



# Breakout Workshops

## 11th Annual EABIS Colloquium

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# Breakout Workshops Overview

As many participants will know, the Latin roots of the word “colloquium” mean “to talk together”. At this year’s Colloquium, we are proud to continue to talk together and share our knowledge through a number of more informal sessions within the programme, during which smaller groups will present and discuss latest case studies from the field and research insights relating to innovation for Sustainability.

More specifically, all conference members are invited to participate actively in three Breakout Workshops. The focus is on promoting the exchange of knowledge and insight between members of our international audience. These sessions integrate more than 70 different presentations from around the world.

The emphasis during the breakouts lies on the presentation of new and emerging insights. Each year, EABIS invites all presenters to develop a full paper for the Special Issue of the Corporate Governance Journal. 15 to 20 papers are selected through a double blind peer review process and published along with the most impressive keynotes to be launched at the following year’s Colloquium. Since the first journal published in 2005, an important body of knowledge has been built thanks to these contributions.

## Format of the Breakout Workshops

The Breakout Workshops follow the well-established format used in previous Colloquia, namely that they are designed around a number of thematic tracks which run through some or all of them.

This enables more than 70 cases & presentations to be sub-divided into coherent blocks of shared interest and content. Each track will contain up to three individual sessions over the two days, with every session supported by a maximum of four presentations on a specific dimension of the overall theme. As in the past, the main objective of the Workshops is to showcase innovation, facilitate dialogue and encourage inquiry in small-group settings.

### **Time Allocated:**

Each presenter will receive **a maximum of 15 minutes** for their presentation, which will be enforced by the track moderator.

We have asked all presenters to keep to this fundamental guideline, out of respect for colleagues who will follow and to enable discussion with the audience!

### **Format:**

Presentations can be supported by PowerPoint slides and / or printed copies of an abstract.

### **Focus:**

The Breakout Sessions emphasize the sharing of new knowledge and insight. As such, we have asked all presenters to devote a maximum amount of time to key findings and results of their individual case study or research initiative.

### **Sharing:**

All presenters can decide if they want to share their presentation. If it is agreed to, the presentations will be published on the IMD Portal accessible to all Colloquium participants.

# Brief Summaries

## Stream 1: Systems, Sustainability & Innovation

**Tuesday 3 July 16:45-18:00 (M 210)**

### **Mitigating the Davos Dilemma: Towards a Co-evolutionary Framework for Global Sustainable Development**

In an increasingly interconnected world, the expanding impact of boom and bust cycles (Shularick and Taylor, 2009), growing influence of industrialised nations (BRIC) and consequences of political upheavals exemplified by the Arab Spring of 2011, has benefitted convergence towards the Capitalist model of governance (Hall and Soskice, 2001). However, societal frustrations (Williams, 2011; London Riots, 2011), scholarly criticism (Lane, 2003; Clarke, 2009) and major events such as the Global Financial Crisis (Knyght et al. 2011) suggest internal imbalance between firm, state and society (Anderson and Cavanagh, 2000). Further, in a world of seven billion people (United Nations, 2011) depleting non-renewable resources (Schilling and Chiang, 2011) and expanding megacities (Buijs et al., 2010), the guiding principles of creative destruction, namely innovation (Schumpeter, 1934), seem to have misplaced the essence of preserving quality and protecting society as the foundation for sustainable development (Sandoz, 1964). Most recently, research presented to the World Economic Forum in Davos indicates that businesses are less trusted than before, while faith in governments has fallen sharply (Financial Time, 2012). This increasing volatility indicates a sustainability crisis as the cause of concern and in turn there is an urgent need to rebalance the Capitalist model of governance.

*Nadeem Khan – Northampton Business School; Ouarda Dsouli – Northampton Business School; Nada K. Kakabadse – Northampton Business School*

### **Sustainable Innovation through Financial Resilience**

The financial crisis has brought to light the vulnerability of the financial system which was meant to serve society in good and bad times. Now, the financial industry is a major part of the current global societal problems and crises. Nevertheless, some insights and practices linked to that crisis can be noted, which may serve as stepping stones towards a more sustainable financial industry. There are chances to stabilize the financial industry and to play its role in financing sustainable development.

So, we see two movements: the first one is TO CHANGE FINANCE and the other is TO FINANCE CHANGE.

These two movements were signalled during the two-yearly meeting of UNEP-FI, 2009 in Cape Town. We will elaborate these movements in this contribution through two angles. The first one being the practice of Rabobank, the largest Dutch bank: a cooperative bank which survived the crisis without state-support and that continued its work for its ten million customers properly. The second angle is the managerial one highlighting some elements of leadership which are relevant for the change of finance and the finance of change.

We structure our Rabobank-Nyenrode contribution along four parts: 1. Cooperative banking contributes to a stable, resilient and reliable financial system. To change finance: Responsible finance is key to risk-management in a financial institution. To finance change: Sustainable finance leads the way to a green economy. These movements need leadership and management in order to combine innovation and resilience.

*Bouwe Taverne – Rabobank; André Nijhof - Nyenrode Business University*

### **Co-creating sustainable innovation**

Many organizations these days are working hard to tackle issues like climate change, resource scarcity, social injustice and other sustainability challenges. However, progress in these areas is often marginal and fails to create lasting results. Business leaders are under pressure to quickly solve problems created by the complexity and uncertainties in fast changing environments. The problem is that many business leaders work with the same mindset and paradigms that existed when the issues were created; primarily a dominant “Western” mindset, mainly developed during the Industrial Age, hugely disconnected from nature and community where nature is

seen as primarily as a material resource and the focus is on individualism and competition. Processes are designed to be linear and all initiatives need to be measured so they can be managed. This mindset leads to a lot of resources being committed to developing scientific, technological innovations and behaviour change programs that almost unfailingly create new problems as soon as the previous one has been solved.

*Ingrid Messner - Authentic Values, Sydney/Australia*

## **Wednesday 4 July 08:45-10:00 (M 210)**

### **How to organise to be a disruptive innovator for sustainability**

Cafedirect shifted the hot beverages market so customers enjoyed drinking fair trade coffee; now most other coffee companies have at least one brand that is certified in one way or another. Nissan is trying to take electric cars to the mainstream. Good Energy made renewable energy available to ordinary customers.

These are all examples of disruptive innovation for a sustainable future, which we define as: an offer (product or service) to customers which creates a new market or shifts an existing one in a way that creates superior sustainability outcomes.

Forum for the Future works with many sustainability leaders, including Unilever, Marks and Spencer and Kingfisher – all of whom want to improve how they create step-change. The paper will present joint findings of Forum and our leading partners on how they can organise themselves to be disruptive innovators for sustainability. The paper will be divided in three parts.

*David Bent - Forum for the Future; Zoe Le Grand – Forum for the Future*

### **Teaching and academic research on eco-innovation in business models - Building the Framework**

Although the primary focus of corporate practices towards more sustainable solutions has been on technological innovations, some organizations have broadened the scope to institutional level, such as new business models and alternative ways of offering value to customers. The prevailing driver so far for greening the business practices has been strict environmental regulations (i.e. compliance). Recently the sustainability trend has gained ground also by increasing competition in the situation of economic slowdown and rising demand for green products (with rising consumer awareness). Whether it is regulations, pushing competition or eco-aware consumer, a company usually needs to eco-innovate in order to maintain its position on the market. Additionally, eco-innovation has become an important part of many start-up firms' strategies as well.

*Liina Joller - University of Tartu, Estonia*

### **Sustainable Technology Enabled Service Innovation for the Masses: Lessons from an Entrepreneurial Healthcare Initiative in a Developing Country**

In developing countries multifarious institutional voids manifest as service consumption gaps in the society. Consequently, large segments of population have limited or no access to basic services such as *healthcare* and *education*, which are generally taken for granted in the developed world. In such situations, technology enabled service innovations could serve as opportunities for addressing these service divides and become a key driver for an inclusive growth in the developing world on a sustained basis.

In this study, by focusing on one such institutional void namely, delivery of healthcare services, we examine how non-traditional service providers could facilitate the delivery of sustainable health care services to large segments of population by recombining the capabilities of the technology with the available institutions. Specifically, we examine the case of specialized ophthalmic care services delivered through tele-medicine initiative by a private enterprise in India to large segments of rural Indian population. Furthermore, following an inductive approach, the study aims to delineate the requirements for successfully implementing such technology enabled service innovations.

*Shirish C. Srivastava – HEC Paris*

## **Collaborative Sustainable Development: Innovation for achieving Societal Benefit, Environmental Protection and Economic Growth**

This study integrates the concepts of industrial symbiosis with social entrepreneurship to develop a model for sustainable value creation, namely achieving social missions and ensuring environmental protection, while enabling economic growth at the micro enterprise level. We show why such a model can only work as a collaborative effort between corporations, NGOs and Academia. We first define the issues with our present IO system, followed by a review of industrial symbiosis and social entrepreneurship literature.

We then develop a model integrating these concepts highlighting how such a model for sustainable growth might address the present systemic issues. Thereafter we elaborate possible mechanisms to achieve such a sustainable ecosystem, the spin-off benefits of capacity building, and conclude with the possible drivers and barriers to such developments.

*Sujit Sur - Dalhousie University, Halifax, Canada*

## **Wednesday 4 July 11:45-13:00 (M210)**

### **Contributions to Knowledge Production in Corporate Sustainability Research Communities**

The importance of corporate sustainability as a research field has grown as a result of the need to maintain the "capacity of a firm to continue operating over a long period of time" (Perrini & Tencati, 2006). This ability is strongly linked with the prerequisite of establishing a benign industrial system, and therefore many different research disciplines have taken on the challenge on how to achieve this aim. In fact, there exists a plethora of different examples such as ISO14001 (e.g. Kerret, 2008), life cycle assessment (e.g. Guinee & Heijungs, 2011), the strategic sustainable development framework (Robert et al, 2002), or the cradle-to-cradle approach (Braungart et al., 2007), all stressing the vision of sustainability which "meets the needs of a firm's direct and indirect stakeholders, without compromising its ability to meet the needs of future stakeholders" (Dyllick & Hockerts, 2002).

