traditional measures of business leadership, and this process is still incomplete.

Business leaders are only beginning to take up the challenge of driving innovation to deliver true sustainability. Much of the last two decades of attention to sustainability has brought relative improvements to an unsustainable model, rather than enterprises able to thrive within and create an economic system that decouples prosperity from resource consumption and avoids catastrophic climate change.

Four Dimensions to Reframe Mindsets

To turn this vision into reality, new mindsets remain crucial, and my view is that four key dimensions are needed to make that happen.

First, set big and bold goals. Over the past several years, more and more companies have changed the way they approach goal-setting. During my first decade at BSR, I heard literally dozens of companies tell me and my colleagues that they wouldn't set public sustainability objectives they couldn't be sure to meet. Why, they asked, should we raise the bar on ourselves when the media, NGOs and the public routinely slam us for failing to live up to expectations? Timidity, especially for companies in the US, who too often are ruled by the hyper-risk aversion of a culture dominated by lawyers, they chose to keep their heads down.

Fortunately, this is starting to change. Jeff Immelt and GE deserve a great deal of credit for his 2005 speech setting out big goals for Ecomagination, with the pledge to invest US\$ 10 billion in sustainability solutions between 2005 and 2015, with revenues exceeding 105 billion in June 2012.¹⁹¹ For the past several years, more and more companies are emulating this approach with big targets on everything from carbon reduction to water use to economic development. Setting big goals is what business leaders do best: after all, what CEO rallies the troops with a call to be No. 3 in the marketplace? Competing to excel on sustainability is a more common part of the landscape today, and that's essential.

Second, work for change in how policy and market rules operate. Leadership also means influencing the rules of the game. Here again, there are some positive signs. Brazilian businesses representing 40% of that country's GDP called for a more aggressive carbon reduction target in the run-up to Copenhagen,¹⁹² and the US Climate Action Partnership took a similar approach.¹⁹³ These were positive signs, despite backsliding by many since then.

These efforts now need to be extended to business advocacy for market rules that promote long-term investments. The average share of stock in the United States is held for seven months today, down from seven years in 1975.¹⁹⁴ Automated trading means that vast numbers of shares are traded by the millisecond. This needs to change and business leaders, who would be among the biggest beneficiaries of more patient equity markets, should be more vocal in seeking such reforms.

Business support for integrated reporting models is a good step, but embracing many of the principles of sustainable capitalism outlined in a paper published via Generation Investment Management in February, 2012, by David Blood and Al Gore,¹⁹⁵ including a new class of shares, called "L-Shares," for long-term holdings, is a critical step that should be taken. Business will also need to contribute to honest debates over fast-changing social contracts in both mature and emerging economies, lest social and human capital needed for functioning economies be lost.

Third, listen to non-traditional voices. Twenty years ago, businesses and NGOs began to see the value in dialogue and collaboration. Today the challenge is to find ways to transcend transactional relationships to ensure that businesses regularly integrate new ideas, perspectives and networks not traditionally part of business.

The global financial crisis has exposed flaws in governance and resulted in a crisis of legitimacy for many businesses. The answer to these twin challenges may be found, at least in part, by a more systematic effort to diversify the voices shaping business strategy. Multiple companies, from Nestle to Marks & Spencer to Unilever, have established expert advisory panels that bring voices from society into the boardroom. This “soft governance” model, done right, can create huge value. I have had the opportunity to participate in several such advisory boards, and have seen first-hand how corporate policy, practice and perspective change by virtue of candid exchanges with people who have not historically participated in formal governance structures.

In an era when business is shaped by infinite sources and ideas from all corners of the world, Boards of Directors have not kept pace. Bringing new voices into corporate strategy provides a source of innovation, and also a “wind tunnel” through which strategy can be tested more thoroughly than it might otherwise be.

Fourth and finally, understand and embrace a world of empowered individuals and connected communities. The central fact of our time is that information and influence is spread more widely than ever before, undermining the monopoly that large institutions, public and private, had during the 20th century.

This means that companies have to come to grips with the world of distributed power. The implications of this change mean a more nimble and open approach to everything companies do, from strategy, to product development, to business models, to communications and engagement.

This change is not inherently good or bad for sustainability. This new operating environment, however, opens new opportunities. This is especially true where the formerly hidden impacts of our behaviours are made visible for the first time. Consumers are increasingly able to understand the health and environmental impact of their choices, which can create new market rewards for companies that enable consumers to thrive. Wired homes can now identify – for the first time – the massive waste of energy and water that many Westerners indulge in. It is hard to imagine such waste continuing once we are aware of it, and this will change the economics of energy and water systems. Businesses will do well to create this future, rather than being caught on the defensive.

All this means that we have to redefine leadership for true sustainability. But to what end? The promise of widespread global prosperity won't be reached without creating new models.

This responds well to the systemic changes in the 21st-century economy. The archetypal consumer today is an aspiring urban dweller in Mumbai, not an American suburbanite near Detroit. How do we meet their needs? The market economy is based both on meeting peoples' basic needs today and their aspirations for a better future. It is a non-starter to suggest that people living in poverty should have their future aspirations “capped”, yet we know that we cannot replicate globally the models of economic advancement that have driven the “West” since the Industrial Revolution.

Figuring this out is the grand opportunity for business and it is where the sustainability battle will be won or lost.

From 1992 to today, a 21st-century vision has emerged to supplant the zero-sum ideological battles of the 20th century. The central challenge of the 21st century asks how we deliver prosperous lives for all the people of the world while preserving our natural resources. We are in fact closer to that goal than ever before...yet if we do not change our behaviour, our rules and the very objectives of the economy and our societies, we will not only fail to reach this goal, we will reverse the massive progress we have achieved in the past generation.

Over the past two decades, the foundation for achieving this vision has been laid. I have seen first-hand the creation of a global coalition of businesses, individuals and civil society organizations dedicated to making sustainability the central organizing principle of our economy. Every single day there are many reasons to be proud of what has been accomplished and also daily reminders of the progress we still have to achieve. The stakes couldn't be higher and the prize couldn't be greater.

Conclusion

Emerging Themes

Over the preceding pages, twenty individuals have explained their journeys, and through each story one can dig a little deeper into the power of personal motivations. Each essay offers a very different perspective, but each is also a key piece of a larger story. What can be drawn from the common threads that weave these experiences together?

A common and recurring message seems to be that while there are many levers to pull to accelerate and scale our progress towards sustainable consumption, one must not lose sight of the ultimate goal of sustainable prosperity. This is not just about consumption per se, but also about entire lifestyles and, from a business perspective, it is about more than fixing the product, it is also about culture and values. By innovating with the goal of sustainable markets and new opportunities, businesses can minimize risks and be the primary driver of sustainable consumption. Along the way, they can enable an expanding global population to consume sustainably, leading the change of consumption patterns in the developed world while creating a model for long-term prosperity in the developing world.

