

Blekinge Institute of Technology
Blekinge Institute of Technology Doctoral Dissertation Series No. 2017:01
ISSN 1653-2090
ISBN 978-91-7295-334-5

BUSINESS MODEL DESIGN FOR STRATEGIC SUSTAINABLE DEVELOPMENT

César Levy França

Akademisk avhandling
som för avläggande av Teknologie doktorsexamen vid Blekinge Tekniska
Högskola kommer att offentligen försvaras i J1650, Campus Gräsvik,
Blekinge Institute of Technology, Karlskrona, Sweden, 2017-01-27 , kl. 09.15

Handledare:
Professor Göran Broman, Institutionen
för strategisk hållbar utveckling

Professor Karl-Henrik Robèrt,
Institutionen för strategisk hållbar
utveckling

Professor Louise Trygg, Linköpings
universitet

Opponent:
Docent Cecilia Mark-Herbert, Sveriges
lantbruksuniversitet



Blekinge Tekniska Högskola
Institutionen för strategisk hållbar utveckling
Karlskrona

Abstract

Humanity confronts an existential threat without historic precedent. Environmental pressures have reached such intensity and pace of change that the earth system may be irreversibly tipped into a new and unpredictable state. The emerging global reality is, in turn, redefining overall conditions for business success. Addressing these challenges both demands and brings great opportunities for innovation. An important and sometimes neglected aspect of innovation is the design or redesign of business models, which has been identified as a greater source of lasting competitive advantage than new products and services per se. The business model has also been suggested as a new unit of analysis when discussing sustainability. However, this is still a relatively underexplored area. The aim of this work was therefore to develop an approach to business model design that supports strategic sustainable development, i.e., supports organizations to contribute to society's transition towards sustainability in a way that strengthens the organization.

To be able to design a business model that supports strategic sustainable development, it is necessary to know what sustainability is and how to develop sustainability-promoting, economically viable strategies. Therefore, the Framework for Strategic Sustainable Development, which includes, e.g., an operational definition of sustainability and strategic guidelines for how to approach it, was used as an overarching framework. Specific research methods and techniques included, e.g., literature reviews, questionnaires, interviews, work with focus groups, participatory action research with partner organizations, creative problem solving techniques, modeling, and simulation.

The literature reviews revealed potential sustainability benefits of developing business models in conjunction with product-service systems (PSS). However, a knowledge gap exists regarding how to effectively connect these fields. Arguably, PSS strategies can best contribute to sustainability when business models support their implementation and when both the business models and the PSS strategies are guided by an understanding of strategic sustainable development. Therefore, an integrated approach to Business Model Design for Strategic Sustainable Development was co-developed and tested in PSS innovation work with partners, e.g., companies within the energy and lighting sectors. The tests indicated that the new approach helped to clarify strengths and weaknesses of current business models from a strategic sustainability perspective; to transform an organization's vision and strategy into a sustainability-framed vision and a sustainability-promoting strategy; and to communicate the new vision and strategy to the value network as a basis for engaging important stakeholders in the change. For example, the approach supported one of the partner companies in its transformation towards providing sustainable PSS solutions in the form of light as a service.

Examples of business benefits of the new approach include improved scalability and risk avoidance, which provide a foundation for better investment strategies. Benefits also include improved differentiability and a broadened view on, and a more solid foundation for, collaboration with stakeholders that are increasingly important to sustainable business success.

Keywords: Business Model Innovation and Design, Strategic Sustainable Development, Sustainability, Sustainable Development, Sustainable Product-Service Systems, Value Network.