

# 4

## Eco-Innovation: Lean Startup approach to Sustainable Business Model Innovation

*Alberto Peralta, Jorge Castellote and  
Mohamed Salama*

### Learning outcomes

By completing this chapter, the reader should be able to:

- Understand the concept of eco-innovation in the context of business models
- Understand the building blocks of the Lean Startup (LS) methodology
- Compare and contrast Lean Startup and the corporation models
- Explain how to apply Lean Startup (LS) to create sustainable business models

### Introduction

Business model innovation (BMI) has emerged as a key root cause of competitive advantage. This is vital for organizations seeking to achieve the set strategic objectives through projects, particularly New Product Development (NPD) projects. However, there is limited attention among scholars and practitioners about sustainable BMI and its methods. Eco-innovation efforts (including the environmental, social and economic dimensions of innovation) concentrate on triple bottom line goals, but to date there seems to be a deficit of academic and practitioner literature on the effect of this type of innovation on new business models.

Scholars has been trying to address this gap, mostly focused on eco-innovation from a product-centric perspective where the product is the cornerstone of the new sustainable business models. And this is how conventional sustainable business model innovation is being developed.

Lean Startup is a novel approach towards business model innovation. This chapter aims to show how its concepts and tools are deeply rooted in sustainable

concepts and how eco-innovation, under this new approach, is developed a step further, considering not only the product but the whole business model as the unit subject to eco-innovation.

## Eco-innovation and business modeling

Eco-innovation is being addressed extensively, acknowledging stakeholder engagement, long-term sustainability (based on the triple bottom line) and the impact of public and private governance on how corporations are integrating it in their strategies (most of them from a supply-side, He et al., 2017). A very few reviews on eco-innovation have considered the relationship with new business model development as worth mentioning. Most eco-innovation studies connect their constructs with the development of goods, services, processes and even organizations to improve corporate competitiveness, but disconnect eco-innovation from the ways organizations create, deliver and capture value, and prevent leaving value uncaptured (Yang et al., 2017). Moreover, other authors (Evans, Bocken, Geissdoerfer) who connected sustainable innovation and business models focused on theorizing and integrating eco-innovated products, services and processes with working business models (BMs) to achieve a healthy triple bottom line. To date, there is a clear gap in the literature if we consider eco-innovation of business models as driven by value holders' needs and interests, not by products or extended value proposals.

## Lean Startup and eco-innovation

This chapter aims to answer the following question:

*How can Lean Startup (LS) serve as a process to create sustainable business models?*

It may be the first effort to present LS as a novel sustainable BMI methodology that effectively integrates sustainable goals and eco-innovation since the inception of any new business model (BM). This is of importance, since conventional BMI methodologies address sustainability at late stages and always from a product perspective, which may cause high rates of failures.

LS as a BMI is method that places the customer and the rest of the value holders front and central, and sets a process for testing BM assumptions about every element of the new business model (Blank and Dorf, 2012; Boschet et al., 2013; Dennehy et al., 2016). Consequently, the value proposal is treated as just one piece of a new business model among others waiting to be discovered, tested and falsified.

The next sections will help understand the basics of sustainable BMI.

## Sustainability perspectives on business modeling

In their seminal paper on Sustainable Business Models, Stubbs and Cocklin (2008) acknowledge that sustainability was itself a contested concept. It still is. They rightly cited the World Commission on Environment and Development (WCED) report, which referred to environmental, social, and economic aspects of sustain-

able development, as an effort to agree on a common definition of the concept. But its implementation has resulted on its two most common, and different, perspectives:

- 1 The neoclassical economic worldview sees sustainability as a secondary, instrumental, concept to be pursued only if it maximizes shareholder's value, advocates for the company's self-interest, or is imposed by legislation or pressure from stakeholders (namely, customers) to retain credibility/legitimacy. This neoclassical understanding fosters a production cycle that reflects a "linear take-make-waste approach", which could in turn favor a linear way of innovating organizations and their business models.
- 2 The ecological modernization (EM) perspective sees sustainability as an alternative to achieve economic growth through environmental innovation and use of new technologies. BMs developed under EM are ecology-inspired and environment-induced. They have transformed their core practices to be profitable, improving the welfare of stakeholders and minimizing the environmental impact. BMs developed under this perspective would then take into consideration the interests of all stakeholders, including the future ones. They, for example, compensate harmful activities, usually by considering closed-loop processing and 'cooperative' approaches. Under this perspective, BMs not only, or preferably, act for shareholders' interests. In this paper we adopt this latter perspective.

## Eco-innovation of business models: a review of the conventional product development process

Sustainable business models (SBM) are relatively new in the academic literature. Citing Stubbs and Cocklin (2008), Geissdoerfer et al. (2016) trace back the first reference of SBMs to 2008. According to these latter authors, SBMs are a simplified visual representation of the elements forming a business model (BM), the interrelation of these elements, and the interactions of those elements (or thanks to those elements) with its stakeholders as they together produce the flow of value among them. That visualization then helps understand how the BM produces, delivers and captures value (Osterwalder, 2010) for its success, measured through impact and growth rates.

### What is a business model?

The term business model (BM) has been present in scientific discussions for over fifty years now. Several differing perspectives have emerged. Osterwalder and Pigneur (2010) describe a BM as the ways an enterprise creates and delivers value to customers and others, and captures value and "converts this into profit". They describe nine elements of a BM: customer segments, customer relationships, channels, revenue streams, value proposition, key resources, key activities, cost structure and partnerships. In this paper we adopt this perspective of BMs.