The essays also show how individuals and communities have proven their ability to put on their “citizen hat” and rally around sustainability issues; however it is very rare that they continue to do so as consumers themselves. The “citizen hat” is not yet the same as the “consumer hat”, but deeper engagement with consumers offers the chance to make them more conscious of their acts and their individual and collective impacts. By creating a vision of sustainable lifestyles that brings together our consumption, livelihoods and prosperity, there is a common goal – a North Star to follow.

Driving sustainable consumption also seems to be about more than “corporate social responsibility” or a single role within an organization. It is about necessary fundamental changes in the way business is done and the way the world consumes. This requires the engagement of every individual within an organization, and not just those who have the word “sustainability” in their job description.

One other important lesson brought out through these stories is the necessity and challenge of collaboration to make more significant progress. While there are many cases of individual businesses making substantive progress, each company relies on others within its value chains and has realized the need for actors to work across traditional boundaries. While they can be significant, it is about more than the actions of one company or organization. Driven by the inherent complexity and scale of the challenge, the Forum’s Partners have embraced systems solutions that will require deep and broad engagement between their businesses and other stakeholders, within and across value chains and industries.

It seems that the more a company explores issues of sustainable consumption, the more it becomes aware of the scale of the challenge. Along with this often comes a sense of humility in the face of such a daunting challenge. Many of the contributors to this volume suggest they still don’t have “the answer” to our consumption challenges – there is no one silver bullet.

Yet is clear that running through each of these contributions is a strong sense of optimism. It seems that pessimists don't last long in this field - human nature encourages us to chase targets and try for seemingly impossible goals. It can be done and it will be done, seems to be the overriding message, provided there is leadership to keep pushing on the agenda.

Three Levels of Decoupling

It is impossible to summarise the many excellent contributions to this book from leading experts and business practitioners; yet from the four years that the World Economic Forum's Sustainable Consumption Initiative ran 2008-2012, one can draw some overarching thoughts.

Resource and energy efficiency have traditionally been sold as the win-win solutions to usher in a new era of sustainability. Though the concept of efficiency and decoupling has been around for decades, the two have often been communicated as a single step. To take this to the next level and look at the micro, meso and macro levels, the concept of decoupling should be seen as three levels: decoupling environmental impact from resource use; decoupling resource use from consumption; and decoupling consumption from prosperity.

The first level is decoupling the resources we use from the environmental impacts they create. We could also refer to this first level of decoupling as a closed-loop or circular economy. Taken to its highest level, this would include the use of only renewable energies with zero carbon emissions, eliminating all waste from supply chains, and reusing or recycling materials at the end of a product's life cycle. This type of decoupling has been discussed in the context of eco efficiencies for decades, but its full potential was popularized in the 2002 book, *Cradle to Cradle*. The concept was taken to a more quantified level in a recent report entitled, "Towards the Circular Economy".¹⁹⁶ Decoupling our resource use from its environmental impact can deliver zero waste, zero carbon systems with the potential of creating products with no new environmental impact. The focus of first level decoupling is mostly technological but does not, however, include the important factors of product use and consumer behaviour.

New trends in the way we perceive value are only captured in a second level of decoupling, the decoupling of consumption from resource use. As explored earlier, the idea of consuming value rather than consuming stuff opens up the opportunity to consume right, rather than consume more. Sustainable lifestyles are not bound just by consumption but include all the ways in which we live; all of our lives are defined by much more than consumption alone. This second level decoupling captures recent trends in value delivery, including dematerialization, shifts from products to services, collaborative consumption, all of which fundamentally change what and how we consume, effectively decoupling our consumption from resource demand.

Finally, we can see that even with a service economy that has largely been dematerialized, an opportunity to reframe our macroeconomic vision of success still exists. A third level of decoupling offers a solution: decoupling growth from consumption. When Resolution 65/309 was adopted unanimously by the United Nations in July 2011, it placed “happiness” on the global agenda and empowered the Kingdom of Bhutan to convene a high-level meeting on happiness as part of the 66th session of the UN General Assembly in New York. The implications are far deeper than one might suspect, as happiness, prosperity and well-being are all quantifiable through various scientific and economic indicators. By graduating from the narrow concepts of quantified economic growth driven largely by consumption, we open up to a phase of qualitative growth,¹⁹⁷ in which we recognize the importance of a broader view of growth – one that encompasses quality of life, well-being and eventually, happiness.

A Roadmap for Sustainable Living

So where does this leave us? As a company or as an individual, it is not easy to wake up one morning and decide to decouple everything. When looking at sustainable consumption as an absolute, it can often seem quite daunting, and difficult to find the opportunities and optimism. When broken down, it turns into a difficult journey, but not an impossible one. Four practical, achievable steps emerged from the World Economic Forum’s Initiative on Sustainable Consumption. First highlighted in the 2010 report, *A Roadmap for Sustainable Consumption*, these can be used to help companies and other institutions and organizations start the process, highlighting the obstacles that must be overcome and the opportunities that can be seized by business, leaders and citizens on the way.

Figure 12: Four Steps to Sustainable Consumption



The first step is to firm up the *Foundation*, as the current leading practices of today become standard practice and sustainability strategy becomes integrated into business. In “relative sustainability”, steps made are important as part of the learning journey but are still incremental improvements, based on current practice. The barriers to be overcome include the mindsets of leaders, a lack of awareness at all levels of an organization and general inertia associated with any organizational change. Strategic dialogue and the ability to learn from peers have proven to be key enablers of the change process. Many of the companies that have been engaged in the Forum’s work on sustainable consumption have overcome these barriers by engaging employees, measuring and reporting non-financial information and

showcasing success to inspire a broader shift. Over the preceding pages, essays by Liz Goodwin, Helio Mattar, Helen Mountford, Mindy Lubber and Simon Zadek have addressed each of these incremental steps vital to have engrained within the business as a prerequisite to addressing the challenge of scale. Collectively, they build the foundation and enable a proper course for a sustainable business.

The second step is *Rebuilding Business*, in which sustainability is integrated throughout an organization; new business models are piloted and demonstrated to be viable. The real challenge addressed at this step is that of organizational change. A few examples appear in the preceding pages, with companies demonstrating the complete shift required to successfully move sustainability from a function to an embedded culture, including Steve Howard, Lawrence Hutter, John Kornerup Bang, and Mike Barry. This shift within a company is certainly not easy, and can be made more difficult by a lack of knowledge and know-how or the challenge of building higher and more authentic levels of trust within an organization. Many of the levers to rebuild business involve soft skills, such as enabling and empowering employees through incentives and performance metrics, and engaging consumers on the journey. Both can be accelerated by a more complete understanding of an organization's environmental impact and increased transparency. Specific initiatives, such as the Carbon Disclosure Standards Board, which was conceived at the Annual Meeting in 2006, provide standards for this transparency. It is also important to have a safe space within an organization to design, fail and incubate innovation.

