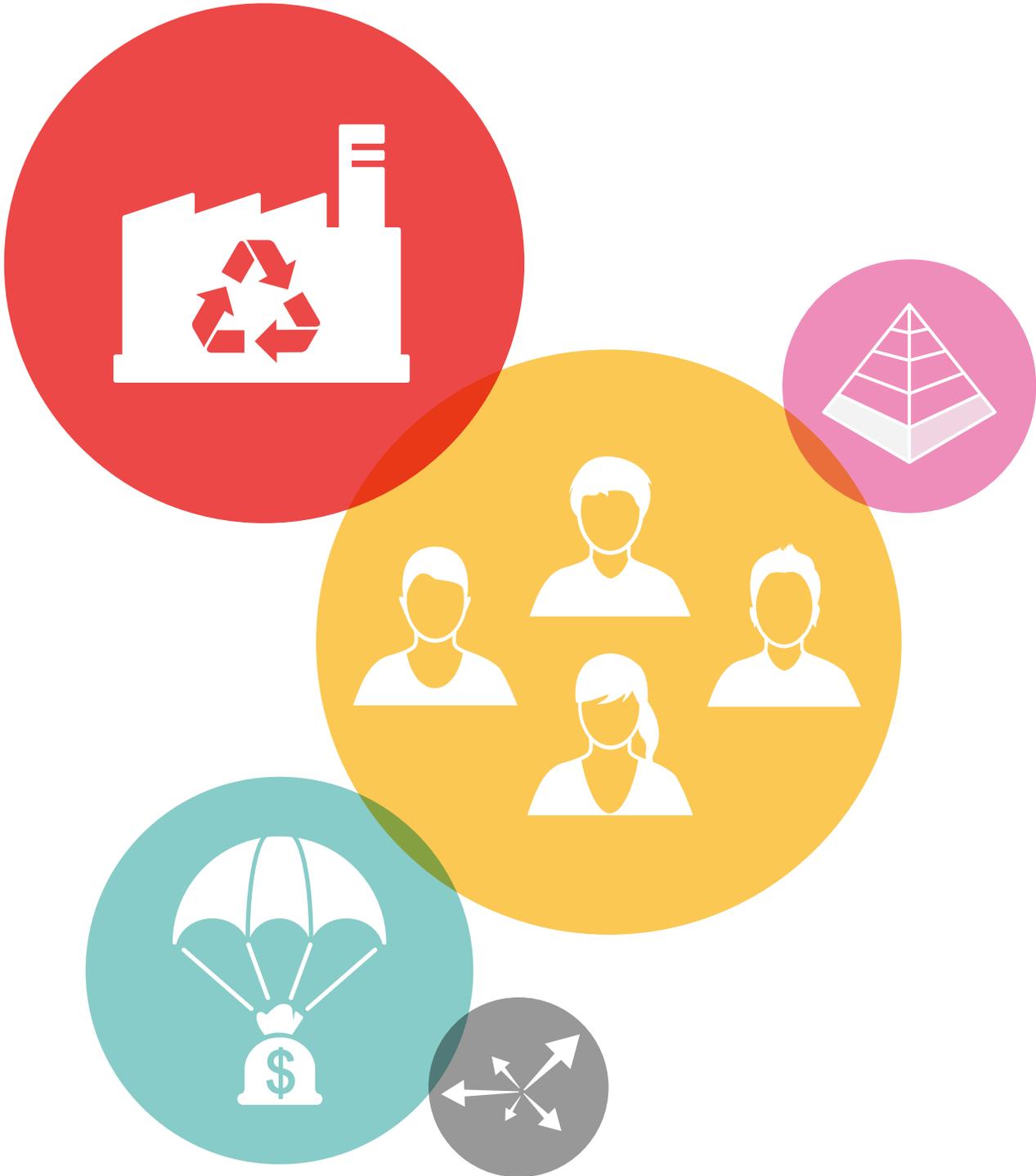


Model Behavior

20 Business Model Innovations
for Sustainability



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Foreword

Most would agree that the concept of sustainable business has hit the mainstream. You'd be hard-pressed to find a company that hasn't at least started a recycling initiative or engaged in some kind of community development project, even if the efforts are spare. Fortunately, many companies have gone far beyond that minimum—they have overhauled products and processes and have started to look outwards at system-wide trends and challenges that promise to radically reshape their businesses in the future.

SustainAbility has long recognized and advocated the need for fundamental shifts in business practice, including in business models, both to drive necessary progress toward, and to unlock business value from, sustainability. Such shifts are all the more urgent and relevant today, given slow progress on sustainable development broadly and accelerating innovation and disruption (both positive and negative) already playing out in many industries.

That is the basis for *Model Behavior*, exploring the role and practice of business model innovation in the context of sustainability. In it, we break down the innovative models we're seeing, trying to better understand their origins, mechanics and implications. In doing so, we hope to induce more focused conversation about business model innovation, going beyond merely marveling at each new car-sharing company or crowdfunding site, and delving deeper into how such innovation comes about, and how we can catalyze more of it.

We acknowledge that business model innovation will not come easily, especially for many of the large, established companies we work with every day. But we proceed with the conviction that those who experiment and take the leap will be better able to traverse the shifting terrain ahead, and reap the benefits.

This report helps by offering inspiration and reflection, by raising issues and questions for further exploration, and by providing a framework for ongoing discussion. It grows out of SustainAbility's past work on social entrepreneurship and innovation (supported by the Skoll Foundation and others) and on the evolving role of the private sector in sustainable development (via our 2012 *Regeneration Roadmap* project and its final report, *Changing Tack*), and responds to the growing emphasis on systems change and collaboration as key enablers of a sustainable future.

We welcome your comments, questions and insights. We are also seeking sponsors and partners to help shape and support further research on this topic. To share feedback, and/or to discuss partnership or sponsorship opportunities, please contact Lindsay Clinton (Clinton@sustainability.com).

Lindsay Clinton
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February 2014



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Acknowledgements

Our thinking has been influenced by innumerable conversations with colleagues and our network, as well as through the thought leadership of several sustainability pioneers and researchers we have come across in our work. We wish to acknowledge several of those who have contributed most strongly to the results presented in this report.

Although SustainAbility's thinking on this topic started many years ago, we held our first formal convening on business model innovation in 2012, through a salon dialogue we hosted in London as part of our *Regeneration Roadmap* research initiative. There we convened a group of leading thinkers and entrepreneurs to talk about the potential of business model innovation to shift the economic landscape. The salon—attended by representatives of companies including BMW, Cisco, Mars, PwC, Rio Tinto, Sony and Standard Chartered; social entrepreneurs; leadership experts; academics; and NGOs—helped to significantly advance our thinking. We thank those who took the time to attend and share their insights with us.

A few months after the salon, we held a small roundtable breakfast in New York to discuss disruptive business models with several social entrepreneurs alongside some of our corporate clients. The discussion helped us see that there might be a ready audience for a report like this.

