PROFESSIONALS FOR SUSTAINABLE BUSINESS IMPLEMENTATION

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Abstract
Sustainable business models (SBMs) are designed to create business value and benefit both the natural environment and society. Sustainable business models cannot be implemented without competent experts. A sustainability professional is expected to have a certain skill set and knowledge in the sustainability field as well as need to acquire a wide range of adequate competencies. In the paper the perspectives for creation of sustainable business models for sustainability by different sustainability professional are presented. Special attention was paid to T-type specialists, their skills and education for the needs of modern sustainable business.

Keywords
Sustainability, sustainable business model, sustainability professionals, T-shaped professionals,

JEL Classification
Q01, O10, O20,

Introduction

A new term, sustainable business model, has emerged in recent years. Heretofore, the notion was used to signal the need to move beyond innovative products and services and alter the way a company generates its revenues. Sustainable business models are designed to create business value and benefit both the natural environment and society. Sustainable business models have been featured in a host of publications [Piscicelli, Ludden, and Coper, 2018; Evans et al., 2017; Schaltegger, Hansen, and Lüdeke-Freund, 2016; Boons and Lüdeke-Freund, 2013; Bent, 2011].
What is the sustainable business model? According to Bent [Bent, 2011], such a model must be:

- **Commercially successful** – i.e. generate value for customers and profits for product and service providers; environmentally-minded entrepreneurs strive to meet environmental challenges while creating economic value [Schaltegger and Wagner, 2011];
- **Future-ready** – designed for success in a world of rising and volatile prices of energy and raw materials;
- **Be a part of a sustainable society** – no business can achieve sustainability in a non-sustainable economy. Every business model relies on specific external conditions; to be called sustainable, undertakings need a thriving economy, which

ensures social progress within environmental limits. A sustainable business model should ensure that no environmental damage results from economic growth.

Perspectives for creation of sustainable business models for sustainability were recently presented by Evans [Evans et al., 2017]. Researchers from a range of disciplines (economic sociology, innovation, history, engineering) have attempted to explain innovation for sustainable business models from various perspectives. Existing studies can be stratified into organizational, inter-organizational and societal [Boons and Lüdeke-Freund, 2013]. Economics is not the only possible approach to Sustainable Business Models for Sustainability. Promising prospects are additionally offered by psychology, sociology and environmental science [Den Ouden, 2012].
Sustainable business models cannot be implemented without competent experts. Weinreb **[**Weinreb, 2016**]** argues that **"**We'll need facilitators, researchers, writers, academia, communicators, project managers, program managers, fundraising experts, campaigners, policymakers, lobbyists, scientists, social media experts and a whole host of other skills to implement sustainable business model*."*

1. Sustainability Professionals

A new term of "*sustainability professionals"* has been coined. This profession is still to be clearly defined. The role is frequently performed by CSR and other experts.
The International Society of Sustainability Professionals [ISSP, 2012] has defined the scope of knowledge expected of sustainability professionals. Sustainability practitioners are defined as professionals acting for sustainable development in organizations and communities. Some of their most common job titles are Sustainability Director, Sustainability Manager, Sustainability Coordinator, External Sustainability Consultant. Also defined are the key expectations put to the holders of such positions, their core job descriptions as well as the requirements applicable to such experts, including the knowledge, skills and attributes they need to possess to ensure that a *sustainable business model* is successfully implemented.
A sustainability professional is expected to have a certain skill set and knowledge in the sustainability field. Such competencies can be acquired by completing a variety of courses offered by universities and other institutions.
One of the many challenges faced by sustainability experts is how to enable businesses to justify sustainability programs and learn to implement Sustainable Business Models (SBMs). The difficulty lies in the fact that sustainability professionals use specific language to present sustainability goals. They refer to the bigger picture of sustainability that includes climate change and the loss of biodiversity to convince people to reduce carbon emissions or espouse the virtues of achieving the United Nations Sustainable Development Goals [UNITED NATIONS, 2015]. However, sustainable business professionals around the world must basically act as interpreters that translate the difficult sustainability jargon into a language that anyone within the business world will readily comprehend.
To that end, sustainability professionals need to acquire a wide range of adequate competencies. Such competencies are rare as today's labor markets are awash with I-shaped experts with very narrow skills designed for work in specific fields.

2. T-shaped Professionals

A study by Econsultancy [Perkin, 2011] has found that organizations indicate a greater demand for T-shaped employees and experts. The key to resolving the problem lies in higher education. Many university students graduate without fundamental knowledge of how economies and business ventures operate. The majority of universities focus on providing a narrow education in a single field. This makes it difficult to find the right

experts (talent) who will satisfy today's customers. The demand for marketing experts with a solid background in technology is ever higher. In the recruiting community, such people are referred to as T-shaped experts.

According to Wikipedia [Wikipedia, (2017).], the concept of T-shaped skills, or T-shaped persons is a metaphor used in job recruitment to describe the abilities of persons in the workforce. The vertical bar on the T represents the depth of related skills and expertise in a single field, whereas the horizontal bar is the ability to collaborate across disciplines with experts in other areas and to apply knowledge in areas of expertise other than one's own.

T-shaped professionals have two kinds of skills, hence the use of the letter T to describe them. The vertical bar on the T represents the scope of abilities that allow them to engage in creative processes. These can be skills from various fields such as architecture, design, business, social sciences and or mechanical engineering.