Somehow, it seems that the things which are within direct control of a business are not the most important. The third step, *New Value Chains*, is the beginning of a major shift towards new business models, in which sustainability is integrated across entire value chains to move towards sustainable supply and zero net waste. The challenge here is that such widespread changes involve the engagement of stakeholders well beyond the boundaries of an organization. It is a significant challenge for many large organizations to even come to terms with the fact that the things least in their control are those that are the biggest enablers of change. Collaboration with peers and with direct competitors is sometimes the only way that such widespread changes can achieve scale. Some examples from this book of collaborating along value chains and with stakeholders are highlighted in essays by Bjarne Pedersen, Thomas Lingard, Peter Lacy, and John Wilbanks. This idea of collaboration and co-opetition has been a fundamental premise of many workshops hosted by the Forum. As highlighted in several of the essays, it goes beyond the traditional role of industry associations and lobbying and into a pre-competitive space where there's push and pull. In tomorrow's New Value Chains, the sticks and carrots used to make change happen are empowered by a collective and inspired goal through a new sense of partnership.

By providing a space where companies can explore solutions with their suppliers and buyers as well as with their direct market competitors, a wider view of the changes required can be established. This can result in better and more efficient access to markets, accelerated technology deployment and scaled-up funding for new business markets and new business models. In addition to collaboration on the supply side, it is equally important to complete the life cycle with the deeper engagement of citizens downstream on the value chain. A renewed understanding of the value being delivered and the needs being met will open a new relationship with consumers. Through workshops and simulations, the Forum helped open the eyes of many CEOs and remind them that the mission of their business was not to sell things or outcompete in the market, but rather to bring quality of life to employees, clients and end consumers. Acting towards this longer-term and higher-level goal enables them to engage with new actors to innovate their business – and be rewarded along the way.

The fourth and final step leads us to *Balanced Systems*, in which radical innovation drives a circular economy and the concepts of value and growth are redefined for all stakeholders. This long-term vision results in a no-carbon system with closed resource loops and zero net waste, both along and across value chains. Through this, we realize both sustainable societies and sustainable lifestyles. Perhaps most importantly in a world of balanced systems, the exogenous factors that influence a business – policies, investments and citizens – are reframed in such a complete way as to be critical to the survival of business. This has been highlighted in essays by Michael Kuhndt, Ted Howes, Adriana Zacarias Farah, Mark Halle and Aron Cramer. Organizations embracing balanced systems are often inspired by the ecosystems around them and look to biomimicry for solutions to their industrial challenges. Perhaps most importantly, balanced systems embrace the nexus between one part of the system – minerals, water, energy – and the impacts on another part of the system, such as agriculture, fisheries, climate change. Such a system may be difficult to envision as a direct extension of today's consumptive and linear economy, but through the right investments, policies and business innovation, it is on the horizon.

The Next Frontiers of Sustainable Consumption

So what is to be done? Leading companies have created their own programmes that differentiate them from the field. Whether it is Plan A, Eco Plus or Sustainable Living, or a commitment to sell only LED lighting by 2016, the companies leading this change recognize that it requires more than just setting targets, but actually changing *how* they do business. A broader sense of one's value chain and an inclusive view of who one's stakeholders are offer a new sense of partnership. This 21st-century partnership is about more than a certified process or a single supply chain, but a whole new mindset that recognizes *who* we work with as the necessary successor to what we are working towards.

Whether an organization is trying to manage its own footprint or fundamentally change its working culture to establish a stronger foundation and create a new business with sustainability embedded in its DNA, scale will be achieved through new life cycles and ultimately through a common vision of balanced systems. Reducing the resource impact of supply chains and taking a life-cycle view of products as a step towards a circular economy is an important step. At the same time, relationships with consumers and a new perception of what delivering value means open the doors to innovation at the business model and industry levels. By decoupling consumption from “stuff”, one can allow innovation and sustainability to move beyond the product or process and open the door to the idea of sustainable lifestyles in which the consumer and the citizen can be reunited. By influencing the rules of the game that enable these changes, society can ultimately redefine what wealth and growth mean.

To get there will require thinking in terms of the “nexus” or systemic nature of a consumer society’s impacts rather than just through the linearity of supply chains, translating big data to big understanding, and better understanding desire and the cognitive science that influences it. The next frontier of consumption will be sustainable and it will be enabled by technology and connectivity and information. It will be driven to scale, however, by passion, emotion and innovation. Allowing ourselves to be driven by human values and by the power of the story can take economic thinking beyond a linear concept of growth and toward a more systemic understanding of shared prosperity, for companies, citizens and society.

The contributors of this book have demonstrated what is possible through exploring, accepting and acting on these ideas. They have also made tangible progress through the hard work and humility that come with the challenge. It is hoped that their stories of real-life challenges and solutions to advance sustainable consumption are ones to which you can relate and by which you have been inspired.

Acknowledgements and Annexes

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This book encapsulates the progression of the debate, through five Annual Meetings and many World Economic Forum regional meeting workshops, private discussions and public events linked to wider sustainability events. As the Forum's work on sustainable consumption shifts from one success into a new phase of exploration, Industry Partners and Global Agenda Council Members asked how the best global thinking on sustainable consumption could be pulled together to create a strategic asset, collecting not just the facts and trends, but also the experiences and learning journeys of those involved.

This publication is the fruit of those labours.

Looking back over the records of meetings from the past five years, over 500 representatives from business, government, NGOs, academia, scientific bodies and international organizations from all around the world have taken part in the Forum's series of discussions on sustainable consumption. Each helped contribute to the debate, and therefore to this publication.

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 - *WPP Plc.*: Martin Sorrell, Chief Executive Officer, United Kingdom; Alison Eyles Owen, Vice-President, EMEA, Hill+Knowlton Strategies (2010-2011);
- * Kraft Foods is now Mondelez International Inc.

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Past and present Members of the World Economic Forum Global Agenda Council on Sustainable Consumption from 2008 to 2013 include:

- *Natalia Allen*, Founder and Chief Executive Officer, Design Futurist SM, USA (2010-2011)
- *Rachel Botsman*, Partner, Collaborative Lab, Australia (2012-2013)
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A personal note from Randall Krantz, Project Director for the World Economic Forum Sustainable Consumption Initiative 2008-2012 and editor of this volume.