*Stefan Hemel - Doughty Centre, Cranfield School of Management, Cranfield University; Palie Smart - Doughty Centre, Cranfield School of Management, Cranfield University*

### **Innovation and CSR: exploring a path towards competitiveness**

An exploration of the link and fit between Innovation and CSR is presented based on our research project over 12 months. It aims to provide a quantitative and qualitative approach to innovation, from the perspective of business practice and develops the relationship between innovation and social responsibility in its connection to the economy and competitiveness.

The research addressed these key questions to better understand the "puzzle of innovation":

1. What does Innovation mean and how does innovation respond to economic and societal macro challenges?
2. Why is innovation important for countries, companies and people?
3. What is the link between innovation and competitiveness and the link between Innovation and labour markets?
4. What are the main drivers of Innovation?
5. Who are responsible for Innovation within an organization?
6. How is managed Innovation managed at company level?
7. What are the key points and driving forces of public policies to foster and encourage innovation in Europe and the US?
8. What is the link between CSR and Innovation? And what are the thematic areas of Sustainable Innovation?
9. Which are the innovation champions within a company?
10. How can sustainable innovation be promoted and encouraged in SMEs?

The key practical output of the research is a better understanding of the concept of sustainable innovation and its potential to meet the challenges at macro and micro levels, within an organization and in the wider society.

*German Granda – Foretica; Jaime Silos – Foretica; Carlos de la Torre García - European Institute of Sustainability, Employability and Innovation and Universidad Carlos III Madrid; Itziar Maruri Palacín, CR Works.*

### **The Role of Capability Building for Improving Sustainable Water Services: The Case of Johannesburg Water**

Widely available, reliable and affordable access to clean water is one of the key global issues (UNESCO / World Water Assessment Programme 2003, 2006, 2009; UNEP 2012; World Water Forum 2012). Several recent studies on the future of water utilities have revealed that there is a consistently widening gap between the requirements for ensuring the delivery of sustainable utility services and the capacity of the public sector to meet those requirements (OECD 2006, 2007; Urban Land Institute and Ernst & Young 2007). Water utilities face often substantial challenges in acquiring, building and maintaining adequate capabilities including engineering capacities, advanced managerial decision tools for long-term investments planning, competences on regulatory issues and new technologies, or know-how in water resource conservation (cf. Dominguez, Worch, Markard, Truffer and Gujer 2009).

The purpose of this study is to develop a systematic understanding of the role that organizational competences and skills play in providing sustainable water services. More specifically, we examine and compare various processes that utilities can initiate to build and maintain capabilities. We assess how factors in the external environment (e.g., specific policy decisions, sector regulations and environmental concerns) influence these capability building and maintaining processes and ultimately affect the performance of infrastructure service delivery and water resource protection.

*Hagen Worch - Swiss Federal Institute of Aquatic Science and Technology; Mundia Kabinga - University of Cape Town; Bernhard Truffer - Swiss Federal Institute of Aquatic Science and Technology; Anton Eberhard - University of Cape Town*

### **Design-Driven Innovation for Sustainability: A New Method for Developing a Sustainable Value Proposition**

This paper offers two starting points bridged by a question: The first point is the field of sustainability concepts that can help to transform a resource-wasting society into a sustainable one. The second point is the field of design-driven innovation that can generate sustainable economic success by designing products and services that meet people's needs. A question bridges these two starting points: How do we design sustainable products to make them more successful? This essay introduces a tool to help companies develop innovative products and services that are sustainable for the environment, the economy and society: the Sustainable Value Proposition Tool (SVPT).

*Mathias Müller - Lucerne University of Applied Sciences and Arts Mensch Design Innovation GmbH, Winterthur, Switzerland*

## **Stream 2: Networks / Partnerships**

**Tuesday 3 July 16:45-18:00 (M 200)**

### **Capacity building for sustainability-oriented innovations: a collaborative approach between SMEs and academia**

This paper explores the dynamics of a learning-action network for sustainability oriented innovation (SOI) established between an academic partner and small and medium sized enterprises (SMEs). The research suggests that such a network structure can serve as a complementary (learning and enabling) resource (see also Clarke and Roome, 1999) for SMEs that follow a proactive innovation strategy for sustainability if the academic partner is recognized as a capable and legitimate partner to create space for exchange, learning, and innovation. This is primarily achieved through the (1) establishment of long-term relationships to explicate embedded and tacit knowledge (e.g. Reagans and McEvilly, 2003), (2) a combination of targeted and less targeted forms of interaction to establish reciprocal learning ties, (3) as well as creating a trustful relationship between individual network members and the

academic partner. The research also identifies a range of challenges within the learning-action network which primarily refer to issues such as hidden agenda, free riding, conflicting interests, and the emergence of different SME boundary roles (e.g. Tushman, 1977). Overall, the SMEs are able to exploit the academic partner (i.e. university) as a repository of additional and complementary resources to innovate for sustainability.

*Johanna Klewitz - Leuphana University Lüneburg, Centre for Sustainability Management (GSM), Germany*

### **Partnership to Sustained and Sustainable Growth**

Sustainability is compatible with growth, and not a barrier to it, because it brings great commercial benefits to companies. The relationships built as time goes by will bring competitive advantages and opportunities, and tacit reciprocity will permeate interactions. Senior leadership, mainly the most visionary and strategic one, can perceive the lasting effect of stakeholder management and dedicates its time to cultivating such relationships. Nevertheless, it is common that there will be some distancing - as regards management readiness and perspective to maintain relationships - among the highest levels of leadership and executive management at a company. Everyone knows that business is increasingly subject to the impact of sudden changes in the economy and that the positions that have been conquered are increasingly ephemeral. What is still little perceived is how stakeholder management can be useful at reducing risks and leveraging opportunities.

*Luis Augusto Lobão Mendes - Fundação Dom Cabral (Brazil)*

### **Innovative collaborations enabling women to develop scalable green economy businesses to accelerate sustainable development (Learnings from Guatemala, India, and Kenya)**

In many developing countries, women and girls have the primary responsibility for obtaining and transporting water and traditional fuels for daily use. This workload limits their time and opportunities for education. Further, the effects of climate change on the water table and in the agricultural sector and its strain on food security add on to these burdens, disproportionately impacting women and girls.

According to the World Bank's 2012 World Development Report, women represent 40 percent of the global labour force, 43 percent of the world's agricultural labour force, and more than half the world's university students. If the skills of women can be used more fully and channeled into activities that drive sustainability, it will be possible to achieve the World Business Council for Sustainable Development's vision of 9 billion people living well within the limits of the planet by 2050.

*Tess Mateo- CXCatalysts*

### **Promoting Development Opportunities through a country Branding Strategy based on the Internet and Sustainable Development: The Case of Gabon**

Our paper studies the linkages between country branding, sustainable development and the Internet. It focuses on a governmental strategy aiming at promoting Gabon, through the development of eco-and geotourism.

Since 2001, Gabon has been enhancing a new policy in the field of sustainable development, after the Johannesburg Summit on Sustainable Development. We analyze the websites that were created to promote this new image of Gabon and to entice new consumers/tourists to choose this destination. These websites aim at promoting the 13 natural national parks and the culture of Gabon. In particular, our research analyzes the links between the concepts of environmental governance and sustainable development, the necessity to implement new development strategies for Gabon in a transitional context, and the incentive to find an equilibrium between an opening to foreign investment and tourism and the long term interests of local people.

Two websites are analyzed (Gabonature and Gabonart). This study shows that essential characteristics of these sites aim at influencing the consumer's behaviour, playing on an

emotional level. The experiential dimension and the ergonomic perception during the visit of these websites are also important factors that can influence the consumer's behaviour.

*Lydie Belaud – INSEEC, Bordeaux; Frédérique Channac – INSEEC, Bordeaux*

## **Wednesday 4 July 08:45-10:00 (M 200)**

### **Network Innovation by Design: Strategic Innovation for Sustainability**

Unilever, a global consumer products company, and Physic Ventures, a San Francisco-based venture capital firm, have implemented a dynamic collaboration model that integrates entrepreneurship, venture capital, and corporate open innovation. The model is designed to catalyze and scale new enterprises that address big challenges in health and sustainability.

By aligning values and strategy, Physic Ventures (PV) and Unilever team with entrepreneurs to invest and add value to new businesses that deliver game-changing innovations with triple-bottom line results. "Network Innovation" embraces an integrated approach to value creation, generating competitive advantages that produce financial returns and positive social and environmental benefits. Physic Ventures is the first venture capital firm to focus on investing in innovative science and technology-driven health, well-being and sustainability companies. Unilever is recognized as a global leader in corporate responsibility and has championed its Sustainable Living Plan, a comprehensive blueprint to reduce the company's impact on the environment while bolstering positive societal outcomes. The Unilever Sustainable Living Plan (USLP) takes an integrated approach to improving health and well-being, with a focus on reducing environmental impact and enhancing livelihoods. With 50 quantitative targets, the USLP goes beyond Unilever's factory gates and addresses the full life cycle of its products and supply chain, as well as the broad purchase and usage behaviours of its consumers. According to its USLP, Unilever's products are used by two billion people each day.

*William B. Rosenzweig - Physic Ventures*

### **Which kind of innovation towards sustainable business? The case of Grameen Veolia Water Ltd**

We will illustrate how a company can implement this new kind of innovation process with the case of Grameen Veolia Water Ltd (GVW). GVW is a Social Business aiming at delivering safe water in rural poor areas of Bangladesh in a context of arsenic contamination. Arsenic mitigation for rural poor people handled as a business opportunity shows the properties of a wicked problem that needs open innovation process.