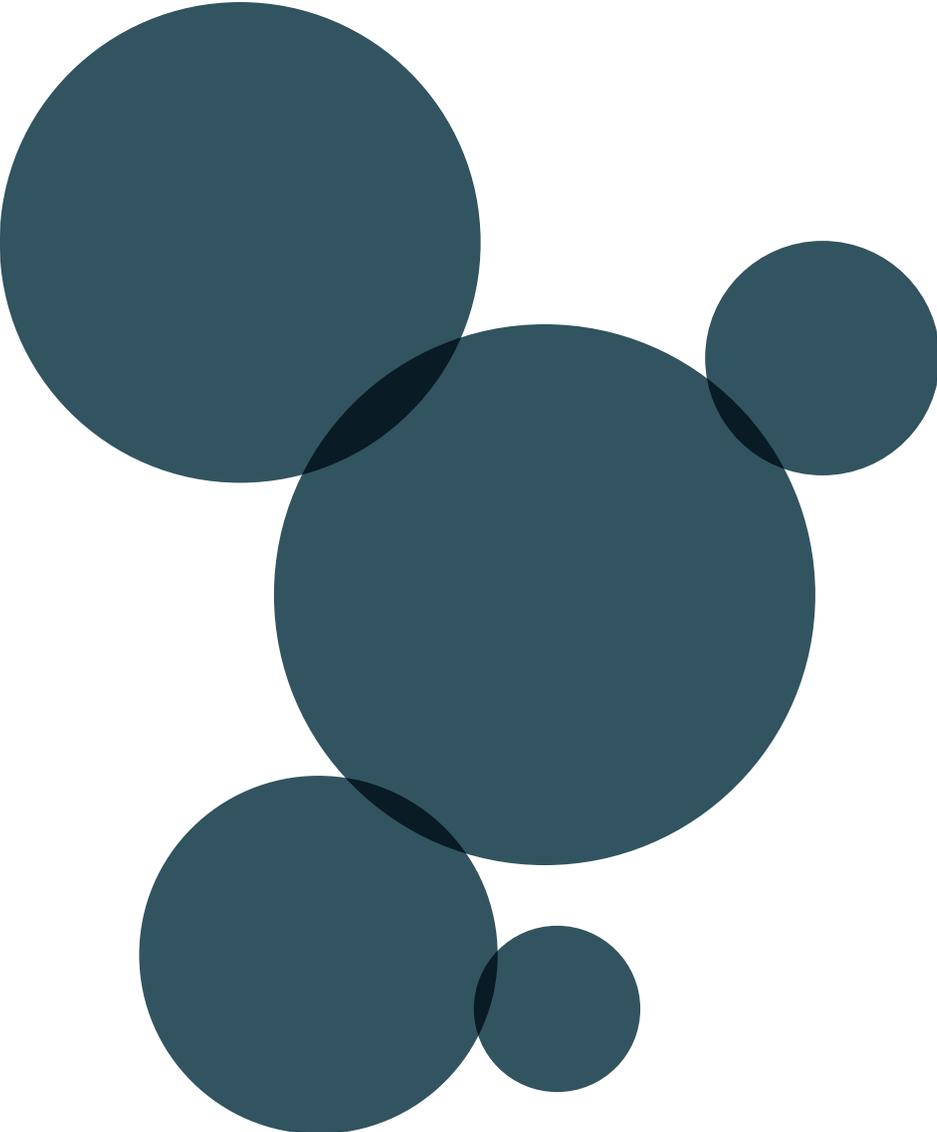
Our thinking has also been influenced by the thought leadership of several key individuals and organizations in this space, including Bill McDonough, the Ellen MacArthur Foundation, Anthony Upward, Bob Willard and WRAP UK.

Finally, we gratefully acknowledge the support and guidance of our colleagues at SustainAbility, several of whom have been instrumental in pushing this effort forward:

- Years ago, our colleague **Chris Guenther** started to develop a framework for understanding the real and potential role of product, process and business model innovation in advancing sustainability. As we started working on this research paper, we found ourselves returning to those ideas. We are indebted to Chris for his thinking, and for his support and influence throughout this project.
- Several colleagues have been very helpful along the way: **Melanie Colburn** for her research assistance, **Chris Wash** for his help in designing the report, and **Emily Spivack** for disseminating the ideas within.
- We benefited greatly from the inspiration and questions from our SustainAbility colleagues, particularly **Geoff Kendall**, **Michael Sadowski** and **Patrin Watanatada**.

Finally, we thank **Matt** and **Jason Hyde** for the report design and illustration, which have brought the models within to life.

Executive Summary



Executive Summary

Context

The idea of business model innovation—that a company could launch a new business model never conceived of before, or transform an existing business model—has long captivated business leaders. Leading academics focused on the topic, like Clayton Christensen, Michael Porter and the late C.K. Prahalad, have discussed the merits of disruption, the value to be created and the fortune to be gained by shifting business models. And yet, executives are often held back by vested interests in their current approach: “If it ain’t broke, don’t fix it.”

For sustainability leaders, innovation is key to meeting human needs within planetary limits. They know that many existing business models are predicated on the assumption that natural and social capital are in virtually limitless supply, and that mispriced resources and other market distortions make some models more competitive than they would otherwise be.

Disrupt or Be Disrupted

It is a hard sell to convince a CEO to change a business model based on threats or opportunities that have not yet materialized. Innovation, therefore, often remains piecemeal or incremental, rather than transformational, fundamental and system-wide. But as global trends—environmental, social, political, technological—continue to shift the foundations of our current business models, incremental innovation will become less and less effective in enabling companies, industries and whole economies to adapt and succeed. There is an urgent need for fundamentally different approaches to value creation.

The utility industry, for example, is currently confronting a mounting crisis with its existing business model. Changing regulations, rising fossil fuel prices, falling prices of renewables, and the arrival of improved energy storage solutions and other decentralized energy options will completely alter the playing field for large coal and nuclear-powered utilities. For a long spell, these companies have enjoyed a stable business model dependent on a high degree of integration along the value chain: from power generation to transmission and distribution lines to customer relations. More recently, this large-scale, centralized system has been disrupted by the rise of smaller, decentralized energy systems, especially those focused on delivering solar and other forms of alternative energy. While they once captured just a tiny, elite niche of the energy marketplace, companies in this space are now growing rapidly and helping speed the decline of the traditional, vertically integrated utility model.

Executive Summary

While many utilities are struggling to handle this disruption, some are acting quickly to adapt. RWE, a German utility with over 24 million customers across Europe, plans to shift its traditional utility model and instead use its expertise to help manage and integrate renewables into the grid, switching from being a power seller to a renewable energy enabler¹—what we would call a *product as a service* model. Much as Xerox and Rolls Royce plc have shifted from being sellers of hardware to more service-based businesses, RWE is transforming from a “volume to value” business.²

The utility industry is currently confronting significant threats to its business model. The uptake of decentralized energy solutions is speeding the decline of more traditional models.

Image: © Paul Ealing, Flickr



We are seeing the same sort of disruption burst like a geyser from businesses that are part of the sharing economy. Alone, a company like Zipcar demonstrates a more thoughtful and potentially sustainable business model. But, combined with other mobility-related sharing businesses like ParkatmyHouse, RelayRides, GetAround and FlightCar, it represents a much more fundamental disruption of the automotive industry.

Executive Summary

Where to Start?

In fact, the sudden proliferation of such innovation gets to the core of why we've written this report. For all its promise and necessity, advocates of sustainable business model innovation have struggled to get beyond citing a few beloved examples (e.g., Zipcar). Nowadays though, examples of sustainability-related business model innovation abound, with new ones arriving almost daily. So we set out to better understand which new business models are emerging, where innovation is happening, and how both new and established companies are experimenting to embed sustainability into the underlying structure of their businesses. The findings shed light on both what's working and what's possible.

From our research and review of 87 company examples, *Model Behavior* identifies 20 distinct business models falling into five categories, offering a closer look at what's occurring in each of these models to produce more sustainable outcomes. In brief, these are as follows:

Environmental Impact



- **Closed-Loop Production:** The material used to create a product is continually recycled through the production system.
- **Physical to Virtual:** Replacing brick and mortar infrastructure with virtual services.
- **Produce on Demand:** Producing a product only when consumer demand has been quantified and confirmed.
- **Rematerialization:** Developing innovative ways to source materials from recovered waste, creating entirely new products.

Social Innovation



- **Buy One, Give One:** Selling a specific good/service and using a portion of the profits to donate a similar good/service to those in need.
- **Cooperative Ownership:** Companies owned and managed by members, often taking broader stakeholder concerns into account, including those of employees, customers, suppliers, the local community and in some cases, the environment.
- **Inclusive Sourcing:** Retooling the supply chain to make a company more inclusive, focusing on supporting the farmer or producer providing the product, not just the volume of the product sourced.

Executive Summary

Financing Innovation



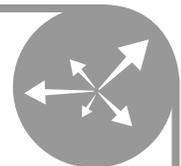
- **Crowdfunding:** Enabling an entrepreneur to tap the resources of his/her network to raise money in increments from a group of people.
- **Freemium:** Offering a proprietary product or service free of charge, but charging a premium for advanced features, functionality or virtual goods.
- **Innovative Product Financing:** Consumers lease or rent an item that they can't afford or don't want to buy outright.
- **Pay for Success:** Employing performance-based contracting, typically between providers of some form of social service and the government.
- **Subscription Model:** Customers pay a recurring fee, usually monthly or annually, to gain ongoing access to a product or service; model has been used to lower barriers to entry to the purchase of green innovations.

Base of the Pyramid



- **Building a Marketplace:** Companies build new markets for their products in innovative and socially responsible ways, including delivering social programs, adapting to local markets, and bundling with other services like microfinance and technical assistance.
- **Differential Pricing:** Realizing customers may benefit from the same product but have different payment thresholds, companies charge more to those who can afford it in order to subsidize those who cannot.
- **Microfinance:** Providing small loans—and in some cases access to financial services—to low-income borrowers who do not have access to a traditional bank account.
- **Micro-Franchise:** Leveraging the basic concepts of traditional franchising, but specifically focusing on creating opportunities for the poor to own and manage their own businesses.

Diverse Impact



- **Alternative Marketplace:** When a firm circumvents a traditional method of transaction or invents a new type of transaction to unleash untapped value.
- **Behavior Change:** Using a business model to stimulate behavior change to reduce consumption, change purchasing patterns or modify daily habits.
- **Product as a Service:** Consumers pay for the service a product provides without the responsibility of repairing, replacing or disposing of it.
- **Shared Resource:** Enabling customers to access a product, rather than own it, and use it only as needed; often dependent on the participation and generosity of community members to share their goods with others.