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It has been a privilege to conceive and lead this work at the World economic Forum, and to be able to serve and shepherd such a distinguished network of inspiring individuals from public, private and expert domains. I look forward to watching the next stages of the sustainable consumption work at the Forum as the direction moves to explore the critical domains of citizen engagement and scaling up the circular economy – both representing the shift from intent to action.

Randall Krantz

Director, Head of the World Economic Forum Sustainability Initiative (2008-2012)
Thimphu, Bhutan; June 2013

Annex 1: An Exploration of the Current Challenge

It was Bjorn Lomborg (the sceptical environmentalist) who wrote that, “the occupational hazard of being a scientist is that nobody reads the footnotes”. If one does read the footnotes (and the annexes), there are many parallel stories on growth, overconsumption, diminishing resources and ecosystem services. This annex explores some of these facts and trends, through which we learn that there is a light at the end of the sometimes Malthusian tunnel.

Sustainable Innovations in Consumption

We have already seen that scaling sustainable consumption requires fundamental changes in the way business is conducted and the world consumes, and necessitates the rethinking of business models, supply chains and how society values goods and services. Some of these changes seem radical or farfetched and yet many are already taking place, often below the radar of multinational corporations and the general public.

As mentioned, rethinking business in view of resource and environmental constraints can create significant opportunity. Sustainability thus becomes a lens for innovation and growth rather than a burden or a barrier to be overcome. The innovation of products, services, processes and business models can provide an alternative to our rampant consumption, as many examples attest.

Product durability

Despite an increase in throw-away products, the environmental impact of some products has been reduced by extending their durability. They thus do not need to be replaced as often. While a mobile phone should not be built to last for 30 years, other products with less dependence on technological advances can have a much lower impact on the environment if they are made to last longer. The durability of many household goods, such as kitchen appliances or toys, can be increased, as they change little over time; broken models are often replaced by similar or identical ones. Better quality goods are not only more likely to last than less robust products, they are also more likely to be valued longer by the consumer. New services, such as the Positive Luxury website and app, can help increase product transparency by communicating what the product is made of.

Product repair and upgrading

Although products eventually wear out, some life can still be left in them. And when the replacement cost of a product is very high, repairs become necessary, yet less costly goods can be repaired as well – cobblers have been in business for centuries.

Computers on the other hand often become obsolete after a few years due to the rapid pace of product improvement. Although Apple recently made headlines when it lost its US government “EPEAT” certification¹⁹⁸ due to the inability to

replace or upgrade components in its computers, Hewlett-Packard is launching a computer that is actually designed to be repaired and upgraded. Its components, including its power supply, graphics card, hard drive, optical drive, system cooling blower and memory can all be accessed and removed, all without any tools.¹⁹⁹

Product leasing and takeback

By some estimates, a drill, found in nearly every basement and garage in Western countries, is only used for 13 minutes in its entire life; it lies idle 99% of the time. Ian Cheshire, Group Chief Executive of Kingfisher, a large UK home improvement retailer, stated: “We as retailers are examining how we might shift from selling items such as a power drill to selling the use of it.”²⁰⁰ This scheme would allow several people to have fractional ownership over the drill, with each person using it when needed, and would provide the retailer with a profitable and more sustainable business model.

Product takeback has boomed in the US over the past couple of years as more states pass laws mandating the recycling of electronics. Companies such as Best Buy, the world’s largest electronics retailer, offer strong recycling programmes; in 2011 nearly 4 million customers returned electronics and appliances for recycling.²⁰¹ Such programmes can simplify consumers’ lives and actually make money for retailers who sell the scrap and increase customer loyalty. The company Gazelle buys used and even broken electronics for recycling. Other firms, such as Amazon’s Electronics Trade-In and Nextworth, are now competing in this space, reducing the amount of electronics going to landfill by creating a competitive market for recyclable products.

Product as service

While lengthening product life and ensuring their ability to be repaired and recycled are essential, even better is for the physical product not to exist at all. While some audiophiles still require the quality of CDs or even vinyl records, most consumers are satisfied with the quality of music available by downloadable 128 kbps MP3 files. The impact on the music industry has been significant; the sales of UK giant HMV recently fell below £1 billion for the first time since the company went public in 2002, as downloads and streaming music revenue accounted for 55.5% of total²⁰² music revenue in the UK in the first quarter of 2012.

Software is another example of a product that can be “dematerialized” or replaced by a service. Instruction manuals on discs have been turned into software that is dematerialized and downloadable over the Internet. The personal computer itself sometimes does not even need to run the software as more and more services, such as the storage of data or customer service, are handled by customer relationship management (CRM) systems. As such, the centralized processing power of data centres can be shared by many individuals. This allows the computers to be used at close to 100% of their designed capacity through sharing of their computing power. A recent study determined that Salesforce.com’s multi-tenant “software as a service” model is 95% less carbon-intensive than on-premise software.²⁰³

In another case that looks at value delivered, Rolls Royce aircraft engines has started selling flight hours instead of jet engines. As the value of owning a jet engine is mainly provided when it is flying, the company offers a new contract in which the engine manufacturer owns and maintains the engines and the airline pays only for the hours they run. This gives both partners the opportunity to maximize expertise and minimize inefficiencies using the same physical product sold through a different business model.

The role of open innovation

Systemic change in sustainable consumption requires open innovation: businesses sharing expertise, co-innovating business models and ensuring that innovative ideas and processes developed within a single organization become agents of transformation.

While new technologies have enabled accelerated information exchange between consumers and companies, many companies have not yet engaged in open innovation processes with other businesses across the value chain, or fully explored the benefits of co-generating business ideas with their consumers. Too often sharing is seen as uncompetitive. Yet open innovation will not replace competition; it should complement it.

Successful knowledge cultures are frequently those that are the most interactive. In an increasingly fast-moving world – where disruptive technologies and trends are a part of the business and social landscape – predicting future needs is highly complex. The ability to learn in real time from customers or business partners through open innovation, often facilitated by social networking, can confer radical advantage. It can speed up the systemic shift towards sustainable consumption.

For example, in 1998, Nike began researching environmentally preferred rubber to develop materials for their footwear. In 2009, 76% of Nike shoes contained environmentally preferred rubber, which also provided cost savings. While it makes perfect sense to keep this intellectual property out of the hands of competitors, many of the same rubber compounds are used in the tire industry, an industry that uses 75% of the rubber produced in the world.²⁰⁴ Using the platform of the GreenXchange, Nike's patent for "rubber compositions with non-petroleum oils" can be licensed for other applications, reducing R&D for a licensee and generating licensing revenue for Nike.