GVW pilot project has been built up as an "R&D project"<sup>1</sup>. Inspired by the public services delegation contract's balanced governance, Veolia's typical business model, one of the first ideas of GVW as a joint-venture was to bring two different actors knowledge and know-how capacities in the operation scope. Veolia also decided to jointly work under an action research partnership with an academic team focusing the business development approach on a learning-by-doing approach leading to stop or redesign some processes progressively. This iterative approach has been partially inspired by the BoP protocol (Simanis, Hart, & Duke, 2008). It has led GVW to conduct "intrapreneurial bricolage" (Halme, Lindeman, & Linna, 2012).

Further researches, experimentations and time are needed to learn more about how and why innovation in and for sustainability can be profitable for companies.

*Rodopthe Vidal - ESSEC Business School, Versailles University REEDS laboratory; Eric Lesueur – Veolia Environnement; Benoit Ringot - Veolia Environnement; Marion Cesselin – ESSEC Business School; Kevin Andre – ESSEC Business School, Sorbonne Business School*

### **Corporate Ethics and Social Innovation: The 'Heilbronn Declaration' on Corporate Social Responsibility**

Twenty years on from the Rio Declaration the ideas of sustainability and Corporate Social Responsibility (CSR) are still up to date. While CSR as a topic has grown popular there is a gap between the CSR idea and reality. To a growing extent customers make buying decisions under



CSR aspects. Enterprises try to follow up with CSR strategies. But the implementation of CSR is challenging.

The 'Heilbronn Declaration' is a voluntary agreement of enterprises and institutions in Germany especially from the Heilbronn-Franconia region to initiate a form of responsible entrepreneurship and thus to contribute to the recovery of stakeholders' faith in economy. It has been elaborated by academics together with enterprises and their shareholders. The innovative approach is the integration of the prospective signers in the discussion on the idea and purpose of business from the beginning. The process of CSR implementation starts with the signing of the declaration in public. In a follow-up meeting one year later factors of success, failure. The 'Heilbronn Declaration' is an approach to make voluntary commitment more binding. Its scientific base may allow development of indicators for CSR implication in business ventures and institutions to finalize in a CSR Audit.

*Christopher Stehr - German Graduate School of Management & Law; Veronika Thanner – German Graduate School of Management & Law*

## Stream 3: SMEs / Entrepreneurship

**Tuesday 3 July 16:45-18:00 (M 230)**

### **Sustainable entrepreneurship and the transformation of industries: The case of the apparel industry**

For the last decade, the prevailing form of doing business has been increasingly challenged by a number of sustainability problems such as climate change, environmental degradation and social inequalities. These challenges culminate in the view that to only focus on economic aspects of business is ever more difficult or even impossible as it is essentially unsustainable (Hart & Milstein, 2003). From a business perspective, corporate sustainability seeks to address these issues by transcending the conventional responsibilities of businesses (i.e. to make profits) in order to also include non-economic (which may in fact often be pre-economic) aspects such as ecological and social responsibilities (Dyllick & Hockerts, 2002; Sharma, 2002; Schaltegger & Burritt, 2005). Thus, corporate sustainability is no add-on, but increasingly understood as becoming an integral part of core business (Hart, 1997; Schaltegger & Wagner, 2011). Furthermore, new regulations and raising consumer demand, amongst others, drive the need for more socially and environmentally benign products. The concept of 'sustainability-oriented innovation' understood as directed efforts aimed at developing more sustainable products, services, and business models has thus become widely accepted (Hansen et al., 2009; Hockerts, 2003; Paech, 2007; Schaltegger & Wagner, 2011).

*Erik G. Hansen - Centre for Sustainability Management (CSM), Leuphana University Lüneburg, Germany; Setefan Schaltegger - Centre for Sustainability Management (CSM), Leuphana University Lüneburg, Germany*

### **CSR as a Strategic Tool for Sustainability- Focused Innovation in Small and Medium Sized Enterprises**

The paper will present results from a statistical analysis of CSR as a Strategic Tool for Sustainability Focused innovation in Small and Medium Sized Enterprises. It is based on a combination of survey and secondary economic and organizational data of a random sample of 350 firms. The sample is taken from a population of around 2000 successful high growth SMEs identified as "gazelles" by the Norwegian business daily Dagens Næringsliv, DN. The study is financed by the Research Council of Norway.

*Atle Midttun – Norwegian Business School*

### **Social entrepreneurship approach to sustainable waste management, a case study of Kerala, India**

Kerala, the tiny state in the southwest coast of India is famous for its sandy beaches as well as being an exception in terms of its social development despite its low per capita income (Parayil 2000). Starting with its land reforms to end the feudal system in 1957, the state has done a lot

to bring social and economic equality to its people. Spending 24% of its total plan expenditure during the first seven five year plans on social sector development (Kerala Government) Kerala has managed to achieve social indicators comparable to industrialized countries despite its relatively low GDP. This is evident in its near 100% literacy, life expectancy of 74 and a birth-rate of 14 per thousand women, lower than the US. Not surprisingly, the state has topped the HDI ranking in India ever since the ranking has been developed.

Ever since the benefits of liberalizing the Indian economy started trickling in, the government has been trying to spread these benefits among the masses. In a country as big as India with more than 600 districts, the initiatives of the central government do not reach the targeted poor living in remote villages due to corruption and unwieldy bureaucracy. In such a situation an active local government plays a crucial role (Oommen and Ghosh 2005). This is where the difference made by efficient local government in Kerala shines through. The better performance of Kerala is attributed to 'public action' (Sen and Dreze 1989, 1995) i.e. action taken by the people themselves for their betterment.

*Murali Nair - Constance Institute for Values Management; Prasanthkumar Nellickal - Centre for Human Development (CENHUD)*

## Stream 4: Capabilities / Education

**Tuesday 3 July 16:45-18:00 (M01)**

**Aligning societal needs, vocational education and business in the Caribbean: How IMCA's innovation is creating a talented pool of technicians and increasing its market share.**

The purpose of this case-study is to illustrate the case of IMCA (Implementos y Maquinarias), a company which has undertaken a significant investment in vocational education in the Dominican Republic - a country that systematically appears in the lowest positions of international rankings on education. IMCA is a medium-sized (300-hundred employees) and family owned company that distributes Carterpillar, John Deere and other heavy machinery in the Caribbean region. Around the year 2005 IMCA clearly realized that the technical graduates they were recruiting (most from the Politécnico de Loyola, one of the most prestigious technical studies center of Dominican Republic) could hardly cope with basic job challenges. As experienced by many other companies recruiting from the local market, the Dominican pool of fresh graduates usually suffered from poor education (basic techno-scientific notions and skills were absent) and, also, frequently lacked basic social skills needed in business environments). By then it used to take IMCA more than 18 training-months to transform these fresh graduates into fully prepared employees.

IMCA decided to transform the situation radically. After an extensive search and in a very innovative and what could be called a counter-intuitive "move", this private company partnered with The Center for Occupational Research and Development (CORD), a Texas nonprofit organization dedicated to leading change in vocational education in the US. They established a partnership to update and re-define the entire basic and technical curriculum of the Politécnico de Loyola, and to help the entire pool of teachers to acquire new pedagogical skills and master some of the latest learning methodologies in vocational education.

*Jose M. Alacaraz - Barna Business School; Manuel Valdez - Barna Business School; Carlos Colón - Barna Business School; Daniel Morales - Barna Business School; Pedro Esteva - IMCA Implementos y Maquinarias Corporation; Catherine Piña - IMCA Implementos y Maquinarias Corporation*

### **Dynamic Capabilities for Sustainability**

Business operates in an ever more challenging context. In addition to increasing competition and growing volatility in many markets, it is also confronted with far-reaching environmental and social challenges. There is thus an urgent need to develop novel perspectives in management that not only eliminate negative economic, environmental and social impacts but also foster more anticipatory approaches to these challenges. This paper aims to make a contribution to the development of such novel perspectives by exploring how sustainability constitutes a new context for the concept of dynamic capabilities.

*Lutz Preuss - School of Management, Royal Holloway University of London, United Kingdom;  
Romano Dyerson - School of Management, Royal Holloway University of London*

### **Using Cases for Sustainable Learning**

We all want our students to walk away from classes and training sessions having concrete learning, and we want them to put this learning to use in their subsequent activities. The purpose of instruction overall should be to reinforce the specific skills participants learn rather than to showcase an instructor's delivery method. Teaching cases can be ideal tools to assure that learners will gain value from your limited interaction with them. In this session, you will get an inside look at what makes a teaching case useful, what to look for when sourcing cases, and how cases can play a vital role in your educational efforts. Participants will receive a useful handout to guide their case selection process.

*Gina Vega - Professor and Director of the Center for Entrepreneurial Activity at Bertolon School of Business, Salem State University*

### **"Sharing about sharing: Educating for sustainable exchange in a sharing economy."**

This study looks at how to educate executives to support innovation in sustainable exchange. Enabling the more efficient exchange and sharing of products and services, in order to increase human well-being while reducing the consumption of natural resources, is a key dimension to the sustainability transition (Manoochehri, 2002). For this study, "sustainable exchange" describes the mechanism for, and outcome of, the trading, swapping, lending, sharing, gifting or receiving, of access to resources in ways that benefit participants without harming wider society. Sustainable exchange involves the unrestricted channeling of all underused assets towards unmet needs, in ways that are stable, non-exploiting and environmentally appropriate.

*Jem Bendell - Griffith Business School; John Rogers - Value for People*

## **Wednesday 4 July 08:45-10:00 (M01)**

### **From leadership for responsibility to Responsible Innovation – Sustainability -Driven innovation**

Until 25 years ago public policy makers and businesses had not really thought about the need to redesign the development process so that it would lead to outcomes that would be less likely to erode future opportunities to provide for human needs. In advanced societies, economic development was largely unplanned. The Brundtland Commission report (1987) put forward the idea of a reconfigured approach to development termed 'sustainable development'. Sustainable development was conceived as a complex phenomenon – at one and the same time a response to change, a social goal, an agenda for change, a process, and an approach to governance (Roome, 2011a) but in essence it called for new ways of thinking and acting based on the integration of environmental limits and social considerations into economic development (Brundtland, 1987).