Executive Summary

Findings and Implications

In reviewing these models, *Model Behavior* reveals a number of themes relevant to the practice of business model innovation for sustainability.

1. Every exchange in a value chain provides opportunities for innovation and impact.

We argue that business model innovation for sustainability boils down to creating a novel form of exchange at some point along a company's value chain. In the models listed above, the traditional form of exchange—between a company's customers, employees, owners or community—has changed in some way that usually distributes value more equitably for more stakeholders. Each exchange that a company engages in, therefore, presents an opportunity for a potential shift in model, and potentially also in social or environmental outcomes. By identifying and analyzing these points of exchange, an established business can find areas of promise for business model innovation.

2. Companies that have demonstrated a business model innovation have often done so by shifting incentives in the value chain.

When a business understands what each stakeholder wants or needs and responds creatively, or perhaps even radically, business model innovation begins to take shape. For example, late in 2013, GlaxoSmithKline announced that it will stop paying doctors to promote its drugs and that it will no longer link the compensation of sales representatives to the number of prescriptions that doctors write—practices that have long been deemed conflicts of interest in the pharmaceutical industry. Glaxo says that it will now pay sales people based on their technical knowledge and the quality of service they provide, completely changing the incentives for its sales force, and also changing the incentives for doctors, likely reducing the quantity of unnecessary medications prescribed, and perhaps unlocking other opportunities for innovation and value creation that better serve customer needs.

Many of the models we identified are also trying to tweak incentives. The *buy one, give one* model incentivizes customers to purchase their products by building in social good. The *shared resource* model incentivizes property owners to make money off of idle goods. The *behavior change* model incentivizes consumers to lower their energy use to beat their neighbors. Shifting the incentives at play can often shift the entire model.

Executive Summary

3. The largest companies tend not to be the source of new models, but they can help evolve and scale them.

Most business model innovation emerges from companies that design more sustainable models from the start. That said, bigger companies can help to bring these models to maturity. This may occur through acquisition or mutually-beneficial partnerships, or the adoption of new ideas into a given industry.

In addition, large companies are finding creative ways to innovate and experiment with new business models. They are partnering with social entrepreneurs and using a range of tools—impact investing, innovation platforms, in-house venture funds, and dedicated R&D centers—to search for and exploit effective new models.

Although smaller companies often lead the way in business model innovation, we believe bigger companies have a critical role to play in helping to enhance the impact of the most important innovations.

4. Business model innovation doesn't happen in a vacuum.

However urgent our quest for sustainability, new business models can't just be willed into existence. Instead, we must recognize how any model—sustainable or not—is dependent on surrounding conditions, and that new models are often enabled by, or arise organically from, changes in those conditions. Looking across the models identified in the report, we see numerous examples where changes in circumstances—an infusion of technology, entry into a new country, a shift in customer demographics and/or preferences, areas where old systems have crumbled—along with the keen insight of the innovators themselves, have been the key to radical shifts in models.

But the implication is not that business leaders and companies should simply stand by and wait for things to happen organically. Disruption frequently catches us off guard and is almost never orderly in its impact, and in a world that is more and more defined by the increasing scope and pace of change, it is more or less inevitable. The key is to increase our individual and collective ability to recognize and respond to—and where necessary, to directly engineer—circumstances that will support new, more sustainable ways of doing business.

Executive Summary

The Challenge of Change

If it were easy to be a sustainable business—to create, deliver and capture value in a way that meets human needs within planetary limits—everyone would be doing it. But typically companies devote the majority of their resources to optimizing current business models especially by applying and improving incrementally on existing capabilities. This is because business models are ultimately based on a common understanding among individuals—company managers, employees and investors—of what business they are in and how they create value. Shifting these mental models to evolve business models remains a powerful barrier to innovation.

But, just because business model innovation requires a mental leap and requires potentially painful shifts within a company doesn't mean it isn't possible or necessary. In fact, when it comes to survival, some established companies will shift their models, and will do so quickly.

In 2012, the world's largest electronics retailer, Best Buy, announced that it would begin a transition to a new model, initially requiring the elimination of 50 stores, the creation of 100 new smaller stores, and a focus on mobile device sales. The business model shift, from big-box retail to "Connected Stores," was precipitated by swiftly declining sales and competition from online retailers. The experiment with smaller, more mobile-focused stores began immediately and was brought online in a span of only 18 months. Whether Best Buy's experiment is a commercial success or not, its effort is evidence of how quickly a company can shift market position and approach when conditions require it.

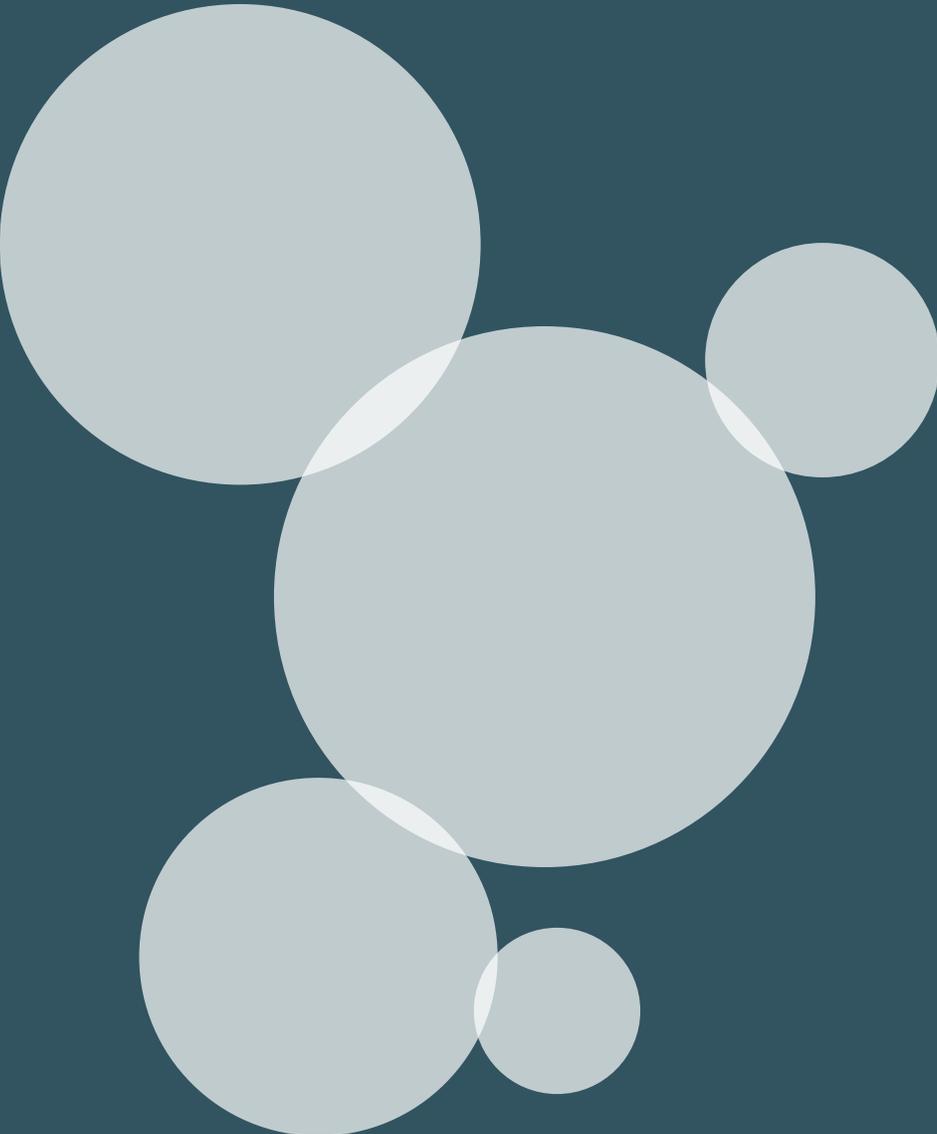
Where We Go from Here

When we started this report, we intended it to be a short primer covering a handful of models that seemed to hold promise for future sustainability. It has become much more than that. And yet, we feel this is only the beginning of a more in-depth exploration of this topic.

If business model innovation is indeed a key ingredient to transforming our economic landscape and improving social and environmental outcomes, it is worth understanding what drives it, what the most promising business models are, what might compel an established company to transform its model before such change is urgent or unavoidable, and what broader systemic shifts—in policy, markets, consumer mindsets, etc.—may most hasten the rise of beneficial new models.

We look forward to exploring this topic with you.

Introduction



Introduction

Business models—the underlying structures of how companies create, deliver and capture value—form the engine of our economy.

