1st Organizations and the Natural Environment (ONE),

2nd Social Issues in Management, 3rd Technology and Innovation Management

Title: Innovating for Sustainability: The State of the Art and Beyond

Organisers: Mario Pansera, Oliver Laasch, Stefan Schaltegger, Steve Kennedy, Sally Randles.

Abstract:

The global challenges set by climate change and ecosystems degradation require new forms of framing socio-economic development. The achievement of sustainable development implies new forms of sustainability-driven innovation (SDI) able to deliver new products, organizations and business models\(^1\) with better environmental characteristics. The aim of this PDW is to advance the debate about the future directions and methodological complexity that the study of SDI presents. The starting point for this discussion is the ground-breaking research and training activity conducted by the project ‘Innovation for Sustainability (I4S)’ funded by the European Commission’s Marie Skłodowska-Curie scheme. For this purpose, in the first section of the workshop the organisers will introduce the audience to the social, technical and economic challenges that the study and deployment of SDIs present. This introduction is presented in the form of ‘Topic Teaser Presentations’ organised in three topic areas: (1) State of the Art and future challenges for SDI, (2) Sustainable Business Models of the future, and (3) normative orientations, leadership, and SDI. In the second part of the PDW, one selected paper for each topic areas is presented and discussed with the participants in three parallel

roundtables. Finally, insights from the table discussions will be collected and made available through the ONE division and other channels.

**Workshop Introduction**

In 1992 the Brundtland report and Agenda 21 anticipated grave environmental and social problems unless contemporary models of development were modified. In essence they called for a ‘new development order’ that would integrate environmental and social considerations into the public policies and business practices that shape development. In the 1990s some exceptional businesses understood sustainable development as a basis for innovation and change and began to develop this practice. For some businesses this led to the development of new products, new business models and changes in technologies and technical processes with better environmental characteristics. Prospective or forward-looking studies suggested that the focus for innovation arising from sustainable development would increasingly include the redesign of production-consumption systems or socio-ecological systems such as nutrition, energy, transport and household services. It was noted that this would require new skills and competences and a new orientation to innovation. It also became clear that innovation for sustainable development – or simply Sustainability-Driven Innovation (SDI) - was more complex than normal business innovation. Complexity arises because the networks which

---


6 ETAN (2001), op. cit. Supra.


provide firms the basis for new knowledge and innovation\textsuperscript{9} are more extended with SDI, spanning the boundary of the firm\textsuperscript{10} and engaging a wider variety of actors.

As a consequence, SDI is seen as a supra-disciplinary field that requires research that goes beyond the limits of classical approaches to the study, management and regulation of innovation. SDI is supra-disciplinary because it is based on an integrated approach to environmental, economic and social performance, it spans producers, consumers and other social interests, and it connects business and social innovation. It requires training in science together with a clear insight of the exigencies of practice. Regrettably examples of firms promoting SDI of the kind identified above are quite rare. The mainstream approach by business to environmental concerns during the period to the mid-2000s was more incremental and revolved around the adoption of voluntary standards and the introduction of management systems. Companies sought opportunities to generate economic and environmental gains by searching for win-win solutions within existing production systems and product structures through miniaturization or material substitution. In summary, experience to date tells us that SDI requires different managerial competences and organisational capabilities from traditional business innovation. It involves new inter-organisational structures based on firms and other actors in society. These can arise from multi-actor platforms and networks linking business and other actors or through ‘blended innovation’ combining social and business innovation. Above all, SDI requires new processes and practices for collaboration that begin with visions of the future or that draw inspiration from natural rather than mechanical systems.


