TIM Lecture Series

Green Business Models to Change the World: How Can Entrepreneurs Ride the Sustainability Wave?

Mika Westerlund

> *"We need entrepreneurs and leaders with the courage and conviction to take bold action ahead of others. We also need radically new business models that create true value for the environment and society, bring competitive advantage to companies, and have the potential to transform industries globally."*
>
> Mika Westerlund
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Overview

The fifth TIM lecture of 2013 was presented by Mika Westerlund, Assistant Professor at Carleton University's Sprott School of Business (sprott.carleton.co) in Ottawa, Canada. Westerlund discussed the need for a new sustainability-oriented business culture; described emerging business models that aspiring entrepreneurs can create or adopt; and presented recent research and trends relating to sustainability and green innovation. The event was held at Carleton University on June 20th, 2013.

The TIM Lecture Series is hosted by the Technology Innovation Management program (carleton.ca/tim) at Carleton University. The lectures provide a forum to promote the transfer of knowledge from university research to technology company executives and entrepreneurs as well as research and development personnel. Readers are encouraged to share related insights or provide feedback on the presentation or the TIM Lecture Series, including recommendations of future speakers.

Summary

In the first part of the lecture, Westerlund focused on the need to shift mindsets toward sustainability and the ways in which this can be accomplished. In the second part, he focused on the mechanisms by which companies can profit from a focus on sustainability.

Part I: Value creation

When viewed through a traditional mindset, the goals of "green" and the goals of "business" seem incompatible; however, companies that embrace a green mindset are becoming increasingly successful in today's economy. For entrepreneurs who have embraced a sustainability mindset, the compatibility of *profit* and *planet* may be combined with an emphasis on *people* and *personal* benefits; these are the "four Ps" of sustainable entrepreneurship (GEF, 2011; tinyurl.com/mldfyqe). Thus, entrepreneurs are passionate about making a positive impact on their environment, their society, and their economy.

Sustainable entrepreneurship is not primarily about starting a business but about taking responsibility for life choices and promoting this way of thinking. However, this does not mean that the focus on sustainability must come at the expense of profit. If fact, this new mindset can open an entrepreneur's eyes to opportunities that others may not see, whether it is an idea for a new venture, an opening in the market, or a more sustainable process that can be applied to an existing business.

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To varying degrees, green companies are taking advantage of five key benefits of a focus on sustainability (Kiron et al., 2013; tinyurl.com/pdgbtnr):

1. **Market benefits** (e.g., brand, competition, new markets)

2. **Financial benefits** (e.g., increased margins, reduced costs)

3. **Innovation benefits** (e.g., business models and processes, product/service offerings)

4. **Compliance benefits** (e.g., reduced waste, lower material costs, adherence to regulations)

5. **Stakeholder benefits** (e.g., attracting and retaining talent, stakeholder/investor relations, reduced risk)

Among the market benefits, a key driver has been the increasing demand and prices of natural resources, therefore the greatest impetus for green innovation lies in resource-intensive industries that produce consumer products, chemicals, automobiles. Here, green innovation is not just about "doing good"; a company in a resource-intensive industry simply cannot compete without going green (Haanaes et al., 2012; tinyurl.com/acawzkp). Indeed, the green mindset can be applied to any aspect of a company, including production processes, lifecycle management, new products and services, and new business models.

The more intangible market benefits are also important, including the brand benefits. Positive perceptions of a brand based on its eco-credentials can be of great benefit to a company. However, despite the fact that sustainability brands can be relatively easy to build, they are also easily damaged, whether through the company's own actions or the actions of others (e.g., competitors, activists, disgruntled customers). To avoid accusations of "greenwashing" (tinyurl.com/nlvbfrg) and to demonstrate its commitment to the principles of sustainability, transparency is important.

Despite the various recognized benefits, the need for sustainability is not recognized worldwide. North America, in particular, lags well behind other economies in terms of business-model innovation and investment in sustainability; emerging markets such as Africa, the Middle East, and Asia-Pacific region, lead the way (Kiron et al., 2013; tinyurl.com/pdgbtnr).