They determine the speed at which economies grow, and the intensity at which our resources are consumed. They determine the number and type of jobs in our cities, the provenance of the products we buy, and the price of the food we eat. They contribute to the quality of our communities and our lives. The idea of business model *innovation*—specifically, that a company could launch a new business model never conceived of before, or transform an existing model to disrupt an industry—captivates business leaders and sustainability advocates alike.

So great is the enthusiasm for such innovation that there is a whole vocabulary for the scale of impact it is hoped to achieve: Transformation. Step change. Breakthrough. We also recognize the importance of small steps that add up to big change. No matter the speed or type, we all want to know what innovation is happening, and how. For business leaders, understanding and advancing innovation is necessary to beat competitors and better serve customers. For sustainability practitioners, innovation is key to meeting expanding human needs within planetary limits.

Many existing business models are predicated on the assumption that vital, non-financial resources—i.e., natural, human and/or social capital—are in virtually limitless supply.

The inner workings of a business model—its products and processes, its interactions with stakeholders, what and how it measures, the transactions it requires—influence a company's ability to thrive in the future, and shape its impacts on people and planet.

But many existing business models are predicated on the assumption that vital, non-financial resources—i.e., natural, human and/or social capital—are in virtually limitless supply. Societal benefit, if considered at all, is frequently an after-thought. To truly create a more sustainable world that can thrive over time, we need business models that operate within planetary limits and are sensitive to their roles as economic, environmental and social linchpins.

Introduction

To date, many companies have realized the merits of modifying their products and processes to become more sustainable. Acknowledging the business benefits of improved product performance, some have revamped their offerings to be more effective, more efficient and produced with safer, “greener” materials. Other companies have rethought their processes—for example, by utilizing renewable energy sources in production or enhancing performance and trust through various certifications. But, these innovations will only get us so far. What we need are not just better products and processes, but fundamentally different business models. We need companies and industries whose underlying structures are, at worst, zero negative impact, and at best, contributing to the regeneration and restoration of natural, human and social capital.

Examples of more sustainable business models exist today, and more are being invented by creative entrepreneurs and intrapreneurs around the world. There is a need to better understand what makes these models work, where innovation is happening and how companies with traditional models can transform to become more sustainable and more profitable.

This report takes a closer look at business model innovation, examining its real-world role in advancing sustainability. We explore where business model innovation is happening, what models are emerging and what role multinational companies play in the business model innovation landscape. We also provide a snapshot of how some large companies are experimenting with business model innovation.

We hope these findings spur a deeper exploration of business model innovation and provide actionable tools to a diverse audience, including sustainability and corporate responsibility leaders, corporate innovation and strategy teams, social entrepreneurs and environmental economists, among others.

What we need are not just better products and processes,
but fundamentally different business models.

Introduction

What Is a “Business Model”?

The sustainability field has had a longstanding preoccupation with the promise of business model innovation. We’ve seen a good amount of hype, with surges of interest around topics like social innovation and the sharing economy, and frequently cited examples like Kickstarter and Zipcar. But despite all the talk, the topic of business model innovation still lacks the clarity to fully deliver on its promise.

Like “sustainability,” the term “business model” is used rather loosely. One has the sense that everyone is referring more or less to the same thing, but what, exactly? Put another way, if a company comes up with a new business model, what is it that has changed?

Many have attempted to define the term. Innovation researchers Alexander Osterwalder and Yves Pigneur offer an inclusive and succinct definition in their 2010 work, *Business Model Generation*.³ It defines business models as the “fundamental structures for how companies create, deliver and capture value.” Raphael Amit and Christoph Zott offer a somewhat lengthier definition in the *MIT Sloan Management Review*: “The bundle of specific activities conducted to satisfy the perceived needs of the market, along with the specification of which parties conduct which activities, and how these activities are linked to each other.”⁴ This and other definitions clearly point to the fact that a business model encompasses more than just what a company produces.

A business model is much more than the product or service a company offers.

According to a 2013 study by Boston Consulting Group and MIT, nearly half of the companies surveyed said they had “changed their business models as a result of sustainability opportunities.”⁵ However, more often than not, the innovations we see involve creating better processes and/or products, without addressing the underlying value structure.

This isn’t to say that product or process innovations aren’t needed or useful—in some cases, they may even support or lead directly to a significant change in a model. For example, consider when Walmart committed in 2010 to double its sourcing of local produce by 2015. On first inspection this may sound like an issue of process. But to meet the objective demanded a range of responses—paying farmers more, offering customers a money-back guarantee, and changing the way produce is stocked in-store—which cumulatively represented a more fundamental shift in the business model. By sharing income differently along the value chain and assigning higher value to things previously externalized, Walmart engineered more sustainable outcomes directly into the structure of the business.

Introduction

Business model innovation ultimately involves a novel form of exchange at some point along a company's value chain. When that exchange, sometimes completely new, other times just different, creates new social or environmental value, and/or distributes economic value more equitably for more stakeholders, then it may be considered business model innovation for sustainability.

The most straightforward exchange is one between a company and its customers. The development of power purchase agreements (PPAs) for solar projects, pioneered by SunEdison, provides a good example of a change in how a solar provider, in this case, captures revenue from its customers. Using PPAs has lowered the barrier for commercial and industrial customers to adopt solar because there is no upfront cost. SunEdison's customers get cleaner energy at lower rates than commercial power while also taking advantage of renewable energy credits. The use of PPAs helps spread the use of renewable energy and lower costs, providing more value to customers and the system at large.

Business model innovation ultimately involves a novel form of exchange at some point along a company's value chain.

Other examples of novel exchanges that provide value to more stakeholders and shift incentives can be found in interactions between a company and its suppliers (e.g., SABMiller sourcing from disadvantaged cassava farmers), a company and its employees (e.g., the cooperative ownership structure at Ocean Spray) or a company and its community (e.g., 2 Degrees providing a meal to a hungry child for every health bar sold).

In each case, the value created in the transaction is no longer concentrated among the company's owners or shareholders, but is distributed more equitably, usually shifting social and environmental outcomes along the way. Meanwhile, incentives are also at play: stakeholders are encouraged to engage in the new exchange by the promise of financial gain, greater stability, or community benefit.

As a company considers its business model structure, the exchanges that occur at all points within the business model present opportunities to innovate, distribute value, and shift outcomes for the better.

Introduction

Why Business Model Innovation Matters

SustainAbility and GlobeScan's 2013 report *Changing Tack*⁶ spells out the urgent need for fundamentally different approaches to value creation. For companies looking to respond to this mounting urgency while reaping the financial benefits, moving beyond product and process modifications to business model innovation is vital.

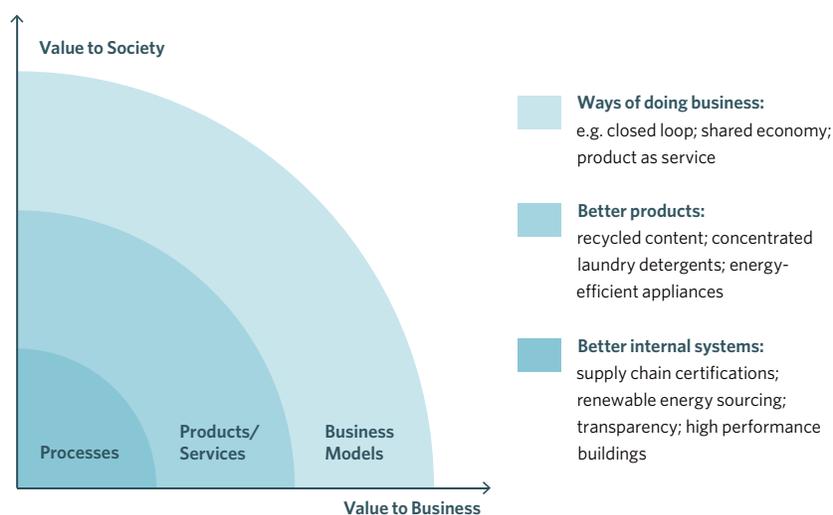
Process and product innovation are not enough to generate both financial and sustainability performance.

Many novel or even radical new process or product innovations have fallen short of their potential because they were unable to compete within the constraints of an existing or traditional business model. Shifts in the underlying model are necessary to enable the innovative product or process to succeed in the marketplace.