Change of this kind requires leadership as well as innovation. This has particular significance for business organisations because they drive economic development, contributing to systems of production and consumption that shape the economy as well as society and impact environmental processes and resource endowments. We can term leadership that contributes to sustainable development 'responsible leadership'.

Previous research on responsible leadership has focused on leadership values and practices as organisation-level preconditions for the attainment of business responsibility (D'Amato et al., 2010). Although some early-stage theorizing on 'responsible leadership' as management innovation has been undertaken (D'Amato & Roome, 2009) what has generally been overlooked in previous research is the connection between 'responsible leadership' and 'innovation' as a basis for change, where innovation has technological, organisational, institutional, social and managerial facets.

*Alessia D'Amato - London School of Economics and Political Sciences Department of Management; Nigel Roome - Vlerick School of Management*

## **SDA Bocconi and sustainability: the strategic role of master programs**

Today, in light of the recent economic and financial crisis, it is evident that the general interest of the community must be pursued by public institutions and nonprofit organizations and by businesses as well. In a period in which mutual recognition and a multi-stakeholder perspective are not enough, SDA Bocconi firmly believe that its role entails recognizing and implementing the principles of sustainability and responsibility among the School, its staff and students.

SDA Bocconi School of Management has developed a sound tradition of education and training for current and prospective managers in the Private, Public and Non Profit sector. SDA Bocconi operates in the larger context of Bocconi University, where an ad-hoc Chair in CSR has activated a Center for Research on Sustainability and Value. There are significant synergies that take place on a daily basis between the School and Bocconi University in the field of global sustainability and responsibility that includes the organization of seminars and guest speeches, access to resources for joint research activities and collaboration for research and teaching among faculty members.

*Alessia Anzivino - SDA Bocconi; Federica Bandini - SDA Bocconi; Manuela Brusoni - SDA Bocconi*

## **The creative settlement—enabling an eco-system for thriving innovations and social systems**

It is important to understand that this settlement does not primarily address a romantic view of living and working in the countryside or a kind of “wellness” program for a good work-live balance. Rather, by focusing on the core processes—in this case, knowledge and innovation processes—it is a well-balanced eco-system continuously bringing forth new knowledge, innovations, as well as educated and cultivated individuals and social structures. One has to know that there exists a long tradition of research settlements in Russia, e.g. Naukograd or Zelenograd—they have a rather positive reputation.

From that perspective, the “creative settlement” is located in a positive distance (accessible but remote) from a major city, as this supports these creative processes in a highly efficient manner. Historically, cities emerged around (road) junctions, water routes, etc., since most processes were—and still are—based on material structures. In our age, this materiality gets relativized: knowledge processes and knowledge creation are immaterial, they are not bound to roads, but require new epistemological and social eco-systems in which they can thrive: Enabling Spaces. The presented “creative settlement” implements these sustainable knowledge processes in combination with social a sophisticated model for the social and educational dynamics.

The project team currently translates the concept into concrete architecture, a process that is finished by end of May 2012. First visualizations are shown in Figure 4.

*Thomas Fundneider – theLivingCore, Vienna, Austria; Markus F. Peschl - University of Vienna, Vienna, Austria*

# Stream 5: Stakeholders

**Tuesday 3 July 16:45-18:00 (M 110)**

## **Olympic Games, sponsors opportunity to raise the bar on CSR strategy**

The nine Top Sponsors of the International Olympic Committee (IOC) represent 15% of the financial resources that promote the Olympic Movement (MO) worldwide. In fact, if funds raised by the host cities were added, all private sector’s contribution can reach 30% of the total funding. Contracts between IOC & Organizing Committees (OCOG) and sponsors have specific commercial and promotional targets but those, even profitable, expose companies to a large reputational risk due to the undeniable impact of the Games. However, despite their important role, sponsors do not have a private forum, an exclusive platform to align their interests. At the same time, in relation to CSR policies implementation, since these companies are far ahead of the IOC, the Olympic Movement and the Organizing Committees (OCOG), this lack of alignment among sponsors mirrors an institutional leadership vacuum that represents a missing opportunity to transfer knowledge and foster innovation. Based on stakeholders theory and strategic alliances literature, this paper argues that these companies should: (1) build their own

forum to dialogue with IOC and Organizing Committees, (2) develop common policies on CSR to reduce their reputational risks; (3) foment the implementation of CSR policies across the MO and the Games.

*Maureen Flores - Universidade Federal do Rio de Janeiro (Brazil) presently at Università Degli Studi di Siena (Italy)*

### **Stakeholder Capability in the value creation process: Empirical evidence from multicase study research**

One of the main issues that stakeholder theory tackles is how to create value and trade in stakeholder-firm relationships (Freeman et al., 2010). "Stakeholder Theory is about value creation and trade and how to manage the business effectively. "Effectively" is to create as much value as possible" (p. 9, Freeman et al., 2010). In spite of the thousands of articles on stakeholder theory, research on the creation of value and trade by stakeholders has had a shorter history and narrower breadth (Freeman et al., 2010; Walsh, 2005; Jones and Wicks, 1999). Only a few studies have researched what value creation is from a stakeholder lens (Post et al., 2002; Harrison et al., 2010; Bosse et al., 2009) how stakeholders appropriate value (Coff, 1999; Byler and Coff, 2003) or the processes or activities by which stakeholders create value (Post et al., 2002). To the extent that to date, some questions remain unanswered regarding how a firm should treat stakeholders in order to create value. Specifically from the stakeholder's side, several questions arise: What does "value" mean for stakeholders? What does "value" mean for a particular group of stakeholders and how do firms create these different types of value? How do we measure the value created by stakeholders (beyond the accounting and financial measures)?

According to Harrison et al 2010, stakeholders' value should be understood in terms of welfare, in the sense that stakeholders would choose those options or opportunities that will increase their welfare in the value creation process. Then, the firm should identify the stakeholder welfare and manage stakeholder relationships knowing how their actions affect or is affected by stakeholder's welfare, in the sense that the firm could create value if the firm is able to increase stakeholder welfare

*Elisabet Garriga - EADA Business School; Miguel Laloma - Foundation SERES*

### **Driving Decisions on Sustainability where Data and Models are controlled by Conflicting Stakeholders**

Organizations have been hampered in their efforts to make insightful and informed decisions related to their proposed actions on sustainability. Some of this is due to the cost of creating a wider-thinking view; more is due to the inaccessibility of critical data and valuable models due to proprietary or security considerations.

We need new ways to understand our rapidly evolving world and to explore the implications of planned actions and the risks and opportunities these actions present. A key challenge with leveraging these tools for large-scale exploration is that, while much has been invested by many parties in developing these models, independent efforts have resulted in models that either can't interact with one another due to technical issues, or aren't allowed to interact with one another due to internal (political, IP, security, etc.) issues. And when it comes time to explore the models, data is even more problematic.

*Adrian Gheorghe - Old Dominion University & Center for Understanding Change, Norfolk, VA USA; Adrian Valciu - Transelectrica, Bucharest, Romania; Brad Holtz - Cyon Research & The Center for Understanding Change, Bethesda, MD, USA; John Cummings - The Center for Understanding Change, WA, USA; Miriam Heller - The Center for Understanding Change, Fairfax, VA, USA; Michael Riddle - Evolution Computing & The Center for Understanding Change, Cave Creek, AZ, USA*

### **Green Halo: Consumer Inferences about Corporate Social Responsibility**

Consumers often make judgments and decisions on the basis of incomplete information. This can give rise to a halo effect whereby contextual cues are used within an inferential process to compensate for the uncertainty arising from incomplete information. It is well established that consumers draw inferences about missing information on product attributes. However, the effect can be broader; thus Posavac et al. (2010) find that more favourable advertiser

judgments are formed when there is information about advertiser profitability. In this paper, we look at the inferences drawn in the context of incomplete information about corporate social responsibility (CSR) practices, which may have no immediate consequences for product functionality or the consumption experience.

Despite well-documented consumer skepticism about CSR, we propose that there is a CSR halo effect: that consumers make inferences about company CSR performance on the basis of limited information, even where that information refers to CSR activities in an entirely different domain. We demonstrate across four studies a remarkably robust CSR halo effect with implications for our understanding of consumer inference-making and assumptions about the halo effect as well for managerial and policy considerations in regard to company CSR strategy and the use of “green washing” by companies.

*N. Craig Smith – INSEAD; Daniel Read - Warwick Business School; Sofía López-Rodríguez – SKEMA Business School*

## Stream 6: Managing Innovation / Organisational Change

**Tuesday 3 July 16:45-18:00 (M 220)**

### **Energy Management as the Core of Sustainability**

Sustainability finds increasing mention in many job descriptions, conference titles, academic papers and public policy initiatives. Businesses issue sustainability reports. Yet the concept remains fuzzy and neither the companies pursuing sustainability nor the recruiting firms who seek candidates for the Chief Sustainability Officer position have a clear idea of what the duties of the person should be, as described in a recent Bloomberg interview. In this paper, I propose that two categories of activities are involved in sustainability, one, design and structure-related initiatives, and two, energy management as a strategic process. While both activity sets have to be implemented for effective sustainability, the former are more hygiene factors, after Herzberg, in that while they are necessary, they are not enough to address sustainability in its entirety. They typically require maintenance, and include such initiatives as LEED certified buildings, rainwater harvesting infrastructures, use of electric vehicles, day lighting, air quality monitoring, and so forth. They are good things to do, and since their acceptance as good practice is growing, they are likely to be implemented when new buildings – offices, factories, or schools – are built. The activities are typically within the control of an organization, a matter of prioritization and budgeting. To continue and extend the Herzberg analogy, what we seek are the motivators in sustainability, compelling and on-going reasons for its pursuit.