Collaborative consumption

Every second, eBay sells US\$ 2,000 worth of previously-owned merchandise. In the past, much of that would have ended up in a landfill or stayed in the back of a closet for another decade before finding a second owner. By lowering the transaction cost of buying and selling used merchandise, similar platforms have made it both easy and economical for buyers and sellers to make deals.

Taking that one step further, eBay partnered with RecycleBank in 2010 to create an innovative recycling rewards programme. RecycleBank started as a recycling incentive programme, entering into partnerships with waste management companies and municipalities in select US cities. Rather than punishing individuals for not recycling, RecycleBank's innovation was to offer rewards for

recycling – such as air miles for green behaviour. By partnering with eBay, RecycleBank is able to move beyond the cities in which it has partnerships and reward anyone on eBay for recycling. Points can then be used towards the purchase of, for example, a used camera on eBay or towards purchases at any of the other 1,500 partners affiliated with RecycleBank.²⁰⁵

Another common example already in practice is car sharing. This practice started over a decade ago with the launch of Zipcar in the United States. Now car-sharing platforms can be found all over North America and Europe, including a new electric car-sharing programme in Paris called AutoLib', which picked up 25,000 subscribers in just over six months.

While new ventures and new fleets of cars take a tremendous amount of capital investment, many cars are little used. Robin Chase, the founder of Zipcar, recently established Buzzcar, a car-sharing company that does not own the cars. Instead, people rent their own cars out to neighbours on Buzzcar's network. This lowers the transaction costs of sharing them. The company covers liability insurance in the rental contract. A car can be shared with anyone in the network for hours or even days. Using similar models and leveraging the Internet to reach broader markets and lower transaction costs, companies are sprouting up to share a variety of assets, including spare beds, office space and baby clothes.

Not only does the sharing of physical goods present opportunities; community-based social models now promote services as well. One example, in New York City, is "Fixer Cafés". This model combines social and environmental benefits. The Fixers Collective has been repairing umbrellas and computers since 2008.

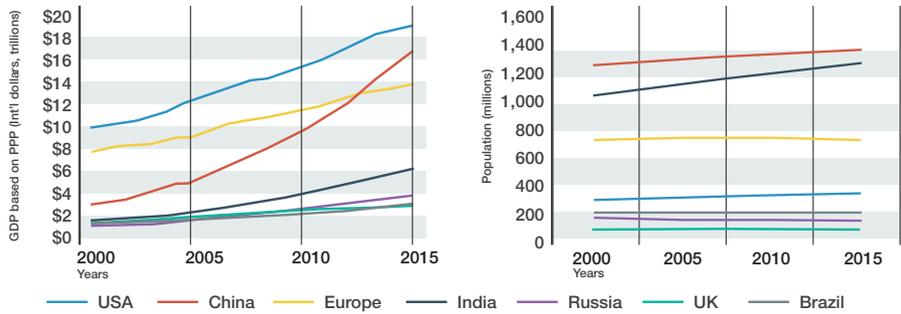
Each of the ideas described is new and each is sustainable in its own way. The innovations introduced in these collective ideas are truly the wave of the future. Together these innovations encourage sustainable consumption, offering ideas that begin to address the challenges outlined in this book.

Growth of the Middle Class and the New Consumer

Pressures on current models of consumption are rising. The world's population is forecast to rise to 9 billion by 2050. Seventy million people are expected to join the global middle class every year between now and 2030.²⁰⁶ Demand for goods and services will follow. Without a more sustainable style of consumption, meeting these demands – and the collective expectations and aspirations that go with them – will become increasingly difficult, with increasingly severe consequences.

Historically, energy and resource use have correlated with economic and population growth. In the coming years, a disproportionate share of both economic and population growth will take place in developing countries as their economies strive to catch up with Western technology and lifestyles.

Figure 13: GDP and Population Growth, 2000-2015



Source: IMF World Economic Outlook, 2014 & 2015 estimated - UN Statistics and Population Divisions

As emerging economies grow, consumer markets will rise rapidly as a result – as will consumer spending, which will rise as a share of GDP in many emerging markets, especially China. As disposable income continues to increase, traditionally exporting economies like China will likely shift away from growth based on exports to growth based on domestic consumer spending.

As growth in consumption takes place, the number of households moving from poverty to the middle class will rise faster than the growth of the economy itself. When households grow out of poverty to the middle class with disposable income, the resource intensity of consumption – including food, energy and raw materials – increases dramatically.

One interesting example is the rise of washing machines in India. As women’s roles have changed in Indian society and as the middle class has grown, washing machines have increasingly found their way into Indian homes. The washing machine industry grew by 22% in 2007, with sales of approximately 2.2 million units. One company has introduced a US\$ 66 washing machine that caters to the unique needs of Indian families with a programme that automatically resumes the washing cycle after power returns from an outage.

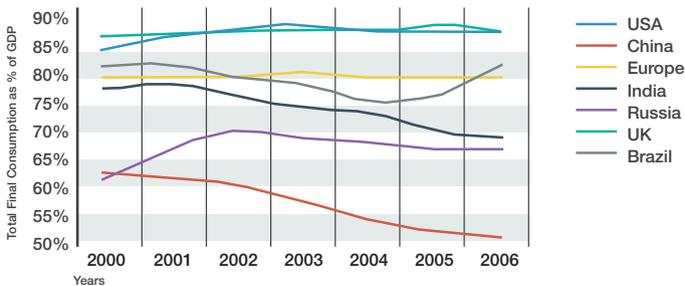
By 1940, 60% of the 25 million wired homes in the United States had an electric washing machine. By contrast in scale, India currently has over 100 million homes with televisions, and washing machines are rapidly catching up. The clear challenge is to embrace the lifestyle aspirations of these new consumers while incorporating the world’s new practices and technologies in the interest of the local and global environment.

Growth of GDP and the Macroeconomic Disconnect

For over half a century, GDP growth has been the primary goal of economic and development policy. The appropriateness of using increased GDP as a measure of success (a task for which it was not designed) is now seriously in question. It was Herman Daly, Senior Economist at the World Bank, who stated, “The growth economy is failing. In other words, the quantitative expansion of the economic subsystem increases environmental and social costs faster than production benefits, making us poorer not richer.”²⁰⁷

In some Western and certain emerging economies such as Brazil, consumption accounts for over 80% of GDP. It is easy to see how this makes consumption the strongest lever to pull when a government looks to accelerate economic growth. After a national crisis or in an economic downturn, the mandate to “go shopping” rings out from capitals around the world. Figure 14 compares consumer spending as a percentage of GDP and indicates the current gap between developed markets and emerging markets. This variation in consumer spending as a percentage of GDP will converge as the economies of the emerging markets grow further and mature. Note that the drop in consumer spending as a percentage of GDP for China in the last decade confirms that its GDP growth is not the result of growth in local consumption; however, this will change as China’s middle class expands further.