One useful illustration of the power of business model innovation is LifeStraw, which has a growing foothold in the developing world. LifeStraw's product—a personal use straw designed to remove bacteria and parasites from water—is certainly innovative. But the product is only successful if it gets into the hands of people who need it, particularly those with less access to clean water. This is where LifeStraw's innovative product financing business model comes in. Its unique approach to financing relies on funding from a carbon credit market, allowing the company to offer products at low to no cost in certain areas. It earns carbon credits by eliminating the need for families to cut down trees for firewood to boil and purify water.⁷

Another example is re.source, a startup based out of Stanford University which produces low-cost mobile toilets for residents of dense urban slums who don't have access to hygienic sanitation services. Rather than try to find someone to buy the toilets, the company has created a business model that blends affordable monthly membership, waste collection services and processing of waste into useful products such as organic fertilizers and energy.⁸

Figure 1:
Innovation Framework



Introduction

New business models can transform industries.



Narayana Health in India is changing how medical providers operate.

Image: © Pete Ketcham, Flickr

The biggest reason for companies to embrace business model innovation is the threat that current models will ultimately slip or even fail in the face of changing market conditions. Examples of business models that have quickly transformed or even become obsolete abound across sectors including media (decline of print), retail (online retailing and sharing platforms), music (digital music devices and services), telecommunications (proliferation of smartphones and associated services) and even finance (peer-to-peer lending).

In healthcare, Narayana Health, winner of a *Financial Times* 2013 Boldness in Business award, uses a combination of process efficiency, revenue and cost structure and financing to make a profit while providing access to vital healthcare services for both rich and poor.⁹ The company's work is beginning to change the way medical providers in India think about the cost, quality and reach of their services. For example, at Narayana Health, which uses a *differential pricing model*, the average open-heart surgery costs less than \$2,000, compared to the US, where it can cost well over \$100,000.¹⁰

Many traditional business models are viable today only because of mispriced resources and other market distortions that make them more competitive than they would otherwise be.

As sustainability trends and challenges—including energy and commodity price fluctuation, supply insecurity or demands for transparency—continue to shift the foundations of our current business models, along with our expectations around them, incremental innovation will become less effective in enabling companies to adapt and succeed.

Take the energy industry: incumbent utilities are facing startups like Mosaic, a solar company that uses an easy-to-use crowdfunding investment model enabling small individual investors to fund large commercial solar projects. This and similar models are opening a door to more democratized systems and shifting away from traditional command-and-control business models where centralized operators decide what investments to make—in coal versus solar, for instance.

Introduction

Business model innovation both catalyzes and relies on broader systems change.



Apple's iPod would not have been the game changer it was without the ecosystem created by iTunes.

Image: © Oliver Lavery, Flickr

According to the MIT report *Creating Value Through Business Model Innovation*, it is important to innovate in areas where the competition is unable or unwilling to act—where competitors might find it more difficult to imitate or replicate an entire “activity system”.¹¹ The classic example is Apple—the iPod would not have been the game changer that it was without the ecosystem created by iTunes. The resulting system dramatically changed how we acquire, store and listen to music, and made Apple the go-to provider of this new and better experience.

To innovate within systems, companies need the capability to adapt to shifting market conditions and larger systemic changes. They also need to be able to create systemic change, build new markets, and avoid or dampen the impacts from dramatic systems shifts. To do so, companies must be willing to see beyond the obvious, short-term business case with an eye to the viability of the broader system.

The demise of Better Place in early 2013 provides a cautionary tale and an illustration of the need for larger systems change. The electric car venture, based on an innovative battery-swapping technology and a *subscription model* (see Business Model Innovation section), sold only 750 cars, while amassing losses of more than \$500 million.¹² Ultimately, the success of Better Place depended on changes in the broader system—changes that never materialized—including tax and/or subsidy support, local government approval in building battery-switching stations, and design partnerships from automakers.

Companies must be willing to see beyond the obvious, short-term business case with an eye to the broader system.

Research Approach

In order to explore and better understand business model innovation, we combed recent reports, news articles and blogs and identified over 100 companies cited for their forward-thinking approaches. We cataloged these innovations, and categorized them according to industry, company size, geography and type of innovation (product, process or business model), resulting in a winnowing of the list to 87 business model innovation examples. We then analyzed each example, identifying patterns and characterizing each of the different, recurring models employed, such as *dematerialization*, *alternative marketplace* or *product as a service*.

Introduction

We identify and define 20 distinct types of business model innovation. For each type, we discuss what makes the model unique and relevant to sustainability, what differentiates it from a more traditional model, what novel exchange is occurring, and any shifts in incentives.

For each model, we also give an example of a company demonstrating that model, and list a few other manifestations, where available, of companies using the model.

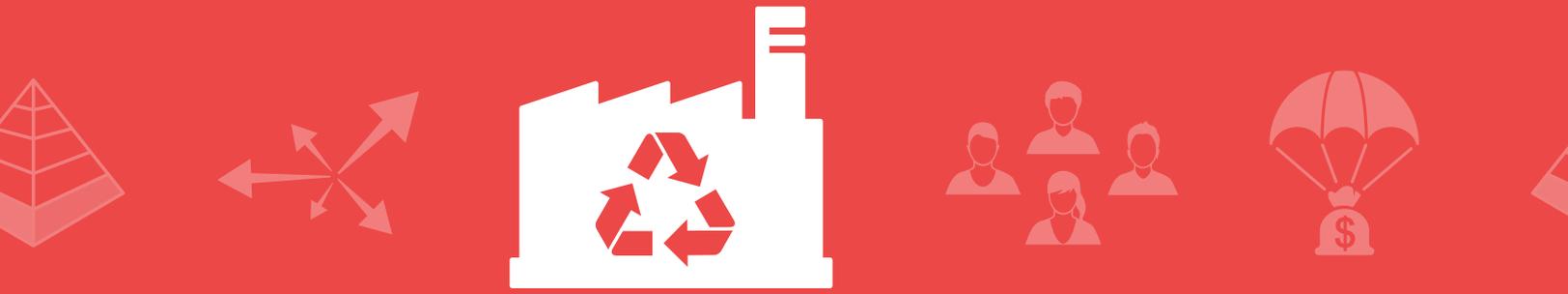
Lastly, we've grouped the models into five "meta" categories that help to demonstrate similarities to other models' impacts, as well as their differences:

- Environmental Impact
- Social Impact
- Financial Innovation
- Base of the Pyramid
- Diverse Impact

Figure 2 notes a few caveats for the examples presented in the sections that follow.

Figure 2: Some Notes on the Examples Presented

Purity	Hybrid Models	Sustainability Intent
<p>In our review, we documented examples that, while innovative, may not meet some readers' expectations for a "sustainable business." Our goal is not to point out perfectly sustainable business models, but rather to highlight examples of companies, new or incumbent, that have done something innovative to yield more sustainable outcomes. It is from these examples that we believe others can learn, and by which they will be inspired to innovate further, or simply be compelled to follow suit.</p>	<p>Some business models fit into multiple categories. For example, the eyeglass maker Warby Parker has elements of a <i>physical to virtual</i> model, and it also uses a <i>buy one give one</i> model focused on building social capital. Mud Jeans, an online marketplace where customers rent jeans on a monthly basis, has elements of <i>physical to virtual</i> and <i>innovative product financing</i>. Business model innovation is more art than science, and we expect other business models to emerge that exhibit more than one defining structure.</p>	<p>Innovations that produce unintentional sustainability benefits are not uncommon. As we sifted through examples, we considered whether to include those that are not values-led, so to speak. We decided that we should do so because what matters is the outcome, rather than the intention. To drive the sustainability agenda, we must be responsive to any innovation that produces sustainable outcomes, not just those intended to do so.</p>



Environmental Impact



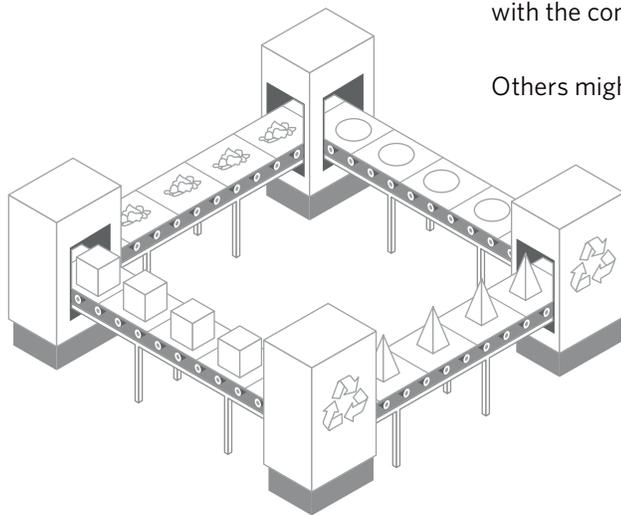
Environmental Impact

Closed-Loop Production:

In this model, the material used to create a product is continually recycled through the production system. Every effort is made to reduce waste in the production system, and those elements that cannot be eliminated are recaptured and reused or biodegraded and composted.¹³ Few if any outside inputs are needed.