This paper proposes that certain elements in energy management constitute a continuous, strategic process, and therefore represent such motivators. Why are they so regarded? First, consider the value-chain in any business. Each value element has an energy component, as it does an information component, and its value is rising as energy becomes a scarce resource and also a polluting source. Whereas the information intensity at every element in the value chain rises, the energy intensity at every element must diminish, or become “green” in its character, that is, non-fossil fuels based, or both. This is shown in Figure 1. Energy intensity thus may be regarded as the inverse analog of information intensity at every element in the value chain.

*Mahesh P. Bhave - Indian Institute of Management (IIM), Kozhikode*

### **Innovation Potential for Sustainability Management Methods**

Various empirical studies have shown that many European corporations are trying to transform their business strategies to include sustainability aspects (Wolter 1999; Mathieu 2003; Husted & Allen 2007; Schaltegger et al. 2010). However, the same empirical studies also reveal that one important barrier to turn these strategies into practice is a lack of methods how to implement corporate sustainability. Knowledge about existing methods and particularly about new innovative methods is required, to implement sustainability successfully and transform sustainability challenges into business opportunities. However, no in depth analysis has so far been conducted on what sustainability management methods are needed for which business functions. Whilst the increasing operationalization of corporate sustainability strategies requires

more specific methods of sustainability management it is not known for which organizational units (e.g. production, human resources etc.) and for which thematic aspects (e.g. resource efficiency, equal opportunities etc.) a need to develop new sustainability management methods exists.

*Stefan Schaltegger - Centre for Sustainability Management (CSM) and MBA Sustainability Management, Leuphana University Luneburg; Jacob Hörisch - Leuphana University Luneburg; Christian Herzig - International Centre for Corporate Social Responsibility (ICCSR), Nottingham University Business School*

### **Environmental impacts of Innovative activities and cooperation in Brazilian firms: an exploratory analysis from the Innovation Survey**

The environment is gaining importance as a key variable to influence businesses behaviour. Discussions on the capability to reproduce today's wellbeing to the citizens that will inhabit the planet in the future – what constitutes sustainable development – have reached its peak in the 80s in the context of the meetings held by UNEP. Businesses are at the centre of this discussion, for a significant share of environmental impacts in the environment is generated in their production processes. For this very reason their awareness and action to environmental problems is crucial if any change is to be attained.

Nowadays more and more firms reckon the importance to manage resources, energy and waste responsibly, not only due to regulatory pressures but also because such behaviour can generate value to the firm (Porter & van der Linde, 1996). Especially firms who foresee in the solution of environmental challenges the opportunity to create new markets or products may attain higher levels of growth, profitability and competitiveness (Hart, 1997; Maimon, 1996).

In the context of an increasing awareness of firms to key environmental issues, innovation rises as the mechanism with which firms can switch towards cleaner, more energy efficient, resource efficient methods of production. As the current production methods are jeopardizing the possibility of a sustainable development, new paradigms of production and consumption must replace them.

*Carlos Arruda - Fundação Dom Cabral; Flavia Carvalho - Fundação Dom Cabral and UNU-MERIT; Gabriela Goulart - UFRJ and Fundação Dom Cabra*

### **Using Strategic CSR to Achieve the Hybrid Middle Ground Sustainability Equilibrium During an Economic Crisis: The Case of Telenor Hungary**

To be considered a sustainable organization today requires achieving what can be termed a "hybrid middle ground" equilibrium, comprising of economic as well as social sustainability. This middle ground requires some blend of both business and social commitments. Reaching the status of a sustainable organization—incorporating economic, social and environmental objectives—is facilitated by reaching the hybrid middle ground as quickly as possible. Some of the necessary characteristics of organizations inhabiting this hybrid middle ground are: a) Profit making motive as well as mission motive, b) Shareholder accountability as well as stakeholder accountability and c) Profit redistributed to shareholders as well as income reinvested in social programs or operational costs (Mulloth, 2011).

In this presentation, we use the case of Hungary's second ranked mobile operator, Telenor Hungary to illustrate an example of a company that is moving to the hybrid middle ground by transitioning from a for-profit company to a socially responsible business. The method or approach employed by Telenor Hungary to do so is strategic CSR (Hardi, Radacsi, 2011). In this line of thinking, the organization explicitly supports programs and initiatives that have a direct link to the core business and bring operational and/or financial advantages for the company, while creating a positive social and/or environmental impact. In the case of Telenor Hungary, the notion of sustainability became the focus of their CSR policy.

*Peter Hardi - Central European University Business School, Budapest, Hungary; Mel Horwitch - Central European University Business School, Budapest, Hungary; Bala Mulloth - Central European University Business School, Budapest, Hungary; Frank III Klausz - Telenor Hungary*

## Wednesday 4 July 08:45-10:00 (M 220)

### **A systematic review of the innovation processes and innovation management practices of sustainability leaders: study protocol**

This abstract describes the background and protocol for a systematic review addressing the question "What characterizes the innovation processes and innovation management practices of sustainability leaders?" This review is being undertaken in collaboration with and on behalf of the Network for Business Sustainability by colleagues at the Universities of Exeter, Cranfield and Cornell.

*Richard Adams - Exeter Business School, University of Exeter, UK; Sally Jeanrenaud - Exeter Business School, University of Exeter, UK; John Bessant - Exeter Business School, University of Exeter, UK; Patrick Overy - University of Exeter Library, UK; David Denyer - Cranfield University School of Management, Cranfield, Beds, UK*

### **Paradigm shift in management - Profitability to Social Responsibility**

Since long term sustainability has been the major focus of businesses in general, the big ones in particular, enlarging the market space and consumer base obviously would be their major concern and that can be achieved only through inclusive growth. Two concepts central to the conduct of business—corporate profitability and social responsibility—have co-existed in an uneasy tension throughout industrialisation. Business is caught in a struggle between escalating demands for social responsibility versus urgent needs for profitability to survive a more competitive world. Albeit business works for achieving economic objectives but its long term sustainability can not be assured with this objective alone and in fact this situation has given impetus to develop consciousness among present day global manager to show responsible behaviour towards different stakeholders and work for the welfare of the entire society.

*Vandana Tripathi – Institute of Technology and Management (ITM), Kharghar Navi Mumbai*

### **Focal organisations, relational capability and accelerated eco-innovation**

The focus of recent research at the Sustainable Consumption Institute ([www.sci.manchester.ac.uk](http://www.sci.manchester.ac.uk)) has been to consider the circumstances under which focal organisations – those organisations with significant buying power – can stimulate eco-innovation beyond their organisational boundaries. Much of the analysis has taken a systems level perspective to understand how production and distribution arrangements have evolved and what implications this has for the ability of focal organisations to drive change. We've examined how historical pathways and structures in the sectors shape current opportunities for stimulating supply chain eco-innovation; identified where the environmental impacts exist across the production and distribution system; explored – through interview and analysis – which actors have 'focal' power in the production and distribution system to stimulate eco-innovation and what they are doing to achieve environmental objectives; and considered the opportunities and challenges for focal organisations to stimulate incremental and radical eco-innovation in their supply chains consistent with long-term production and distribution system sustainability.

We've looked for example at milk, bread and orange juice (Dewick and Foster, 2011; Dewick and Mylan, 2011; Foster et al, 2012). Similar studies of other product value chains have highlighted the varying ability of organisations to influence the operation of increasingly complex supply chains (Gereffi et al, 2005; Wilkinson, 2006; Lowe & Gereffi 2009). For example, Lee et al (2010) differentiate between global value chains that are producer-led, buyer-led, bilateral oligopolies (where influence is concentrated at both the producer and retailer stages of supply chains) and traditional markets (where influence is fragmented across the supply chain). Large retailers, who sell tens of thousands of food and non-food products, are interesting to study because they operate across these global value chains, the nature of which determines in part the nature of their relationships with suppliers and their influence to drive eco-innovation.

*Paul Dewick - Sustainable Consumption Institute & Institute of Innovation Research, University of Manchester; Jakob Edler - Sustainable Consumption Institute & Institute of Innovation Research, University of Manchester; Andrew McMeekin - Sustainable Consumption Institute & Institute of Innovation Research, University of Manchester*



## **Organizing for sustainable innovation: the importance of control in the transition towards sustainability**

Increasingly, companies are becoming aware of the importance of sustainable development, recognizing that environment management has become a key strategic issue. Also, the demand for and development of environmentally and socially innovative products has increased (Nicholls and Opal, 2005; Wüstenhagen and Bilharz, 2006). The literature highlights several benefits that can arise from integrating environmental sustainability issues into product development and business operations: increased efficiency in the use of resources, return on investment, increased sales, development of new markets, improved corporate image, product differentiation, and enhanced competitive advantage (Fraj-Andre's et al., 2008; Miles and Covin, 2000; Miles and Munilla, 1993; Pujari et al., 2003; Shrivastava, 1995; York, 2009).

These benefits can only be materialized, however, provided that the organization is properly attuned and designed to deal with sustainable development. Thus, as companies are increasingly confronted with the pressure for change towards sustainability, organizational design should change accordingly to incorporate issues such as efficiency, dematerialization, reduction of waste and emissions. Further, to address the sustainable development challenge, companies need to balance financial, social and environmental performance (Elkington, 1998). This change towards sustainability thus not only entails a change in the objectives defined by the firm (i.e. simultaneously meeting financial, social, and environmental goals) but has also implications for the knowledge required to meet those objectives. To implement issues as reduction of waste, emission and energy, dematerialization, etc., into the innovation process, it is most likely that firms will have to look outside their boundaries as no or insufficient knowledge is available within them. The challenge of implementing new objectives that are in line with a sustainable strategy and accessing required knowledge can be partly addressed by installing appropriate organizational control mechanisms. Such controls allow the organization to steer the actions and behaviors of its employees towards the firm's goals and objectives by formulating incentives and rewards. Also, controls have the potential to manage the flow of information into and within the firm (Turner & Makhija, 2006). As such, they help the firm to reach its objectives in terms of sustainability and manage the knowledge flows that are required to meet those objectives.

