Social–Ecological Innovation

Rick Edgeman
Aarhus University, Denmark

Jacob Eskildsen
Aarhus University, Denmark

INTRODUCTION

Social-Ecological Innovation (SEI) results from strategic integration of sustainable innovation and innovation for sustainability (Edgeman & Eskildsen 2012a). *Sustainable Innovation* results when innovation contributes to the financial security of the organization; is regular, systematic, and systemic to its endeavors, and is thus embedded in enterprise culture. *Innovation for Sustainability* addresses ecological or societal considerations so that it is generally a subset of the enterprise innovation portfolio.

SEI is critical to organizations intent on the asymptotic goal of becoming a *continuously relevant and responsible organization* (CR2O) through transformation of the 3E (equity, ecology, economy) strategy of the Triple Top Line (McDonough & Braungart, 2002a) into 3P (people, planet, profit) results associated with the Triple Bottom Line (Elkington, 1997). This is congruent with the cradle-to-cradle philosophy of product and service design, delivery, and lifecycle (McDonough & Braungart, 2002b) and with the status of sustainability as a key driver of innovation (Nidumolu, Prahalad, & Rangaswami, 2009).

From a SEI perspective, innovation is relevant to the organization, society, and the natural environment. Similarly, the organization is both relevant and responsibility with respect to society and the natural environment. Positive correlation of SEI with enterprise value (Al-Najjar & Anfimiadou 2012), affirms the profitability of SEI. More pervasively, SEI extending throughout an enterprise ecosystem contributes to *socio-ecological resilience* (Olsson & Galaz, 2011)

with large-scale deployment possible through a modified form of quality function deployment (Edgeman & Hensler, 2005).

While SEI is defined, it must also be proliferated and assessed and any serious assessment requires not only an understanding of what SEI is, but also of how and in what forms it manifests, how developed or mature it is, and how to improve future SEI strategy and results. SEI is herein elaborated, maturity scale assessment for SEI is described, and a simple assessment report that combines graphic and narrative feedback is presented. The assessment report is referred to as a *SEI News Report* and provides feedback to the organization concerning its present SEI performance, while also delivering significant foresight that will inform future SEI efforts, advance *Sustainable Enterprise Excellence* (SEE) performance, and aid progress toward becoming a CR2O. As such, the enabling role of SEI in SEE is also briefly addressed.

BACKGROUND

Enterprises face mounting challenges in three primary sustainability areas that from a strategy perspective represent the 3E triple top line elements of equity, ecology and economy and from a results perspective are associated with the 3P triple bottom line elements of people, planet, and profit. Using more familiar business vocabulary, the equity-people, ecology-planet, and economy-profit synapses represent societal sustainability, environmental sustainability, and financial sustainability. Business reality typically dictates the

primacy of financial sustainability since an enterprise that is economically unstable will ordinarily poorly contribute to society and will be unable to perform in environmentally responsible ways.

Despite the primacy of the financial sustainability domain, regulatory compliance, societal concerns, consumer demands, and stakeholder expectations have stimulated enterprise urgency to produce sustainable results not only with respect to financial performance, but also societal contributions and impacts on the natural environment. Thus far however, rapidly increasing societal and environmental challenges have outpaced organizational capacity to successfully address such challenges. Such capacity is composed of many factors, including enterprise intelligence concerning the challenges themselves, and the ability to embed innovation of the needed scope, scale, trajectory, and velocity in enterprise strategy, policy, and practice. SEI is associated with this latter organizational capacity factor and is consistent with the innovation lens of the balanced scorecard (Kaplan & Norton, 1992).

While SEI if focal to the present discussion, it is perhaps of greatest value as a critical enabler of SEE, where SEE is defined as:

SEE is a consequence of balancing both the competing and complementary interests of key stakeholder segments, including society and the natural environment, to increase the likelihood of superior and sustainable competitive positioning and hence long-term enterprise success. This is accomplished through an integrated approach to organizational design and function emphasising innovation, operational, customer-related, human capital, financial, marketplace, societal, and environmental performance.

Examination of this definition of SEE reveals its strategic integration of sustainability and enterprise excellence as a means of delivering responsible competitiveness (Avlonas & Swan-nick, 2009), with SEI serving as a principal integrating factor.

Savvy use of enterprise excellence systems has been documented to significantly boost enterprise financial performance, human capital performance, operations and supply chain performance, and other domains, along with increased firm value (Balasubramanian, Mathur, & Thakur 2005). Historically, such systems have inadequately addressed sustainability's equity-society and ecology-planet dimensions so that any improvement in organizational performance with respect to these dimensions cannot be directly attributed to enterprise excellence system use. Similarly, there is no compelling evidence that systems focused on the equity-society and ecology-planet dimensions deliver improved economy-profit performance. These considerations motivated development of SEE models and systems.

EMBEDDING SOCIAL-ECOLOGICAL INNOVATION STRATEGY AND PERFORMANCE

Sustainable innovation implies that innovation is systemic to enterprise culture and is rigorously and systematically pursued. Innovation for sustainability devotes a critical mass of enterprise innovation resources to the ecology and equity components of 3E with concomitant results relative to the planet and people constituents of 3P.

SEI may be approached on both tactical and strategic levels, 20 of which are suggested herein. These are divided equally into basic and advanced areas referred to as the 10R and 10A areas and are described in Table 1 and Table 2, respectively. From a scientific perspective, social-ecological innovation integrates social innovation and institutional entrepreneurship research with research on social-ecological systems and resilience thinking. Olsson and Galaz (2011) suggest that SEI should target the following:

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