Figure 14: 75-85% of Growth in OECD Countries Is Dependent on Consumption



Source: UN Statistics Division

Redefining Prosperity, Redefining Value

The linkage between consumption and economic growth locks us in the current consumption model that rules Western economies, and the rest of the world is on track to follow the same pattern. As long as economic growth remains a holy grail, and as long as consumption is what drives it, we are unlikely to escape the vicious cycle we find ourselves in.

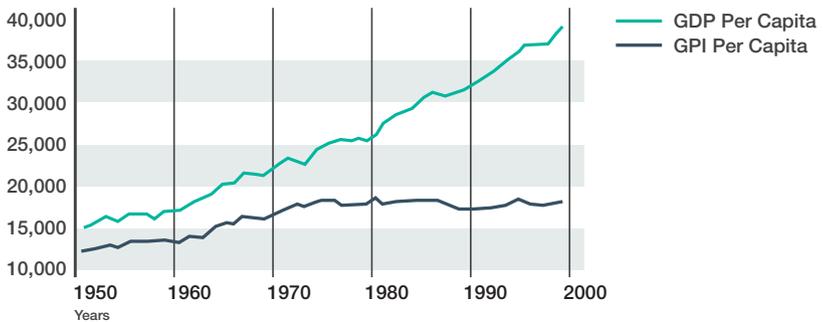
The systemic transformation of the global economy implied by sustainable consumption forces us to rethink what we mean by growth at the highest level. To completely decouple consumption from natural resource use and environmental degradation, we need to purposefully unlink narrow concepts of GDP growth from broader qualitative objectives: prosperity and well-being. This is not to suggest that there are necessarily “limits to growth” in a pessimistic perspective but that a trend towards qualitative growth exists.²⁰⁸

The main criticism of GDP, as a measure, is that it focuses on the throughput of materials, capital and labour rather than on the outcome of improved lives. Targeting GDP growth tends to encourage greater resource use; but this use may not translate into improved well-being, particularly in the developed world. Above a certain level, quantitative increases in GDP no longer signify greater human prosperity. The returns of GDP growth – and its associated resource use – to well-being may fall, or even become negative. Countries in the developed world are often worse at delivering long, happy lives in terms of the planetary inputs that they use than some developing countries.

In 1968 Robert F. Kennedy pointed out in a speech that we attribute to GDP things like: “air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and jails for those who break into them. It counts the destruction of our redwoods and the loss of our natural wonder in chaotic sprawl. It counts napalm and the cost of a nuclear warhead, and armoured cars for police who fight riots in our streets”. He also and, more importantly, stated what is not accounted for in GDP: “Yet the gross national product does not [account] for the health of our children, the quality of their education, or the joy of their play. ... It measures neither our wit nor our courage, neither our wisdom nor our learning ... it measures everything in short, except that which makes life worthwhile.”²⁰⁹

Many alternatives have been suggested to measure progress, including the UN’s own Human Development Index which incorporates education and life expectancy. The Genuine Progress Indicator (GPI) is another alternative metric to GDP, an attempt to measure whether a country’s growth, increased production of goods and expanding services have actually resulted in the improvement of the welfare of the country’s people. While GDP is a measure of current income, GPI is designed to measure the sustainability of that income through economic, social and environmental indicators. GPI uses the same personal consumption data as GDP but makes deductions to account for income inequality and the costs of crime, environmental degradation and loss of leisure, and additions to account for the services from consumer durables and public infrastructure, as well as the benefits of volunteering and housework.

Figure 15: The US Economy, Measured by GDP and GPI Per Capita, 1950-2004



Source: *The Genuine Progress Indicator 2006*. Oakland: Redefining Progress.

Figure 15 shows that despite steady growth in GDP, the US economy, measured by GPI, has actually stagnated since the late 1970s. Addressing both is difficult but not impossible: shifting away from GDP growth and towards a concept of “dynamic equilibrium” – maximizing units of well-being delivered per unit of planet input – will make decoupling prosperity from natural resource use easier.²¹⁰

The need to move away from a narrow focus on GDP, price externalities more accurately and shift development objectives from quantitative growth to qualitative improvements in life outcomes has resulted in a number of high-level initiatives in recent years. The intellectual argument for broadening measures of prosperity – and for more accurately valuing environmental and other externalities in national and business accounting – has been ongoing for decades. What has changed in recent years is the seriousness with which redefining prosperity has been adopted by governments.

In an attempt to define an indicator that measures quality of life or social progress in more holistic and psychological terms than GDP, the term Gross National Happiness (GNH) was coined in 1972 by Bhutan’s fourth king, Jigme Singye Wangchuck, who opened Bhutan to the age of modernization. In 2008, a GNH Commission was founded at the same time as Bhutan transformed itself from an absolute monarchy to a multiparty democracy. Since then, the Centre for Bhutan Studies has developed a sophisticated survey instrument to measure the population’s general level of well-being. GNH, like the Genuine Progress Indicator, refers to the concept of a quantitative measurement of well-being and happiness. Based on solid empirical research, the survey uses 72 weighted indicators within nine dimensions, including time use, community vitality and environmental diversity.²¹¹ Another version of the survey instrument, based on the same body of work, is being applied in Canada.

The idea of including measures of sustainability into measures of national income was boosted in September 2009 with the publication of a report commissioned by French President Nicolas Sarkozy from the Commission on the Measurement of Economic Performance and Social Progress.²¹² In the summer of 2012, the World Bank pushed for natural capital accounting to be used by nations at the Rio+20 Summit in Brazil. As national accounting standards move towards measures that incorporate sustainability, it is highly likely that the incentive structures that states create – for businesses and for individuals – will shift accordingly.

One common issue with each of these alternate measures is that they all have elements of judgemental selection of partially correlated indicators, and the weightings of different measures and valuation techniques are open to challenges. This has not decreased their attractiveness. The use of well-being and GPI as benchmarks of progress has recently been supported by the OECD.²¹³ Some G20 governments have indicated their intention to broaden the sets of data that guide policy. In the United Kingdom, the Office of National Statistics started collecting data on “happiness” in 2011. In the developed world, we need a new definition of development; in the developing world, we need a new trajectory for achieving it.

Global and Regional Growth Imbalances

Can the global economy continue to reap the enormous benefits of globalization while simultaneously dealing with the increasingly evident environmental and social costs? A societal goal is to sustain economic growth and lift billions more out of poverty, notwithstanding an additional one billion consumers by 2020.²¹⁴ They will expect to drive cars, travel by airplane, buy major electric appliances and live in larger homes with air conditioning.