*Annelies Bobelyn - Department of Management of Technology and Innovation, Rotterdam School of Management, Erasmus University; Serge Rijdsdijk - Department of Management of Technology and Innovation, Rotterdam School of Management, Erasmus University; Jan Van den Ende - Department of Management of Technology and Innovation, Rotterdam School of Management, Erasmus University*

## **Wednesday 4 July 11:45-13:00 (M 220)**

### **Business Going GreenDesso case of corporate transformation through radical eco-innovation**

Our society is currently facing an unprecedented series of crises in modern history --financial, economic, industrial and environmental crises--as a consequence of an unsustainable development model based on the mismanagement of our scarce social and natural resources. However, like in the natural ecosystems, crises offer opportunities for evolution. Visionary companies lead the change of their business models to work towards a more sustainable future based on natural resource efficiency, the development of eco-innovative products and services and the empowerment of eco-consciousness customers and citizens. The businesses engaging in this "green economy" are nowadays obtaining a key competitive advantage, being recognised clearly as leaders within their sector.

In this theoretic and empirical research at international scale, we have studied the literature of change management and corporate sustainability, from which we constructed a framework for organizational transformation towards green business. Then, we have examined different companies that are leading this strategic change to confirm the validity of our model and illustrate the different stages of the transformation process. Finally we have chosen to focus on Desso Company, a Dutch carpet manufacturer that is using radical eco-innovation to transform its business model.

*Jérémie Fosse – Esade Business School; Daniel Arenas - Esade Business School; Emily Huc - Entrepreneur and independent researcher*

## **Changing the rules of the game: the case of responsible procurement on London's Crossrail programme**

Responsible procurement (RP) is the consideration of sustainability objectives associated with the entire-supply chain of a construction project (where sustainability refers to the combination of environmental, social and economic issues). Public authorities, NGOs, the media and the public are increasingly expecting RP to be monitored, for example, RP criteria were included in the contractual obligations of the 2012 Olympics (e.g. on ethical sourcing, fair employment and environmental protection). This trend is gaining traction because clients are concerned about the „cost“ of being exposed to RP risks, but there is no consensus on definitions or agreed mechanisms for reporting (Glass et al, 2012; Glass, 2012) and no quantifiable method for identifying and evaluating risks. Hence, the subject warrants exploration, so this study considers how RP is being implemented on a major UK infrastructure programme in London; it makes a clear link with literature on sustainable supply chain management, SSCM (Seuring, 2011) and responsible sourcing (Mustow, 2006; Glass, 2011).

*Jacqueline Glass - School of Civil and Building Engineering, Loughborough University; Kelly Bradley - Crossrail Ltd; Rizwan Imtiaz - Crossrail Ltd*

## **Responsible Innovation by Russian Companies: Some Evidence from National Reports**

The role of responsible innovation is taking an important place in modern debate on corporate social performance (CSP) moving towards the “shared value” seeking in the total “portfolio” of CSR related activities. As CSP is treated by stakeholders as imprescriptible part of corporations' activities the latter try to move their social, ecological and philanthropy programs closer to their business strategy and connect these to managerial routines of different functional departments.

*Yuri E. Blagov - PWC Center for CSR, St. Petersburg University Graduate School of Management; Anastasia A. Petrova-Savchenko - PWC Center for CSR, St.Petersburg University Graduate School of Management*

## **Can Mambu beat IBM? Strategic innovation in MIS for Microfinance market**

Concerns over sustainable development are linked to environmental issues and social issues. One of the key industries concerning social issues is microfinance which is growing at a very rapid pace. For its sustainable solid growth and scalability it need excellent information systems. Thus, new information systems software providers have been entering the market. Today there are hundreds of such software packages, often very expensive. The question is whether any software supplier can create a strategic innovation which not only allows it to take over the global software market for MIS but also provide its customer MFIs the possibility of making microfinance reach more people faster and at a lower cost.

*Ashta Arvind – Burgundy School of Business; Dinos Constantinou– Burgundy School of Business; Mikhail Cherkas – Burgundy School of Business; Vitalie Bumacov – Burgundy School of Business*

# Stream 7: Strategy

**Wednesday 4 July 08:45-10:00 (M 230)**

## **Degree of Inclusiveness: Innovative management for inclusive and sustainable business models**

The issue of sustainability in inclusive business models is a growing field. Put forward as a means to accelerate progress towards the Millennium Development Goals, addressing both the needs of the poor and the interests of companies, inclusive business have the potential to transform the current economic paradigm promoting more equal and inclusive growth.

Inclusive businesses are those which in their operations:

- have the intention of generating profit for companies and making them competitive, but in a respectful manner, through dialogue with communities and in a way such as to contribute to a win-win scenario;

- involve the poor, contributing to the improvement of their quality of life, but do so neither in an aid assistance fashion nor through subsidies.
- promote the recuperation and preservation of the environment.

And inclusive markets are those which value and foster inclusive businesses.

Although unarguably desirable, the promotion of inclusion raises a few questions as to whether or not our current economic system can accommodate us all. If we are currently living on a planet and a half, how do we include the millions of people living in poverty?

The answers lie within innovative and strategic management. In order to promote inclusive business which benefits both the people and the planet, companies need to rethink the way they see consumers and consumption.

*Cláudio Bruzzi Boechat - Sustainability and Corporate Responsibility Research Center, Fundação Dom Cabral, Brazil; Junia Carvalho de Faria - Reference Centre for Inclusive Markets at FDC*

### **A Springboard to Sustainable enterprise excellence**

The organizational and social themes of sustainability, enterprise excellence, and innovation have emerged in recent years. Relative consensus exists that each of these are important to organizations, to society at large, and to the environmental well-being of our planet. Despite such consensus, strategies and tactics aimed at successful integration of these themes have largely proven either ineffective or highly elusive. In part this is a result of diverse understandings of the relationships among these themes: are they mutually compatible, or do they conflict with one another? If they are compatible, then to what degree? If they are not perfectly compatible, then to what balance should an organization aspire? More importantly, how can this balance be achieved, to what depth, breadth, and how rapidly?

*Rick Edgeman - Sustainability & Performance in the Interdisciplinary Center for Organizational Architecture (ICOA) at Aarhus University, Denmark; Jacob Eskildsen - The Interdisciplinary Centre for Organizational Architecture (ICOA) at the Aarhus School of Business and Social Science, University of Aarhus*

### **Strategy 2.0: Turning Management Innovation into Practice**

Our findings suggest that all types of firms in our sample (age, size, industries) lack both, mechanisms that enable for dynamics & innovation and for stability & efficiency. Also, our research indicates that innovation and stability can be seen as two distinct dimensions, but they are not mutually exclusive. Our findings rather suggest a positive correlation between these types of capabilities to be true in the organizations involved in the project. In all firms, organizational structure, organizational behavior, the firm members' mindsets and their commitment to interpersonal networks were closely related to each other and they served as instruments to achieve stability and / or to enable for innovative work.

We assume (1) that sustainable successful firms simultaneously realize both, stability and innovation, but to different degrees that might change over time. Therefore, firms need to continuously search for a balance that suits their current and idiosyncratic situation. (2) We also argue that innovative work seems only to be possible, if an organization can also provide a certain level of stability to its members. (3) In order to provide for enough stability, new mechanisms are required that allow (instead of avoid) or enable for innovative and creative work.

The sample of firms in our project was too small to generalize all findings on a broad level. Future research using large-scale, quantitative methods is needed to further verify our results and assumptions.

*Petra Kugler - FHS St.Gallen, University of Applied Sciences Institute of Business Management IFU-FHS; Sibylle Olbert-Bock - FHS St.Gallen, University of Applied Sciences Institute of Information and Process Management IPM-FHS; Rigo Tietz - FHS St.Gallen, University of Applied Sciences Institute of Business Management IFU-FHS*

### **A Sustainable Farm: The production of Biogas from Dung**

The purpose of this paper is to present a business case of a farm dedicated to the production of milk that has been able to use the dung for production of biogas. The farm object of the case is a company of more than 50 years of history. It is one of the biggest in Europe and has more than 2,000 cows dedicated to the production of milk. Three years ago the company decided to move his installation from a small town close the Valencia, to the countryside, building a completely new facility.

The movement was a good opportunity for the owner also to put in place a R&D project, started in 2001 in collaboration with a technological institute (AINIA), to transform the dung waste in a sort of energy. The project ended in 2009 with the inauguration of a plant dedicated to the production of 500 kW biogas from dung. The project gave also the opportunity to the company for diversification, being the first Spanish farm to be also an electricity producer.

The plant has a capacity of 45,000 tons per year, being 35,000 tons dung and the other part agriculture waste (primarily waste of orange juice production). The plant produces 4.000.000 kWh per year and contributes to the reduction of 2,808 tons of CO<sub>2</sub> per year.

The case is a real example of how sustainability can be a key driver for innovation and for business opportunities. It represents really a case of a problem (dung disposal) transformed in opportunity. The case clearly identifies synergies between sustainability and innovation success.

*Salvatore Moccia - Universidad CEU Cardenal Herrera, Valencia; Juan Nave Pineda - Universidad de Castilla La Mancha, Spain*

## **Wednesday 4 July 11:45-13:00 (M 230)**

### **Opening the Black box of Corporate Social Responsibility (CSR): The Innovation of CSR in Corporate Sustainability Strategies**

The increasing trend for responsible business illustrated through various schemes like the Corporate Social Responsibility (CSR) and good corporate governance indicates the emergence of a new type of business models, different from the ongoing ones commonly referred to as the Business as Usual. This new type of business model centred on sustainability agendas requires a new way of governing corporate conducts and practices, resources mobilisation, and the setting up of wider yet more balanced corporate objectives with regard to economic, social, and environmental interests. Two key processes are central here: the sustainability agendas that have driven the social innovation within the companies as exemplified in many companies' community engagement; and the attempt of companies to maintain the sustainability through innovative CSR initiatives, labelling schemes, and certification standards into corporate long-term strategies. However, these mostly happen in the black box and not much have been exposed in existing scholarly works. This research attempts to address this concern by providing a thorough account on the appropriation of sustainability agendas into corporate strategies through the CSR initiatives, showcasing palm oil business in an emerging economy – Indonesia.