Aims and relevance of the PDW

The aim of this PDW is twofold. First, the PDW aspires to open up a debate about the relevance and methodological complexity that present the study of SDI for academics and practitioners. For this purpose, by referring to the learning process experienced during the I4S development, in the first section of the workshop the seniors scholars involved in the project will introduce the audience to the social, technical and economic challenges that the study and deployment of SDIs require. Those interventions will be focused on three topic areas: (1) State of the Art and future challenges for SDI, (2) Business Models Innovation for a future compatible with Sustainable development, and (3) Normative orientations ad values-centred leadership of SDI. These three topic areas will be also the base for three parallel roundtable discussions. The roundtables are designed to achieve two objectives. First to provide support for ‘paper development’ to early stage researchers in the field of ‘corporate sustainability management’. For this purpose a Call for Papers will be published and disseminated two months before the AOM annual meeting to select one paper for each topic area. The papers will be shortly introduced at the beginning of the roundtable discussions and commented by the chairs. The second objective of the roundtable is to offer to the rest of the audience insights as regards their personal research development (e.g. suggesting new research agendas, scientific publications guidance, new methodological approach etc.). This activity aims at providing early stage researcher in the field of sustainable business with a clear and complete understanding of the state of the art and the future challenges of SDI.

Second, we aim at disseminating the knowledge produced by the Innovative Training Network (ITN) ‘Innovation for Sustainability (I4S)’ funded by the European Commission. I4S is a research initiative that provides training and funding for 8 early-stage researchers and 2 experienced researchers to investigate sustainability-driven innovation in business. The network is guided by leading scholars in the field of sustainable business. The project is
coordinated by the Academy of Business in Society (ABIS) based in Brussels; a global network of over 100 companies and academic institutions whose expertise, commitment and resources are leveraged to invest in a more sustainable future for business in society. For its own nature of ‘institutional bridge’, ABIS has grounded the I4S network in collaboration and partnership between academia and industry. Eight academic institutions and eight associated business partners, are engaged in this collaborative project (2013-2016) which has received a grant of Euros 2.5 million from the European Commission’s Marie Skłodowksa-Curie ITN funding scheme.

**Topic Areas**

The PDW is organised to cover three topic areas: (1) State of the Art and future challenges for SDI\[11\], (2) Business Models Innovation for a future compatible with Sustainable development\[12\], paying attention to the ‘perfect storm’ where climate change environmental resource depletion and social ‘wicked problems’ converge, and (3) normative orientations and leadership of SDI\[13\]. These topics will be introduced by senior scholars from the I4S consortium in the form of Teaser Presentations (5 min each). After those short introductions, participants can chose to

---


engage in round tables focusing on the three topic areas. In each roundtable the discussion will be ignited by a short paper presentation (5min). It follows a short description of the topic areas:

1) **State of the Art and future challenges for SDI**

What do we know about SDI development? What we don’t know? What should we know and what should we look for? By answering those question, in this session Steve Kennedy and Jason Jay will draw upon empirical research and the latest academic literature to provide an overview of the key theoretical and practice challenges faced by innovation teams engaging in SDI and give consideration to the factors that may facilitate successful innovation outcomes.

2) **Business Models Innovation for a future compatible with Sustainable development**

Unsustainable consumption is at the heart of some of our main sustainability issues. Is it possible for companies to do business while curbing unsustainable consumption patterns? Sufficiency-driven business models aim to moderate overall resource consumption by mitigating demand through education and consumer engagement, making products that last longer and avoiding built-in obsolescence, focusing on satisfying ‘needs’ rather than pushing ‘wants’, pursuing conscious sales and marketing techniques and exploring new revenue models and innovative technology solutions. Nancy Boeken will draw on literature and cases to stimulate the debate on whether it is possible for companies to be profitable and pursue slow consumption as part of their business models. The second teaser by Richard Adams will introduce the audience to new frontiers of sustainable business model based on digital technology. Through the lens of business model innovation, Richard will explore how the affordances of digital technologies, in particular big data, the internet of things and the blockchain, might be utilised to scale up to a systems level solutions to sustainability challenges.
3) Normative orientations and values-centred leadership of SDI