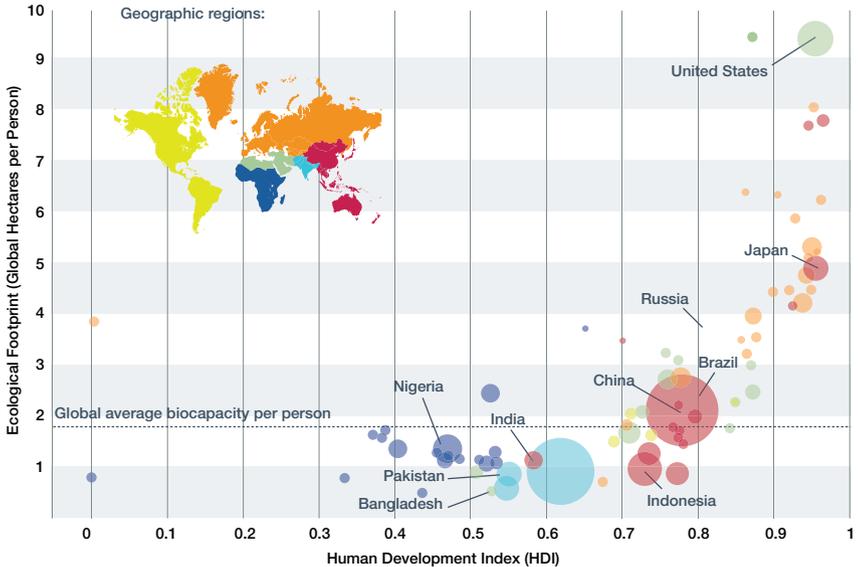
From the perspective of equity, we cannot afford for this not to be the case. With the increased information flows and greater transparency brought about by the spread of information technologies, the rising middle class will conceivably be less tolerant of societal failures. They will likely rebel against environmental pollution, be more attentive to the health and safety of the products they purchase and be more focused on issues of public health and societal well-being in general.

At the same time, we cannot afford in the future to be as inefficient in our use of resources and management of waste as we have been in the past. Rapid economic growth in emerging countries has placed enormous pressure on the physical environment. Pollution in many countries has become exceptionally bad and is already adding to public health costs and reduced life expectancy. China has estimated that a “Green GDP”, which incorporates the health and social costs of environmental degradation, cost 3% of China’s 2004 economic output – more than half a trillion yuan.²¹⁵ Environmental damage is often exacerbated by subsidies to food, fuels and energy use, which is designed to create jobs, increase consumption and encourage economic growth.

We need to create new technological and management approaches, and entire new ways of doing business. Thus, a process of globalization that does not address these issues will likely be deemed a failure not only by policy-makers, but by consumers as well. At present, virtually no country combines a high level of development as measured by the United Nations' Human Development Index with a sustainable ecological footprint (see Figure 16).²¹⁶

Figure 16: Human Development Index and Ecological Footprint

Source: The Global Footprint Network; Trendalyzer tool by Gapminder.



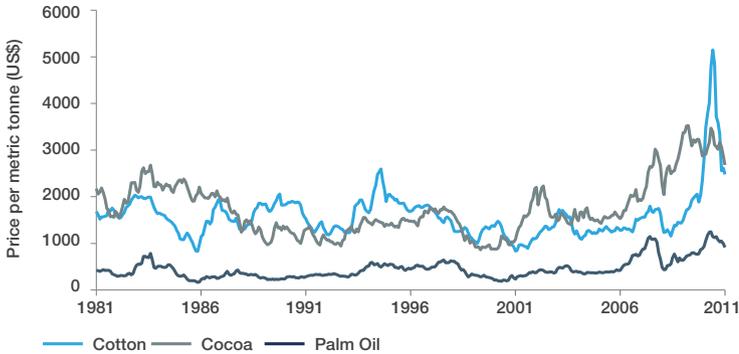
Source: The Global Footprint Network; Trendalyzer Tool by Gapminder

Two influences or triggers have the potential to shift behaviours: scarcity and value creation. Whether it be a shortage of oil, water, financial liquidity or imagination, we are entering an era in which scarcity is influencing the architecture of society and business. As business increasingly looks at meeting the future needs of consumers, a new shift towards value creation and innovative business models that extend available resources is occurring. This combination of “sticks” and “carrots” will result in increasing wealth and value for tomorrow’s consumers and businesses in an environmentally sustainable manner.

Natural Resource Bottlenecks

Over the past decade, commodity price volatility has created uncertainty and limited growth. During this time, rises in commodity prices have reversed 100 years of declining prices in real terms. Between 2000 and 2010, the prices of such commodities as cotton, palm oil and cocoa increased by 75%, 230% and 246%, respectively.²¹⁷ In July 2011, cotton prices were the highest they had been in 300 years.

Figure 17: Prices of Cotton, Cocoa and Palm Oil, 1981-2011

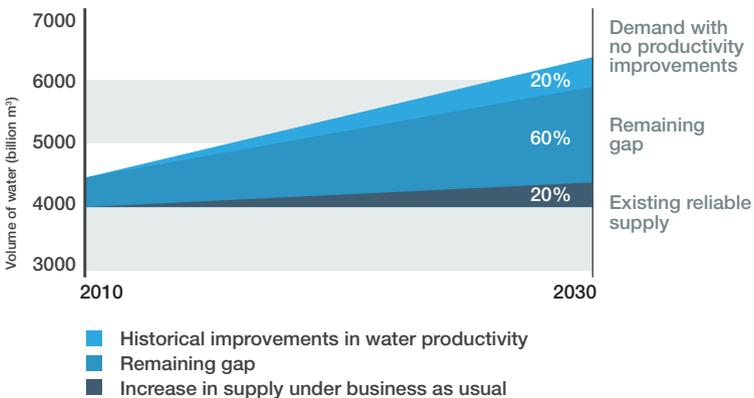


Source: IndexMundi, 2011

Not unrelated to the price volatility of agricultural commodities, the world’s water systems will become progressively more stressed. Some countries may even face “water bankruptcy” as a result of rising populations and changing weather patterns driven by climate change. Global food production will become increasingly inadequate as global population expands and the diet of the emerging middle class shifts towards more energy and water-intensive products.

Globally, competition for scarce resources will increase, bringing with it serious economic implications. Rare earth metals generate much press, but the same scenario applies to much more common materials, such as steel. A “peak metals” scenario could put US\$ 2 trillion (1.7% of GDP) of economic output at risk in 2030 if major global economies fail to respond to shortages in the supply of steel and iron. To meet projected steel demands under this scenario, the recycling of world steel would need to increase from 38% to 51% in 2030.²¹⁸

Figure 18: Water Supply and Demand, 2010-2030



Source: Water Resources Group 2009

The long-term trends of resource scarcity along with rising consumer markets in emerging economies will outlast the current economic crisis; thus it is critical not to allow the urgent to overtake the important. It will become difficult, if not impossible, for countries to insulate themselves fully from the social and other consequences this may bring. Eventually, competition over access to resources, volatility over the price of resources and widening global imbalances between the “haves” and the “have-nots” could lead to a popular rejection of economic and political globalization.