This model upsets the more traditional, linear take-make-waste production pattern that most manufacturing industries currently rely on.

Employing this model not only reduces material- and energy-related costs, but can also provide additional opportunities for interaction with consumers who re-engage with the company to facilitate product take back.¹⁴



Others might refer to this model as “cradle to cradle”.

Spotlight: Novelis

Novelis: This aluminum company, headquartered in Atlanta, GA and owned by Hindalco (a member company of the Indian conglomerate, Aditya Birla Group) is the global leader in rolled aluminum products. Novelis creates 14% of the world’s rolled aluminum products like beverage cans, architectural structures and consumer electronics.

The company currently sources 43% of its aluminum from recycled materials and has a goal of reaching 80% by 2020.

Novelis aims to develop an almost entirely closed-loop business model by sourcing more recycled aluminum, coordinating post-production scrap take back, arranging end-of-life product takeback, and building more of its own recycling operations and processing facilities.¹⁵

Other Examples:

- **Interface** makes carpet tiles from reclaimed and recycled carpet and is aiming for zero waste, zero emissions and zero use of oil by 2020.



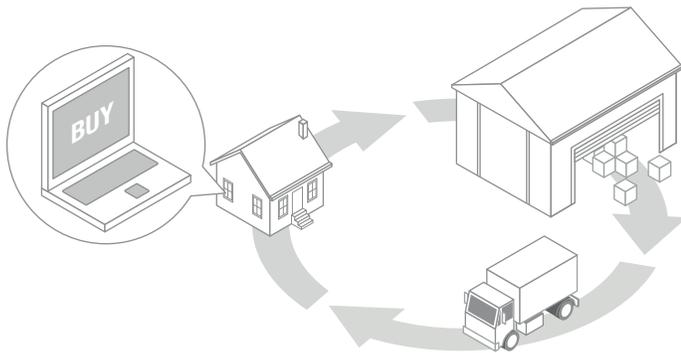
Environmental Impact

Physical to Virtual:

The consumer marketplace was once almost exclusively comprised of brick and mortar stores—the corner store, grocery store, big box store or shopping mall. That model, of erecting a store on every corner or in every town, provides convenience, but can be resource-intensive and expensive.

The physical-to-virtual model eliminates brick and mortar infrastructure to dramatically reduce the resources needed to supply a product to a consumer. It changes where and how a transaction happens. As consumers become more comfortable with virtual shopping, we will likely see fewer retail outposts and more online-only brands, like FreshDirect, the grocery-delivery company.

Some companies in this category, such as Netflix, achieved greater environmental sustainability through this innovation. It's important to note that in augmenting some environmental elements of sustainability, this business model innovation may eliminate jobs, thereby creating questions about social sustainability.



Spotlight: Sungevity

Sungevity: This residential solar installation and financing company has streamlined the way solar panels are sold to individual consumers.

Rather than relying on local retail outlets or representatives, Sungevity has developed a scalable online sales model where customers can get a price quote within 24 hours. A team of remote engineers designs the solar systems based on satellite imagery. Sungevity subcontracts the installation work to smaller, local operators.

This capital-light model has enabled the company to streamline its processes and has resulted in quick expansion to new markets across the US and to countries around the world.

Other Examples:

- **Bonobos** made its name selling a single product—men's pants—online.
- **FreshDirect** delivers groceries straight to consumers' doors.
- **SPUD** (Sustainable Produce Urban Delivery) supplies mostly local produce to consumers via an online marketplace.
- **Warby Parker** sells eyeglasses online and mails consumers five pairs to choose from to mimic the brick-and-mortar retail experience.



Environmental Impact

Produce on Demand:



Threadless only puts designs, which have proved popular through customer votes, into production.

Image: © atomicShed, Flickr

Here a company produces a product only when consumer demand has been quantified and confirmed. Companies do so via online platforms that enable consumers to design their own products, vote on preferred product elements, and in some cases engage with other consumers in product creation. Companies incentivize customers by offering them visibility and recognition among peers or by creating a greater sense of ownership over the product they are producing and purchasing. In the process of interacting with the brand and customizing its products, consumers can develop stronger, stickier relationships with the company.

From an environmental efficiency standpoint, the company benefits; it does not have to over-produce and over-stock products because demand is confirmed. This model presents a streamlined approach to production, as supply meets demand exactly, thus reducing extraneous material in the production cycle.

Spotlight: LEGO CUUSOO

LEGO CUUSOO: This LEGO offshoot is an online platform, created through a partnership between the Japanese company CUUSOO and The LEGO Group in 2008, which allows users to submit ideas for LEGO products to be turned into potential sets available commercially, with the original designer receiving 1% of the royalties.

LEGO CUUSOO engages consumers in a new way by including them in the design process and sharing revenue. The revenue sharing agreement incentivizes existing and new consumers to interact with the brand.

While there is no sustainability intent behind this example, if scaled, it could streamline production and consumption.

Other Examples:

- **Threadless** is a t-shirt company that invites artists to create designs, which users vote on; the most popular ones go into production, and designers receive monetary compensation by the company.
- **Walkers**, the chip and crisp maker in the UK, experimented with this model in 2008 and now periodically allows consumers to create and vote on new flavors to put into production.

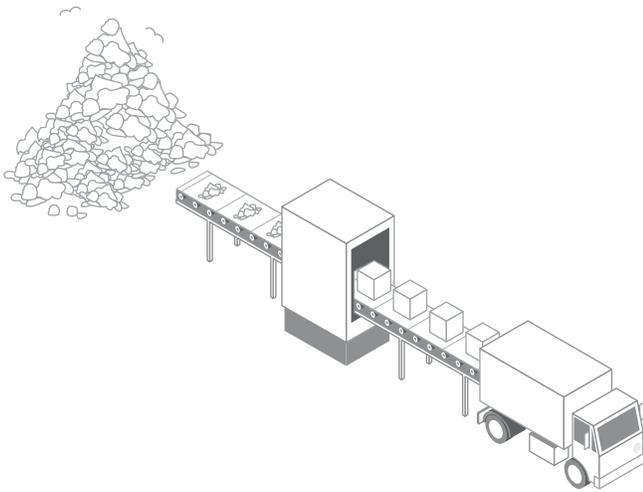


Environmental Impact

Rematerialization:

In this model, a company's source material is derived from recovering waste with which the company develops and markets a new output. This model differs from closed loop production in that the company is creating an entirely new product from the source material. This process often, but not always, requires complex technology to break down discarded material and remanufacture it.

Companies using this model have benefitted from an increasing focus by other businesses on eliminating waste to landfill. Businesses with reduced or zero waste to landfill targets are more inclined to pay to have their waste material repurposed so that they can reach their goals.



Spotlight: Waste Management

Waste Management: This North America-based company provides waste disposal and recycling solutions that divert waste from landfill, transform waste into higher value materials and create clean, renewable energy.

For example, due to its landfill-gas-to-energy efforts that recover naturally occurring gas inside landfills, Waste Management currently produces more than twice the amount of renewable electricity as the entire US solar industry. The company also has plans to invest in new recycling technologies, such as converting organic waste from the materials stream to make high-end compost for local growers.

Other Examples:

- **Knowaste** recycles disposable diapers and feminine hygiene products into plastic components, cardboard and construction filler.
- **Lehigh Technologies** takes scrap rubber from customers that have zero waste initiatives, processes it and resells it to consumer goods, construction, tire and flooring customers to make new products.
- **Rubies in the Rubble** takes surplus fruits and vegetables before they're discarded and makes them into chutneys that are sold in UK markets; in so doing, it provides employment to those struggling to get into the workforce.



Social Impact



Social Impact

Buy One, Give One:



TOMS Shoes donates one pair of shoes for every pair purchased.

Image: © Housewife Glamour

Companies using this model sell a specific good or service and use a portion of the profits to donate a similar good or service to those in need. Consumers are incentivized to purchase not only for the benefit of acquiring the new product, but also for the personal uplift that comes from feeling generous. These models often depend on a strong brand story to draw in consumers and to ensure that they spread the word.

The model has been used most frequently by consumer goods companies, in particular the apparel and accessories space, whose consumers use their purchases to express their style, and as a platform for sharing information on the benefits provided to others through those purchases.¹⁶

Companies using this model usually make donations by setting aside a share of the profits. The companies charge a premium for their product or accept a lower profit margin with the hope of selling more units because consumers are attracted to the cause.¹⁷

This model differs from the traditional corporate separation of the business and its philanthropic efforts, often through a foundation arm. It explicitly builds social impact into the business, so that it is front and center, rather than something that occurs after shareholders have been compensated.

While growing in popularity, the model has come under fire for its social impact claims; some see the product donations made through these models as overly simplistic approaches to large, complex social problems.