*Jimmy Tanaya - Manchester Institute of Innovation Research, Manchester Business School; Yanuar Nugroho - Manchester Institute of Innovation Research, Manchester Business School; Sally Randles - Sustainable Consumption Institute, University of Manchester*

### **The Environmental Value Chain and Strategic Decision Making for Sustainability**

The purpose of this paper is to demonstrate how the insights from the strategy tool Value Chain Analysis and the engineering tool Life Cycle Assessment (LCA) can be brought together. The resulting "Environmental Value Chain" is a decision making framework for analyzing environmental problems and opportunities and for evaluating how and why choices about sustainability may affect business performance. The paper offers three applications of the Environmental Value Chain: synergies, stakeholders, and sharing responsibility for environmental impacts. The Environmental Value Chain allows for understanding issues and opportunities in a way that neither of the other tools can do alone. LCA can calculate the total environmental impact of alternative choices (e.g., whether a paper or plastic shopping bag is responsible for more greenhouse gas emissions over its life cycle), but LCA cannot provide guidance as to which choice is appropriate from an economic or strategic perspective. Meanwhile, the value chain used in strategy analysis can map the relationships among business

activities, the firm and its suppliers, etc., but it does not explicitly consider sustainability considerations.

Value creation and capture are central to research and practice in strategy, entrepreneurship and related disciplines. However, as sustainability has grown as a fundamental concern of business, some basic premises of value creation have been challenged. At least three starkly contrasting viewpoints exist: the strict shareholder primacy view (e.g., Berle & Means, 1932), [2] the thread of stakeholder theory that argues for the importance of sustainability concerns (e.g., Driscoll & Starik, 2004), and [3] an “instrumental” or “win-win” viewpoint that attention to sustainability not only can improve performance but also can uncover profit opportunities that otherwise would be ignored (e.g., Porter & van der Linde, 1995).

Nidumolu, Prahalad, and Rangaswami’s 2009 Harvard Business Review lead article asserted in its title, “Sustainability is now the key driver of innovation.” However, the benefits of sustainability are neither universal nor uniform, and firms face tradeoffs in strategic choices. Innovations in sustainability do not always pay off economically. And the best economic choices are not always the most sustainable choices using environmental and/or social criteria. Mackey, Mackey, and Barney (2007) laid out three possibilities for the economic benefits of investments in sustainability: immediate economic returns, no returns, or improvements in profit only over a longer-term than detected by current-period accounting measures. McWilliams and Siegel (2011) concluded that the sustainability-performance relationship remains largely disputed territory.

*Kevin Laverty - School of Business, University of Washington Bothell*

### **Sustainability as a Driver for Innovation – the example of Odebrecht in Brazil**

This paper presents an in-depth case study on the Brazilian multinational Odebrecht. The case demonstrates how the company turns its global and regional sustainability challenges into innovation primarily by providing an enabling environment for intrapreneurship. We explain the global and regional trends as well as new regulatory requirements influencing Odebrecht’s strategies and how this shapes the company’s strategy, business models, processes, organizational capabilities and capacity building. A key success factor in turning sustainability into innovation is the creation of an intrapreneurial culture as well as partnerships with external stakeholders.

*Heiko Spitzbeck - Fundação Dom Cabral, Brazil; Cláudio Boechat - Fundação Dom Cabral, Brazil; Sergio Leão – Odebrecht, Brazil*

### **Translating Sustainable Development Principles to Concrete Practices in Retail Banking**

Taking sustainability to the core of business strategy at Santander Brasil has enabled the bank to innovate in all dimensions of its operation. As the bank embarked on a discussion of how it can contribute to and be a relevant actor for a greener and more inclusive economy, it uncovered several opportunities and created a movement that affected from client approach strategies to how we build branches and evaluate the quality of their operation using sustainable criteria. This sort of systemic approach to sustainability has led us to a more robust innovation strategy, as all aspects of our business are affected and transformed.

*Sandro Marques – Banco Santander, Brasil*

## **Stream 8: Energy**

**Wednesday 4 July 11:45-13:00 (M 200)**

### **Global Economic Scenario - Sustainable Innovations For Clean Energy Supply**

According to the International Energy Agency (IEA), production from known oil and gas reserves will fall by 2030. Yet the developed world’s thirst for energy is unabated. Emerging economies like China, India and Brazil have an unsatiated demand for energy which will continue to grow. Competition for fossil fuels resources is a source of international tension, and potential conflict.

Energy companies are increasingly looking to fill the gap with unconventional sources of oil and gas, such as shale gas, oil from deep water platforms and others. Processing and using unconventional fossil sources produce large quantities of greenhouse gases and chemical pollution, and puts unsustainable demands with severe impacts on biodiversity and the ecosystem. It will lead to global warming and catastrophic climate changes.

For some, nuclear energy is seen to be part of the solution to the energy crisis. It produces large-scale electricity with low carbon emissions – although mining and enriching Uranium is very energy intensive. Nuclear fission produces dangerous waste that remains highly toxic for thousands of years – and there is nowhere in the world where it can be stored safely.

*Sai Manohar - Department of Management Studies Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam; Shiv R Pandit - Department of Management Studies Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam*

### **The need to understand radical innovation from a corporate perspective**

The case of the Dutch Energy sector: different tactics seen

To gain more insight, the hypotheses were applied to the Dutch energy sector. Currently the share of energy from sustainable sources is below 10%. Different technological solutions are available to increase this share. These include incremental innovation like improving the efficiency of current power sources (mainly gas and coal) and introducing hybrid processes like biomass co-firing. More radical alternatives are also actively developed, including wind power (sea and land), decentral energy generation in which solar energy plays a key role as well as introducing biofuels.

In terms of cooperation and stakeholder engagement many different tactics are seen. For example multiple platforms are established to form visions on the transition and for advocacy. Also the sector has been actively engaged in forming “greendeals” with the government and other stakeholders in which the different parties specify their commitments to aspects of the energy transition. Also the sector has contributed to a number of information platforms which provide information to consumers to raise their awareness and induce behavior change. Also one of the firms is participating in the cross sector climate savers program of WWF.

Considering their market development activities, most leading parties are engaged in multiple pilots and niche projects. There are niche applications of decentral power generation and several wind power projects which were co-financed by the government. All firms also have green energy products which are already sold to a considerable share of the market; however these are often facilitated by importing clean energy from abroad. An interesting development is the implementation of wind power products by a number of the leading players, which have a more direct impact on the local production mix.

Because the transformation is still in an intermediate phase it is currently very difficult to determine the effect of the different tactics and levels of proactivity on the speed and outcome of the energy transition. The diverse tactics seen in practice as well the unclear impact of these tactics on the sustainability transition and the firms’ survival however clearly underline the need to understand this better. A longitudinal research approach from a multi-level perspective would be most suited.

*Gerbert Hengelaar - Partnership Resource Centre, Rotterdam School of Management*

### **Sustainable Markets for Green Technologies: how can innovators influence the development of appropriate commercial infrastructure?**

The case study provides the basis for a learning agenda. The critical review of prior experience is an opportunity to translate knowledge into the context of bioenergy. Taken together, gaps to be addressed through research, capacity building and capability development are identified. These are focused on the role and impact of the technical leaders of innovation, but are of critical importance to companies, large and small, energy sector incumbents and new entrants. This paper addresses the colloquium themes, exploring business and sustainability from a network, rather than firm-centred, perspective.

*Louise Knight - School of Engineering and Applied Science; Tim Miller - European Bioenergy Research Institute, Aston University*

### **Nuclear electricity Generation in South Africa: a case study of strategic Innovation for Sustainability**

The aim of this paper is to analyse the Pebble Bed Modular Reactor (PBMR) nuclear electricity generation venture in South Africa as a case study of strategic innovation for sustainability. The technology had been abandoned in a number of developed countries, but South Africa resolved to develop it as a means for reducing its dependency on fossil fired power stations. Despite expenditure of over \$1bn the project was a failure. The paper examines the driving forces behind what was intended to be an innovative sustainable venture and the reasons for its collapse.

*Ian Hipkin - École Supérieure de Commerce de Pau rue Saint-John Perse, France*

## **Stream 9: Organisational Values / Culture**

**Wednesday 4 July 11:45-13:00 (M01)**

### **Strategic Innovation for Sustainability. The Three Essential Foundations for Creative Solutions to Sustainability**

There are foundations that free up an individual or organisation to work towards a vision of sustainability. It is the awareness, understanding and commitment to these essential qualities that enable an organisation to innovate and deliver on a sustainable strategy. Without an understanding of the importance of these core values any strategy is susceptible to failure from lack of innovation, coherence or longevity because it will lack the capacity for essential paradigm shifts which are the basis for sustainability. This paper outlines the foundations for developing a culture of innovation and gives specific examples of how this has been achieved in business.

*Jeremy Wickremer - Ideal Media, UN mandated University for Peace (UPeace) Centre for Executive Education*

### **Understanding Sustainable innovation through positive ethical networks and crises**

This paper first establishes sustainability as a positive ethical ideal before examining innovations that promote sustainability through a positive ethical lens. Inspired by the microfinance and socially responsible investing movements, the authors argue that positive ethical networks (PENs) are mobilized to develop sustainable innovations in response to external crises. The authors empirically test the crisis-PEN-innovation framework they develop through an in-depth case study analysis of a sustainable European bank. After identifying five sustainable, financial innovations, they utilize theory-guided process tracing to understand how each innovation was realized. The findings are consistent with the crisis-PEN-innovation framework they develop, suggesting that further empirical testing be undertaken to broaden the relevance of the framework beyond sustainable innovations in the finance sector.