This sub-theme will explore the values and capabilities needed from future leaders participating in transitions to Sustainable Development and the advancement of Sustainable Development Innovation. By normative orientations we go beyond individual values to how these become collectively shared and institutionalised within single and multi-organisation complexes. We posit a central role for social-purpose motivated institutional entrepreneurs in disrupting and re-casting incumbent regimes through processes of de-institutionalisation. We also posit a central role of governance processes, instruments and incentives, in the dynamic transformation of the agencement of actors. In the session, Sally Randles and Oliver Laash will open to critical reflection a discussion to identify the skills and competences needed by future leaders of such transitions. They will highlight the coming together of on the one hand individuals motivated to serve social purpose beyond individual gain; with on the other hand concrete capabilities such as systems thinking, ambidexterity, entrepreneurialism, and reflexive experiential being-in-management. Furthermore, generating a pen-portrait of the values and capabilities of future leaders of SDI has implications for pedagogy and management training, if our business schools and HE Institutions are to play a central role in the formation of leaders of the futures with the skills-sets and capabilities we identify.

Relevance for ONE division

The study and promotion of SDI is highly relevant for the ONE. The division’s mission is grounded in the intersection of human organizations and societies with natural environment. Pollution and ecosystems degradation are directly connected to human organizations impact

---

16 On the point of pedagogy and teaching and learning, we cross-reference the complementary submission we have made to the TLC entitled ‘Teaching, Learning, and Researching for Actionable Results: Reversing the Devolution of Researcher Care’
and are the most obvious manifestations of the interactions and relationships between human societies and the environment. In this sense, the discussion about SDI is absolutely crucial to reframe the co-existence of human organizations with the natural environment. Moreover, for its intrinsic complexity, the development of SDI and sustainable business models requires a plural and multidisciplinary approach that includes a wide diversity of theoretical perspectives from different management fields but also from other disciplines e.g. engineering, politics, philosophy, economics, chemistry, physics etc. This interdisciplinary and pluralistic approach is also shared by the ONE division. For this reasons, we think that this PDW would provide a lasting contribution to the division.

**Workshop Format**

The workshop consists of three parts. First, seniors scholars involved in the ITN I4S will introduce different perspectives – i.e. economic, environmental and social – of SDI referring back to the learning process that occurred within the network. The ‘teaser presentations’ will be on the three topic areas: (1) State of the Art and future challenges for SDI, (2) Business Models Innovation for sustainable development, and (3) Normative orientations and leadership of SDI. Second, participants will self-select roundtable discussions, each focused on a different topic, and chaired by one organiser. The goal of this part is to discuss the papers selected for each topic areas. Third, a brief plenary discussion will serve to summarize the outcomes to be communicated through ONE media.

---

**Introduction:**

*Sustainability driven innovation (SDI)*

(10 minutes)

*Stefan Schaltegger,*

Professor
<table>
<thead>
<tr>
<th>State of the Art and future challenges for SDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenges and Facilitators of SDI</td>
</tr>
<tr>
<td>(5 minutes)</td>
</tr>
<tr>
<td>Steve Kennedy</td>
</tr>
<tr>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Rotterdam School of Management, Netherlands</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Models Innovation for a future compatible with Sustainable development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can business models be compatible with and drive sustainable consumption?</td>
</tr>
<tr>
<td>(5 minutes)</td>
</tr>
<tr>
<td>Nancy Bocken</td>
</tr>
<tr>
<td>Associate Professor</td>
</tr>
<tr>
<td>TU Delft, Netherlands</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Normative orientations and leadership of SDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normative orientations ad values-centred leadership of SDI</td>
</tr>
<tr>
<td>(5 minutes)</td>
</tr>
<tr>
<td>Sally Randles</td>
</tr>
<tr>
<td>Senior Research Fellow</td>
</tr>
<tr>
<td>University of Manchester, UK</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Three Roundtable Discussions (20 minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderated by: Mario Pansera, Oliver Laasch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plenary discussion of key outcomes (20 mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitated by: Stefan Schaltegger / Mario Pansera</td>
</tr>
</tbody>
</table>

Logistical Notes

- The call for papers will be published and disseminated 2 month before the AOM2016.
Presenter Biographies

**Stefan Schaltegger**, PhD, is full professor for Management and head of the Centre for Sustainability Management (CSM), head of the MBA Sustainability Management at Leuphana University Lüneburg, Germany, and chairman of the Environmental and Sustainability Management Accounting Network (EMAN). His research area includes corporate sustainability management and sustainable entrepreneurship and innovation.