However, even in North America, incremental improvements are making an impact. To illustrate the benefits of incremental green innovation, Westerlund provided examples of eco-efficiency in the following domains:

1. **Data centres:** increased energy efficiency and investment in renewable energy technologies (e.g., Facebook, Google, Intel)

2. **HVAC systems:** optimized electrical usage in commercial buildings (e.g., LOBOS system; enerliance.com/lobos/)

3. **Solar-powered airplanes:** reduced fuel usage or even fuel-free flights (e.g., Solar Impulse; solarimpulse.com)

4. **Airlines:** fuel-efficiency targets and innovations (e.g., Virgin Atlantic; tinyurl.com/ohj6329)

5. **Beverage companies:** improved manufacturing processes (e.g., Coca-Cola and World Wildlife Fund; tinyurl.com/oro2apx)

6. **Other examples**: smart renewable technology, renewable energy, clean tech, smart grids

Although eco-efficiency is beneficial, related innovations are incremental in nature, are easily copied, and do not on their own enable a company to become a green champion. For companies to gain a distinct competitive advantage, they must change the established ways of thinking, disrupt the market, and transform the industry practices and business models. Thus, Westerlund also provided examples of radical, game-changing innovations. The focus was on Interface (tinyurl.com/d92kjd), a global carpet manufacturer that has pursued a bold and financially successful vision for sustainability. The Interface story was recently featured in the TIM Review through a case study by Lampikoski (2012; timreview.ca/article/624).

Next, Westerlund summarized what can be learned from those who have embraced sustainability and have pursued green innovations:

1. **Move early, even if information is incomplete:** sustainability is an evolutionary process with multiple stages. The journey should be initiated as a reaction to growing risks and uncertainties, and it is characterized by discoveries.

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2. **Balance the short- and long-term benefits:** set a broad, long-term vision with projects offering concrete, near-term "wins".

3. **Drive sustainability from top-down and bottom-up:** enlist employees at multiple levels for improved results and engagement, listen to staff who are aware of sustainability, gather ideas, promote cultural change, make staff feel proud.

4. **Aggressively de-silo sustainability:** the approach should be integrated throughout company operations; build sustainability into core processes (and partners' processes).

5. **Measure everything:** if ways of measuring something do not exist, start inventing them.

6. **Value intangible benefits:** a meaningful portion of a sustainability strategy may relate to intangible benefits.

7. **Be authentic and transparent:** be realistic, communicate challenges and success, stress long-term goals over short-term goals.

Westerlund also emphasized that small firms are better able to embrace sustainability than large firms, for the following reasons:

1. Small firms innovate; large firms bring innovation to masses. Startups build; incumbents transform.

2. Networks favour small firms, and radical innovation is associated with startups.

3. Due to pressure from investors, large firms are often limited to ensuring success through incremental innovation.

4. Small firms are flexible in implementing business models that break the industry rules. Creative destruction is easier for startups, because they are more agile and less encumbered by change management.

5. Large firms need more time to adopt change in strategy.

Overall, the main messages from the first part of the lecture were: a) that value creation depends on cultural change and b) that change is in the air. Increasingly, companies are coming around to a sustainable way of thinking, and they are benefiting from this change in mindset. However, this change does not happen overnight, whether within a specific company or industry.

Part II: Value capture

In the second part the lecture, Westerlund focused on sustainable business models, which may be entirely new or they may be simply modifications of existing business models. Generally, it can be said that, the more parts of a business model which are changed and have a green effect, and the more profoundly a green change is taking place within the individual parts of the business model, the greener the business model innovation and the higher potential for creating radical eco-innovation (Henriksen et al., 2012; tinyurl.com/oagsn65).

Westerlund provided descriptions and examples of the following types of sustainable business models:

1. **Cause-related models:** tie the business model to a particular cause – such as saving the planet, curing a disease, or providing shoes, prescription glasses, or related medical treatment to regions in need – that will resonate with customers (e.g., Patagonia: patagonia.com; (RED): joinred.com; TOMS: toms.com).