*Zahir A. Dossa - MIT; Katrin Kaeufer - Department of Urban Studies and Planning, MIT*

### **Leaders in Sustainable Innovation – Motivations and Success Factors**

Stakeholder expectations of business are rapidly shifting bringing forth both increasing environmental and social challenges but also new opportunities and markets to exploit. As business grapples with the new business landscape, sustainable innovation has now become a mainstream management and strategic issue for seeking solutions and new directions.

At present however there is a lack of empirical studies reporting the motivations of leaders and the potential impact upon success and the challenges sustainable innovation offers (Berchicci and Bodewes, 2005; Ottman et al., 2006). Moreover there is a lack of knowledge concerning what are the real success factors for sustainable innovation (Dangelico and Pujari, 2010; Ottman et al. 2006). For this it is thought that much may be learnt from those companies who are still on their sustainability journey, but are seen to be currently very much leading the pack.

This paper seeks to develop understanding in this area by examining two large multi-national companies deemed as leaders in sustainability (and innovation for sustainability) within their respective industries. Furthermore through detailed, rich case study analysis the paper addresses the neglected importance of internal initiatives (Arnold and Hockerts, 2011) and shines light on the relative salience of the various influences upon sustainability leaders.

The unit of analysis in this study is the project level, investigating two 'on-going' sustainable innovation processes through collating qualitative data from a range of methods including numerous interviews and documentary analysis.

The study forms a detailed understanding of each case, in particular the motivations, drivers and challenges leading to the identification and classification of the critical factors for success. Discussion surrounds... and leads the paper to conclude...

*Steve Kennedy - Business Society Management Department, Rotterdam School of Management, Erasmus University; Gail Whiteman - Business Society Management Department, Rotterdam School of Management, Erasmus University*

## Stream 10: Performance & Risk Management

**Wednesday 4 July 08:45 – 10:00 (M 110)**

### **Sustainable Innovation Responses to Global Climate Change**

This paper examines the nature of sustainable innovation in the context of companies seeking to improve their ecological and social performance. Large gains in performance are possible by mindfully applying appropriate technologies and the mindful use of resources. Sustainable innovations need not involve high tech and large research and development budgets. The paper discusses sustainability and sustainable innovation as a response to global climate change. It provides examples of sustainable innovations and identifies their key characteristics. Innovation can be accomplished by empowering customers and employees to eliminate wasteful practices in areas where small benefits can be magnified by their frequent use.

*Paul Shrivastava - David O'Brien Center for Sustainable Enterprise & John Molson School of Business, Concordia University*

### **Towards a Composite Index of Measuring Overall Corporate Performance: The Cost-of-Capital-Approach Expanded**

Various methods have been developed to measure sustainability. When it comes to measuring whether sustainability issues are integrated in overall corporate performance, companies broaden their reporting from economic performance to "sustainability performance" and there are various frameworks around for benchmarking sustainability outcomes. A major emphasis, however, is on technical data. The main efforts were consolidated in the Global Reporting Initiative GRI. Each of the indicators prudently measures a well determined set of facts. However, one major discussion point is whether the reporting frameworks do really reflect the link between sustainability and economic value, and how they would properly connect to the information used by management for running the business on a day-to-day basis.

This paper tries to point out that one way out of the disconnectedness might be through expanding the concept of "Economic Value Added" (EVA®): Economic Value Added measures overall corporate performance by claiming that shareholders gain when the return from the capital employed in a corporation is greater than the cost of that capital. From there it is a short way to proclaim that all stakeholders gain when the value created by a corporation is greater than the cost of the capital employed in the corporation and the capital employed in whichever commonly available resources outside the corporation are used by its business. The expansion of EVA that is envisaged would be to enlarge the cost of capital by the costs which are caused by that part of "Public Goods" which is available to a corporation.

There is one political and one theoretical obstacle in this: The argument is quite radical and complying with it would require some leadership from "big corporations"; and valuing public goods is a research field which has not yet reached the stadium of generally accepted applicability, at least with regard to aggregative monetary value. It is hoped, though, that new



initiatives which are under way, e.g. the International Integrated Reporting Committee now formed, among others, by GRI, will unite sufficient brainpower to reach a breakthrough. The paper also reflects on the effects the new indicator would stimulate for businesses, their markets and their stakeholders.

*Roland Bardy - Florida Gulf Coast University, United States; Maurizio Massaro - Udine University, Italy*

### **What makes corporations more sustainable? A closer look at the impact of global climate change on corporate emission disclosure strategy**

Corporate responses to global climate change (GCC) have shifted dramatically over the past two decades. Until the early 1990s, except for a few larger transportation and oil companies, businesses generally neglected this issue. By the mid-1990s, North American companies in sectors related to fossil fuels had woken up to GCC and perceived the prospect of greenhouse gas (GHG) emission regulations as a substantial threat to their businesses (Kolk et al., 2008). Companies are now preparing for a carbon-constrained future by exploring a wide range of strategies which include investing in low emission products and technologies and development of the organisational and informational infrastructure for assessing, measuring, reporting and managing GHG (Kolk and Pinkse, 2005). By 2000, key firms on both sides of the Atlantic were converging toward a more accommodation position that acknowledged the role of GHG in climate change. Companies in energy and transportation-related sectors began to invest substantial amounts in low-carbon technologies and trade carbon emissions (Lund, 2007).

*Jessica Hong Yang - Henley Business School, University of Reading; Nada Kakabadse - Northampton Business School, University of Northampton*

### **The Regulation-Trade-Off – Innovation Through Moderate Levels of Regulation**

While many companies are convinced that sustainability is an important issue, making a company's operations sustainable and producing sustainable products is often thought to be associated with a cost disadvantage, in particular compared to rivals in developing countries that don't face the same pressures (Nidumolu et al. 2009). As result, absent monetary incentives to become more sustainable, there are often calls for more and tighter regulatory standards to enforce more sustainable operations.

*Helmut Dietl - University of Zurich; Markus Lang - University of Zurich; Eric Lucas - University of Zurich; Dirk Martignoni - University of Zurich*

## **Wednesday 4 July 11:45-13:00 (M 110)**

### **The Qube: Widening the scope to measuring sustainability**

When performing Life Cycle Assessments there are a variety of frameworks within which one can formulate an analysis. These frameworks take into consideration different aspects of sustainability, the built environment, or society and attempt to use them as an organizational structure through which to "check off" all impacts and ensure that no factors are neglected. By trying to incorporate the principles of whole systems thinking, our team has attempted to consolidate the many frameworks that exist today into one cohesive, holistic framework with two different applications. The first is for use in the private and government sectors, while the second is for use by non-profit companies specializing in humanitarian work and social entrepreneurship.

Sustainability frameworks tend to fall into one of three categories: Stakeholders, Impact Categorization, or variations on the classic "tri-pod" or "three-legged stool" framework. The framework developed at Villanova University is a hybrid of all three types. It is called the Question Cube© , or Qube©. The Qube is based on the concept of combining the diverse variety of sustainability "perspectives" into one comprehensive framework. Frequently when using a single dimensional sustainability assessment tool, impacts may not be considered because they do not immediately seem relevant. The aim of The Qube is to prevent this from happening. By cross-referencing the different analysis techniques, The Qube accounts for all impacts.

*Alyssa Fischer - Sustainable Engineering Program, Villanova University; Julia Musso - Sustainable Engineering Program, Villanova University; Wairimu Mwangi - Sustainable Engineering Program, Villanova University; Steve Suffian - Sustainable Engineering Program, Villanova University*

### **Sustainability early-movers: How strategies differ by ownership**

This conceptual paper examines how firm ownership predicts early-mover innovations in sustainability to provide competitive advantage. Building on the risk mitigation perspective, we extend first-mover advantage of corporate social responsibility (CSR) based on ownership categorisation moderated by stakeholder category, to propose a model for sustainability innovation. Applications for managers as well as limitations and future research directions are also provided.

*Carol-Ann Tetrault Sirsly - Sprott School of Business, Carleton University, Ottawa, Canada; Sujit Sur - Dalhousie University, Halifax, Canada*

### **Corporate Responsibility and Sustainability: Integrated network Governance**

This paper aims to advance the research on the emergence of an integrated networked governance framework in the field of Corporate Social Responsibility (CSR), which has emerged under the umbrella of global CSR initiatives, such as UN Global Compact, Global Reporting Initiative, Principles for Responsible Investment, the UN Principles for Management Education, the Global Reporting Initiative, SA8000, AA1000 Series, and ISO26000. The purpose of this paper is to provide a modeling analytic framework for understanding how companies actively contribute to the governance of global economy with the integration of a network of global initiatives within the field of CSR. The framework is built upon a dynamic network of a set of soft-regulatory initiatives on CSR which are collaborating to design a common reporting framework of corporate accountability and working to build a common framework of key performance indicators and a sharing set of values and principles.

*Laura Albareda - Deusto Business School, Bilbao, Spain*

### **Implementing a corporate sustainability program in the architectural coating industry**

With the multiplication and acceleration of stakeholders' requests for social and environmental responsibility, decorative paint companies are particularly under the spotlight, having a wide range of markets and customers: DIY consumers following distribution trends, architects looking for green building credits, painters and their end users seeking innovative green products. Moreover decorative paint companies are by essence at the junction of the Chemical and Construction Industries which have their own different drivers for sustainability. Therefore it is vital for the decorative coating industry to have a sustainability roadmap built on a state of the art assessment method. PPG will first present how market trends were analyzed in order to define the business objectives of this program and the sustainability KPI's for the short and longer term. Then we will present some of the key aspects related to the implementation of the program; in particular issues associated with the evaluation and measurement of product sustainability. We will introduce how it uses Life Cycle Assessment for understanding its products footprint and identifying improvements. In order to make LCA results understandable by its customers, PPG proposes to use a Product Sustainability Scorecard that is linked to LCA. It would enable customers to compare products on environmental impact, and performance and let them select the most sustainable solutions.

*Thierry Destruhaut - PPG Architectural Coatings*

## **Special Stream: IMPACT Session**

**Wednesday 4 July 11:45 – 13:00 (M 121)**

### **IMPACT and its implications**

*Nigel Roome*