**Sally Randles** is a Senior Research Fellow at the Manchester Institute of Innovation Research (MIOIR) at the Alliance Manchester Business School UK, where she leads the theme on Emerging Technologies: Dynamics, Governance and Responsible Innovation and is an Associate Fellow at the Centre for Organisations Research and Design (CORD) at Arizona State University, USA. Her current research lies in understanding how actors understand and embed understandings of ‘responsibility’ in research and innovation situations, contexts, organisations and governance processes.

**Steve Kennedy** is an Assistant Professor researching corporate sustainability, climate change and sustainability-oriented innovation within the Centre of Corporate Eco-Transformation at Rotterdam School of Management, Erasmus University. Dr Kennedy’s current research focuses on how corporate sustainability strategies are translated into successful innovation and the formation of future-ready sustainable business models. Dr Kennedy combines his research role with teaching sustainability-related courses at MBA, MSc and BSc levels and is the Academic Director of MSc Global Business & Sustainability.

**Jason Jay** is a Senior Lecturer at the MIT Sloan School of Management and Director of the Sustainability Initiative at MIT Sloan. He teaches courses on leadership, strategy, and innovation for sustainable business. Jay holds an AB in psychology and a Master's in education from Harvard University, and a PhD in Organization Studies from the MIT Sloan School of
Management. Jason is an active leader of sustainability efforts across MIT. Through the MIT Sustainable Societies Research Group, he brings together scholars from across the Institute to examine the invention, implementation, and transformation required for a sustainable society.

Nancy Bocken is associate professor at Delft University of Technology, Senior research associate at the University of Cambridge, Fellow at the Cambridge Institute for Sustainability Leadership (CISL), and advisor to a number of organisations on sustainable business models. She was awarded the prestigious Delft Technology Fellowship to pursue her research agenda in the area of sustainable business models and sustainable business experimentation. Nancy Bocken is an expert in sustainable business models, closed loop economy and eco-innovation. She holds a PhD from the University of Cambridge (Engineering) in the area of radical eco-innovation which was funded by Unilever. In the past, she worked for DHL, Accenture and ING.

Oliver Laasch is a Marie Curie Researcher at the Manchester Institute of Innovation Research. Before, he was lecturer and researcher at Seoul National University as well as Steinbeis University in Berlin, and director of the Center for Sustainability and Responsibility (CRSE) at the Tecnológico de Monterrey. His research is centred on business model innovation for corporate sustainability and responsibility and on responsible management education. Oliver is founder of the Center for Responsible Management Education and editor of the United Nations PRME book collection.

Richard Adams holds Senior Research Fellow appointments at University of Surrey and University of the West of England and is an occasional lecturer on sustainability and innovation at the University of Worcester. His research interests coalesce at the intersection of sustainability, innovation, digital economy and business models.
Mario Pansera is a Marie Sklodowska-Curie postdoctoral Research Fellow at the Academy of Business in Society-Global (ABIS-Global) based in Brussels. He gained a PhD in Management at the University of Exeter Business School, UK. A graduate of University Federico II of Naples in Electronic and Telecommunication engineering, he earned a Master’s degree in Economics and Management of Innovation at the Polytechnic University of Madrid in collaboration with Autonomous University of Madrid and Complutense University in 2009. His primary research interest is sustainable and ecological transition and the critique of the Development Discourse and Growth.