The horizontal bar on the letter T stands for predispositions to collaborate across disciplines. These encompass two areas, one of which is empathy. Empathy is essential as it allows people to present a problem from a fresh perspective and view an issue through another person's eyes. The other predisposition is for enthusiasm about other people's approach to specific fields of science taken to the point where the concerned professionals can pursue such fields themselves. The knowledge of T-shaped experts needs to be both broad and profound.

The same kind of approach applies to life science experts and even medical doctors. A narrow specialization in biomedical sciences (life sciences) is a problem as bioengineers and molecular biologists with expert knowledge on gene expression manipulation and DNA transcription have a very poor understanding of how cells and entire bodies work. On the other hand, medical students during their studies rarely deal with science, which is not part of their curriculum. Specialist doctors hardly look beyond selected patient issues. For instance, cardiologists focus on the heart and the circulatory system while surgeons perform surgeries. These high-class specialists frequently lack a broader view of the patient and more general life-science knowledge. There is a need to better understand how humans function in physiological and pathological terms and to provide medical students with a knowledge that spans multiple fields. The bioengineers who study interdisciplinary subjects, also in medical schools, need to learn about the functioning of humans in normal physiological and in pathological conditions to better grasp the broader context and implications of their work.

3. T-shaped skills

The notion of T-shaped experts was first used by McKinsey & Company to describe their desired recruits. It was then popularized by Tim Brown, the CEO of the innovative design company IDEO [Brown, 2009].

To offer education in specified fields is primarily the role of today's universities. However, to broaden the range of skills of their graduates, universities should provide them with opportunities to obtain interdisciplinary competencies that reflect the demand of present-day labor markets. Such qualifications would equip graduates with the knowledge of the concepts and vocabulary that would enable them to discuss the design and improvement of service quality with members of other disciplines. Industry calls such people T-shaped experts, referring to their ability not only to develop profound solutions to problems within their basic disciplines but also to cooperate with experts from a wide range of other disciplines and functional areas.

The resources used to develop a knowledge-based economy provide a good starting point for educating T-shaped experts. Such resources fall into the four areas of:

1. The fundamentals of organization and management; taught mainly at management schools (marketing, operations management, operational research, management science, supply chain management, innovation management);
2. Technology: taught mainly at technical universities (industrial engineering, IT, statistical process control);
3. Human resources: taught mainly at universities of economics and humanities (economics, cognitive science, political sciences, design, art);
4. Information flow / IT: taught mainly at IT universities (communications, IT systems management, process modeling, simulations).

T-shaped experts derive their knowledge from programs of studies covering either all or some of the four areas referred to above. The relevant list is made up of 35 majors [Ing, 2008].

In recent years, the idea of educating T-shaped experts has been growing world-wide due to changes in business culture and the adaptation of businesses to change. In China, a mini labor market revolution is expected soon as more T-shaped experts are sought. Despite 25% unemployment in Spain, the country's advertising industry is currently struck by a shortage of adequately qualified (T-shaped) people to fill its vacancies [Garcia-Hierro, 2012].

Widely recognized academic programs of studies have been established to help supply a large number of T-shaped collaboration-skilled experts with a view to furthering innovation. T-shaped competencies mean that the graduates of such programs are skilled in communicating with scientists, engineers, managers, designers and many other specializations in the corporate environment. Graduates with T-shaped competencies will be well prepared to "land softly", achieve a high level of efficiency as soon as they are employed and contribute significantly to innovative projects following their assignment.

One of the reasons why so many graduates of the Stanford d.school (the Hasso Plattner Institute of Design) find lucrative positions is that they are educated to become T-shaped experts [Korn and Silverman, 2012; Tischler, 2010]. The Stanford d.school currently recruits 700 students a year.

The Stanford d.school has recently made its name by educating its students in the trendy approach to problem-solving known as "design thinking". Courses in design thinking are additionally offered to corporate managers, educators, scientists, doctors and lawyers. China has become a leader in terms of the number of students enrolled in such courses. Other universities, also European, are now offer similar programs as well [University of Cambrigde, 2010; Universitat Potsdam, 2018].

In the latest OECD study [OECD, 2018] on the topic of meeting policy challenges for a sustainable bioeconomy, attention has been paid to the need for multi-disciplinary education. A central theme of bioeconomy strategies is sustainability. The educational condurum for sustainability has been described by Mascarelli [Mascarelli, 2013]. The long-standing condurum of multidisciplinary education is the need for both breadth and depth. Biomanufacturing needs employees well versed not only in experimental design but also in statistics, especially that large data sets (Big data) are becoming more common. In this area, T-shaped professionals area lso necessary.

Conclusions

In order to create business value and benefit both the natural environment and society the Sustainable business models (SBMs) were designed and described. Implementation of SBMs requires a competent experts. A new term of "*sustainability professionals"* has been coined. Training in sustainability itself begs multidisciplinarity as both breadth and depth skills needed are design as well as systems thinking, strategic planning, and evaluating environmental, social and economic performance. Such a broad and profound knowledge is characterize of T-shaped professionals. The organizations indicate a greater demand for T-

shaped employees and experts. To offer education in fields of T-shaped professionals is primarily the role of today's universities.

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