2. **Functional sales:** provide "product-as-a-service" (e.g., rental/leased offerings, recycling of old products).

3. **Waste management:** reduce waste and lower costs for customers by providing management and supply contracts (e.g., chemical management/procurement systems).

4. **Energy services:** optimize energy usage for customers and be paid according to performance/savings (e.g., energy management for public buildings or industrial companies, software companies providing solutions to support the energy efficiency of their customers, residential solar systems).

5. **Sharing:** provide access to products, tools, shelter, and other resources rather than selling them as products (e.g., tool libraries, bike/car sharing, co-working office space)

6. **Re-using and recycling:** turn waste products into new products (e.g., recycled clothing, fashion products, hardware).

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7. **Design on demand:** seek out inefficient products where "on demand" designs would be profitable (e.g., 3D garment printers).

8. **Hybrid models:** many sustainable business models are combinations of the models described above.

To conclude the lecture, Westerlund offered his view of the next steps for sustainability:

1. Stronger focus on sustainable business models: from types to design to management, and including the capabilities needed to manage the change

2. Focus on sustainability ecosystems: sustainable value networks fighting against each other, and the capabilities needed to manage ecosystems

3. Open and user innovation for green innovations: for example, living labs for SmartCities, energy efficiency, bottom-of-the-pyramid solutions

Lessons learned

In the discussions that followed each portion of the presentation, audience members shared the lessons they learned from the presentation and injected their own knowledge and experience into the conversation.

The audience identified the following key takeaways from the presentation:

1. Sustainability requires vision and systematic change. Developing the right mindset is a key success factor.

2. Compared with other parts of the world – particularly developing countries – North American companies are falling behind in sustainability; they are not investing enough money in sustainability nor are they giving it sufficient attention. From a company perspective, there does not appear to be a sense of urgency in North America.

3. Incremental innovation results in small or minor improvements. Companies need to do more to provide good, sustainable contributions. Radical innovation results in a game-changing innovation that involves both technology innovation and business model innovation.

4. Eliminating waste can lead to increasing wealth.

5. A sustainability brand is vulnerable to perceptions, and damage to one of the company's sustainability brands can cause further damage to the company overall.

6. Intellectual property protection may not be relevant for many sustainability innovations. The need for transparency and collaboration with competitors may be stronger than the need for patent protection.

7. Rethink your partnerships and your networks; have an "ecosystem view" of sustainability.

8. The competition is not company against company; rather, it is ecosystem against ecosystem.

9. There are many opportunities for entrepreneurs and small companies. Small companies are more agile than large companies, they can move faster, and they can fast-track sustainability. In this way, sustainability may represent a risk to larger companies.

10. Entrepreneurs and companies should focus on sustainable business models, sustainable ecosystems, and open/user innovation to create green innovations.

11. A good first step for companies is to identify and then replicate an existing (and successful) sustainability business model that is applicable to their type of business.

12. There are no measures or indicators (generally accepted or standards) for sustainability.

13. To overcome misuse of terms and bogus claims on sustainability, government policies and standards are required. You must be able to prove you are green.

14. Sustainability must become part of your whole business. For startups, this process must start on day one.

15. We need to rethink business, intellectual property systems, and licensing of green intellectual property. We must become stewards of sustainability.

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This report was written by Chris McPhee; the lessons learned were captured by Derek Smith.

About the Speaker

Mika Westerlund, D.Sc. (Econ.) is an Assistant Professor at Carleton University's Sprott School of Business in Ottawa, Canada. He previously held positions as a Postdoctoral Scholar in the Haas School of Business at the University of California Berkeley and in the School of Economics at Aalto University. Mika earned his doctoral degree in Marketing from the Helsinki School of Economics. His doctoral research focused on software firms' business models and his current research interests include open innovation, business strategy, and management models in high-tech and service-intensive industries.

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