Consumption and Capitalism over the Past Century

Evidence all around us confirms that we are part of a consumption-oriented society. The success of individuals, businesses and societies as a whole since the industrial revolution has been linked to growth in consumption. Now, however, supply and demand patterns, fuelled by current economic paradigms and continued population growth, seriously question the long-term viability of continued growth in consumption-oriented behaviour.

It is difficult to trace the roots of our consumption patterns, but the evidence of increased consumption is clear. The average US person now consumes twice as much as 50 years ago. One explanation is disposable income – the rise in disposable incomes in the United States and much of the rest of the world means people have greater purchasing power. This is partly influenced by the decreasing amount of income spent on food, plummeting from 25% in 1933 to less than 10% in 2000, and 9.4% in 2010.²¹⁹

Popularized by a video called, “The Story of Stuff” by Annie Leonard,²²⁰ one theory suggests that our consumptive culture was actually designed. Retailing analyst Victor Lebow articulated the situation as follows: “Our enormously productive economy ... demands that we make consumption our way of life; that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction, our ego satisfaction, in consumption ... we need things consumed, burned up, replaced and discarded at an ever-accelerating rate.”²²¹

While we may believe conspicuous consumerism to be a purely Western phenomenon, looking further afield shows evidence that consumption as a way of demonstrating success is relatively engrained in human competitiveness. One participant in a Forum workshop recounted how, in remote areas of the Philippines, it is common for families to save money for months to buy a refrigerator, because owning one has become a status symbol. This does not seem out of the ordinary until one learns that with no electricity, these families use the refrigerator to store clothing, not vegetables!

This desire to consume as well as the behavioural psychology and cognitive science that start to explain it are the focus of the World Economic Forum’s ongoing work on sustainable consumption. As this goes to print, the Nobel Prize for Economics has been awarded to Alvin Roth and Lloyd Shapley for their work on practical economics, in particular for creating an algorithm to address the supply and demand issue of “who gets what”. By exploring “who wants what” and why they want it, it is hoped that their work will not need to be applied to all the resources we consume and take for granted on a daily basis.

Annex 2: Select Bibliography and Recommended Reading

Over the past few years, many significant publications have highlighted the importance of sustainable consumption.

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175. There is no space to do this entrenchment justice in a small piece. But I strongly recommend *The Lords of Strategy* (by Walter Kiechel, already cited) as an engaging history of the emergence of strategic consulting. I also recommend the "Collected Papers, Duke Conference on the Public Domain" as an introduction to the "second enclosure movement" entrenching competition and monopoly through expansive intellectual property rights. Available at: http://www.amazon.com/exec/obidos/tg/detail/-/0974155306/qid=1061919156/sr=8-1/ref=sr_8_1/103-8316274-2176645?v=glance&s=books&n=507846.
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179. Books can, and have, been written about the business case for sustainability. It's beyond the scope of this chapter to make that case in any detail, but worth noting that according to Eccles, Ioannou and Serafeim of Harvard Business School, "high sustainability" companies "dramatically outperformed" low sustainability companies over an 18-year period in terms of both stock market performance and accounting measures. (The Impact of a Corporate Culture of Sustainability on Corporate Behavior , 4 November 2011). Low sustainability companies may outperform over short time frames but, over the long term, sustainability creates value.
180. In 2000, Nader would run for president as the Green Party candidate.
181. These "capital market players" include securities regulators, asset owners and managers, corporations, rating agencies and stock markets, among others. Ceres works to encourage these players to see climate and other sustainability risks (and opportunities) as business risks (and opportunities) and as information of material importance to investors. For example, we helped persuade the US Securities and Exchange Commission (SEC) to issue guidance requiring public companies to disclose climate risks in SEC filings. We have also worked with major stock exchanges, such as NASDAQ, one of the major American exchanges, to encourage or require listed companies to disclose information about sustainability risk and performance. At the Rio+20 Summit in June 2012, the NASDAQ announced it would work through the World Federation of Exchanges, an association of 54 securities exchanges, to encourage sustainability information disclosure by listed companies. We also work with major institutional investors to drive sustainability into their investment decisions, including the hiring of asset managers with an understanding of sustainability issues and how they affect company financial performance and long-term value creation. One hundred such investors with more than US\$ 10 trillion in assets are part of the Ceres-run Investor Network on Climate Risk (INCR). For more detailed and comprehensive information about all of these and other Ceres efforts, visit <http://www.ceres.org>.
182. In 2010, based on two decades of experience working with companies to make them more sustainable enterprises, Ceres published *The 21st Century Corporation: The Ceres Roadmap for Sustainability*, a set of 20 specific expectations in the areas of governance, stakeholder engagement, disclosure and performance that define the sustainable corporation. Today, the Ceres Roadmap guides our work with Ford and many other companies.
183. General Electric is now one of our most responsible corporate citizens. Through its "Ecomagination" initiative, launched in 2005, GE has invested billions of dollars developing clean and renewable energy and other technologies that are contributing to a more sustainable planet. It's also a core business strategy for GE, earning the company more than US\$ 105 billion in revenue by 2011. GE is another example of harnessing the power of a major corporation to help build a sustainable economy.
184. Corporations almost never favour shareholder proposals, even if the Board and senior executives see underlying merit in them, because they want maximum flexibility in how they address the issues raised in such resolutions. Nevertheless, shareholder resolutions can be effective tools for bringing issues to the fore and catalysing action on a wide range of concerns, including sustainability.
185. Corn isn't just consumed directly, of course. It's used in countless food products and vast quantities are used to feed livestock and chickens. It is also used in many non-consumable products, such as textiles, construction materials and pharmaceuticals, to name a few.
186. Ceres' 2012 report, *The Road to 2020: Corporate Progress on the Ceres Roadmap for Sustainability*, an evaluation of the sustainability performance of 600 major US companies, shows small pockets of sustainability leadership by a handful of companies and minimal or no progress by most. Similarly, the 2012 Global Investor Survey on Climate Change, undertaken by the Ceres-led North American-based Investor Network on Climate Risk (INCR), the European-based Institutional Investors Group on Climate Change (IIGCC), and the Australia-based Investor Group on Climate Change (IGCC) revealed that few investors are taking the steps necessary to integrate climate-related risks into their investment decision-making.
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