Spotlight: 2 Degrees

2 Degrees: This company sells nutrition bars direct to consumers and through retail outlets. For every 2 Degrees bar purchased, the company provides a meal to a hungry child. The company does this by forming partnerships with nonprofit organizations that provide food assistance through health clinics, schools, and community groups in areas where children are suffering from malnutrition or chronic hunger.

A box of nine bars sells for \$17.95 on the company's website. According to 2 Degrees' 2013 report, they have donated 767,688 meals. Where possible, the company reports, they donate meals that are produced locally, using local labor and

Other Examples:

- **SoapBox Soaps** donates one bar of soap for each purchased with the hope of spreading good hygiene among low-income populations.
- **TOMS Shoes** donates one pair of shoes for every pair purchased.



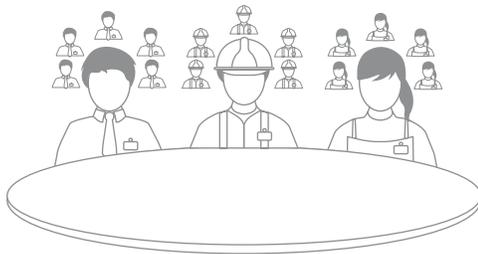
Social Impact

Cooperative Ownership:

A business that is owned and managed by members is called a cooperative or co-op. Members can be retail consumers, users of services, tenants (housing co-ops), savers and borrowers (credit unions) or employees.¹⁸ Whereas a traditional shareholder model focuses almost exclusively on meeting investor expectations, a cooperative model often takes broader stakeholder concerns into account, including those of employees, customers, suppliers, the local community and in some cases, the environment.

The novel form of exchange here is the distribution of greater value to more stakeholders in the company ecosystem.

From a social impact standpoint, co-ops often excel because their structure allows for distributed—and often more equitable—decision making, profit sharing and power sharing. Cooperative worker models often provide a sense of ownership to employees, who are incentivized by playing a direct role in profit generation and profit sharing. Cooperative retail models often pay members dividends or offer members in-store discounts.



Several co-op models, like The Co-operative Group and Fagor, part of the worker co-op Mondragon, have recently come under fire for ethical issues or financial mismanagement. The non-hierarchical structure of co-ops can translate into fewer checks and balances than more traditional ownership structures.¹⁹

Spotlight: Ocean Spray

Ocean Spray: Many who drink the juice sold by Ocean Spray probably do not realize that the company, which brings in around \$2 billion in revenue each year, is an agricultural cooperative of 750 cranberry and grapefruit growers. These farmers are the only shareholders in the company.

As a result, Ocean Spray's farmers are paid well for the fruits of their labor; whereas the market price for a barrel of cranberries in 2009 was \$20, Ocean Spray farmers received \$64 a barrel. CEO Randy Pappadelis explains, "We seek to pay as much for those cranberries as we can, to compensate our grower-owners...the model validates the value of goodwill."²⁰

Other Examples:

- **Amul**, a dairy cooperative in India, is comprised of three million milk producers.
- **The Co-operative Group** in the UK is owned and run by more than 7.2 million members.
- **John Lewis Partnership** is an employee-owned UK company which operates department stores, Waitrose supermarkets and some other services.
- **REI** is a private US-based retail company structured as a consumer cooperative.
- **Vancity** is a financial co-op in Canada with nearly 500,000 member-owners.



Social Impact

Inclusive Sourcing:

As companies consider their impacts outside of core operations, one of the first targets is the supply chain. Setting supplier standards or conducting audits are first steps toward sustainable sourcing, but others go even further. They retool their supply chains to make them more inclusive, focusing on supporting the farmer or producer providing the product, not just the qualities of the product sourced (e.g., organic palm oil, sustainable timber).



Inclusive sourcing is helping increase learning and access for smallholdings and building stronger links across the supply chain.

Image: © Bread for the World, Flickr

Inclusive sourcing often means working with small farmers, which can require more effort on the part of large corporations. But, working with smallholders and local farmers creates market connections, increases farmer learning and access, and makes for stronger links in the supply chain overall.²¹

Building inclusive supply chains can also help build reputational value for large companies, but beyond that it can help companies gain legitimacy in local markets and create more 'ethical' products. The benefits can translate into better traceability and supply consistency through stronger supplier relationships.

Last year, we witnessed in rapid succession the collapse of a Bangladeshi apparel factory and a factory fire—examples of supply chain disruption and reputational damage due to a lack of attention to supplier livelihoods. Some companies have realized that it is smart business to practice inclusive sourcing to avoid disruptions like this, bolster reputation, and strengthen supply chains.

Spotlight: Walmart

Walmart: For several years, Walmart has had a plan in place to source more food directly from farmers, cutting out middlemen and enabling farmers to boost their income. In some countries, this has meant fresher, more local produce for customers.

Part of Walmart's plan includes providing training to one million farmers and farm workers in crop selection and sustainable farming, as well as a goal to increase small- and medium-sized farmer income by 10-15%. By sourcing directly from farmers, Walmart aims to strengthen local farms and economies.²²

Other Examples:

- **Interface**, the carpet tile company, sources discarded fishing nets from small fishing villages in the Philippines to make its Net Effect carpet line.
- **Novelis'** aluminum processing center in Ho Chi Minh, Vietnam will source from local low-income trash collectors.
- **Sylva Foods** is a Zambian SME that aims to grow demand for and increase sales of traditional Zambian foods by working with rural farmers; retail shelves in Zambia are currently dominated by imported food products.



Financial Innovation

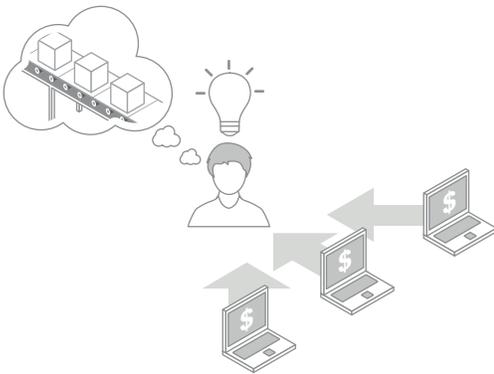


Financial Innovation

Crowdfunding:

Crowdfunding enables an entrepreneur or company to tap the resources of an entire network to raise money in increments from a group of people. This model upends the traditional financing approach, usually contingent on convincing accredited investors to make upfront financial commitments based on predicted near-term returns. That approach entails a certain level of risk on the part of investor and investee. Crowdfunding removes some of that risk for both parties.

There are several types of crowdfunding: donation-based, loan-based, and equity-based. Donation-based crowdfunding enables supporters of an idea to donate money and, as an incentive, to receive a non-monetary gift, such as the product initially funded, public acknowledgement, or the sense of being part of a community. Loan-based funding is neither a donation nor an investment; it is a loan to an entrepreneur that is returned without interest. Conversely, equity-based funders give money with the expectation of receiving a monetary return (this kind of crowdfunding is currently under review by the Securities and Exchange Commission (SEC) in the US and the rules governing such investments are expected to be announced in 2014).



Crowdfunding enables alternative ideas that might not otherwise attract mainstream investor attention to gain traction. They often have a community development angle or social impact element. And, like the co-operative model, the traditional power structures are upended.

This model differs slightly from *innovative product financing* (see page 34) in that it is focused on funding an idea or enterprise for the founder/entrepreneur/organization, rather than financing a product for a customer.

There are now hundreds of crowdfunding platforms for everything from disaster relief to creative projects and green community projects.

Spotlight: Community Sourced Capital

Community Sourced Capital: This online marketplace provides a platform for small businesses to source capital from those in their communities. Businesses create campaigns that run on the CSC site, and the CSC team manages the platform and conducts due diligence on participating businesses. Community members fund part of a larger loan by buying a Square, a \$50 unit of the larger loan made to the business. The Square is a simple loan that is meant to be repaid in full, without interest.

CSC charges businesses that use their platform a \$250 fee before launching a campaign and a \$100 monthly fee until the loan is repaid. To date, the company has funded business improvements and innovations for 12 companies in Washington state.²³

Other Examples:

- **Fundly** offers individuals the chance to raise money for medical procedures, schooling or charity.
- **Kickstarter**, the world's largest crowdfunding platform, focused on creative projects.
- **Mosaic**, is a solar project funding platform.



Financial Innovation

Freemium:

In this business model, a proprietary product or service (often software, media or web services) is provided free of charge, but money (premium) is charged for “premium” features, functionality or virtual goods.²⁵ A freemium model is sometimes used to build a consumer base when a critical mass is needed to make the product valuable to consumers.

Social networks, like Twitter, Facebook and LinkedIn all use this model to build a user base, and only in later stages do they offer paid services or advertising opportunities.

Offering the product or service for free creates engagement with the brand. Often early adopters of the product or service inadvertently provide a free marketing function for the company as users spread the word within their networks and encourage others to participate.

Although this model, when evaluated independently, doesn’t necessarily offer greater impact, it has been utilized to extend product lifecycles and incentivize engagement by customers, as seen in the example below, which is why it has been included in this list.



Spotlight: FreedomPop

FreedomPop: This company began as a free wireless Internet provider and has recently expanded into the mobile telecom service space.

FreedomPop’s phone service removes the traditional contractual arrangement with a mobile telephone service provider and enables customers to purchase a discounted phone or use an existing phone—without a contract—and make a limited number of calls and text messages for free using voice-over IP (VOIP) service. Customers have the option of adding data and additional minutes for low monthly fees.

FreedomPop’s model is unique in that it only sells refurbished smartphones, several generations old. Customers get a “new” phone for much less money than they would pay for a phone attached to a contract. The company also has a partnership with Sprint that enables customers whose Sprint contracts have expired to activate their phones without monthly fees using FreedomPop’s US network.²⁶

The company extends the product lifecycle of mobile phones—providing an interesting use case for older phones—and presents a disruptive model for the traditional cellular phone lock-in contract model.

Other Examples:

- **SolarCity** designs, installs, finances, and maintains solar systems; in 2013 they started offering Energy Explorer software to customers for free so that they can pinpoint home inefficiencies and understand possible cost and savings improvements.
- **TextNow** sells refurbished smart phones and offers commitment-free phone plans to help cost-conscious customers save money.



Financial Innovation

Innovative Product Financing:

In this model, consumers lease or rent an item that they can't afford or don't want to buy outright. Often, the lease agreement can lead to ownership, which is sometimes called "progressive purchase."

While this model is not new, it is being used in innovative ways for environmentally friendly products—it is particularly popular in the renewable energy industry—and for positive social impacts.

The model has similarities to *product as a service*, but is distinguished by a focus on innovation within the financing component.

Spotlight: Simpa Networks



Simpa sells distributed energy solutions on a "progressive purchase" basis to underserved consumers in emerging markets.

Image: © Simpa Networks

Simpa Networks sells distributed energy solutions on a "progressive purchase" basis to underserved consumers in emerging markets.

Currently operational in India, Simpa's goal is to transform the market for solar energy systems. Customers make a small initial down payment for a high-quality solar photovoltaic (PV) system and then pre-pay for the energy service, activating their systems in small user-defined increments using a mobile phone. Each payment for energy also contributes towards the final purchase price. Once fully paid, the system unlocks permanently and produces energy, free and clear.²⁷

Before Simpa came along, many of its customers had limited access to electricity and used kerosene lanterns—often dangerous to health, home and environment—to illuminate their space. Solar energy systems offer health, educational and income-generating benefits, but the traditional pricing model—\$200-400 per individual solar system—is not affordable for most low-income consumers. Simpa enables its customers to pay for a solar system over time. Because the Simpa system lasts 10 years, customers actually save money in the long run; Simpa has calculated that during that same period a customer might have spent \$1,500-2,000 on kerosene, candles, batteries or phone-charging.²⁸

Other Examples:

- **SunEdison** offers a power purchase agreement (PPA) to business and retail customers; there is no upfront cost to have a solar system installed; users pay for the electricity produced and used; SunEdison installs and maintains the equipment.
- **Sungevity** offers customers the option of leasing or buying a solar system; the company custom designs each system using an online system and satellite imaging technology.



Financial Innovation

Pay for Success:

This model employs performance-based contracting, typically between providers of a social service and the government, to fund anticipatory initiatives to prevent adverse outcomes. Often, private investment funds can be utilized to cover upfront program costs.

Typically, the government ends up paying for negative outcomes—they fund jails because crimes have occurred or ambulances to respond to health emergencies. Here, a government agrees to take part in a more anticipatory or preventative program to fund an evidence-based social intervention, and only pays a service provider if the agreed-on target outcomes are achieved, e.g., health improvement or reduced recidivism in prison inmates.

The intent is to save the government money and improve communities by preventing negative outcomes. This model opens the door for financing from private investors, encourages more efficacious use of government funds, and incentivizes better performance by product/service providers.

This novel exchange of funds comes with a guarantee of achieved outcomes.

Spotlight: Johnson & Johnson

Johnson & Johnson: The medical devices, pharmaceutical and consumer packaged goods manufacturer Johnson & Johnson (J&J) has experimented with its business model for Velcade, a drug targeting multiple myeloma, a form of bone cancer.

J&J offered the drug to European health ministries with a stipulation—if the drug is not effective in 90% of patients, the ministries do not have to pay for it.²⁹

J&J's experiment comes as the "blockbuster" drug model proves less and less sustainable. Drug companies often charge patients extremely high prices to recoup years of R&D expenditures. But, patients and insurance companies can find themselves in difficult financial straits when expensive drugs don't work. This model places the onus of drug performance and cost on the drug company.

Other Examples:

- **Goldman Sachs** is a funder in a social impact bond in New York City that supports reduced recidivism by youth released from Rikers Island prison.
- **Social Finance/Collective Health** are part of a social impact bond piloted in Fresno, CA that aims to improve the health of low-income children with asthma and reduce the costs that result from emergency treatments.



Financial Innovation

Subscription Model:

In this model, a customer must pay an ongoing fee, usually monthly or annually, to gain ongoing access to a product or service. The customer pays a fee, irrespective of product or service use, and the company receives recurring revenue and develops longer-term relationships with customers.

In some instances, the model is tied to the purchase and operation of an asset, where the consumer must pay an ongoing fee to make the asset operational. For example, a user buys a phone and then pays for the minutes to make it run. This model yokes the purchase of the product, often at a discount, to a monthly or yearly contract, to make the product work. The contract guarantees financing for the company in the future, so that it can make necessary investments in infrastructure.

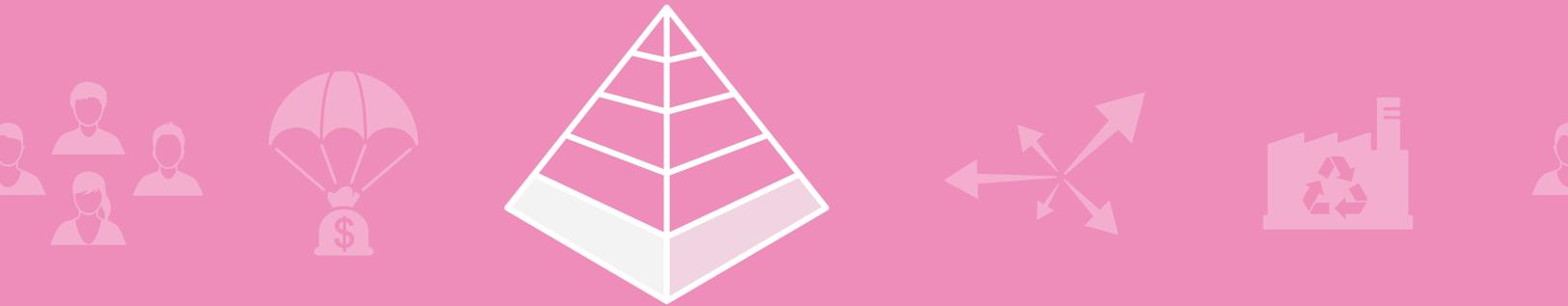
Spotlight: Better Place

Better Place: This now defunct electric mobility company attempted to revolutionize transportation and disrupt the global energy system by making car transport independent from oil. Better Place pioneered battery-switching technology and sold cars at a discount with the expectation that customers would then buy subscriptions for miles.³⁵

The company's success would have required a complete retooling of national driving infrastructure, and although the company failed, the business model innovation might work for other industries or help others innovate.

Other Examples:

- **Blissmobox** is a membership club that provides customers with a curated box of organic, non-toxic and eco products each month.



Base of the Pyramid



Base of the Pyramid

Building a Marketplace:

Companies using this model to build new markets for their products in innovative and socially responsible ways, including delivery of social programs, partnerships, adapting to local markets, and bundling with other services like microfinance and technical assistance. Here, the novel exchange manifests in the creation of a new market where there was none before.

Building a marketplace involves much more than merely creating and marketing a new product. In this model, consumers usually need to be educated about the product or service and how or why it might be of value.

Beyond consumer education, the company building the marketplace might also have to arrange for financing to enable a consumer to make the purchase, and educate and empower other stakeholders in the system, like distributors, community-based organizations or local banks. In some instances, companies create entirely new sales structures to facilitate the distribution of their product.

Spotlight: Novartis' Arogya Parivar

Novartis' Arogya Parivar: This multinational pharmaceutical company, known for drugs like Ritalin and over-the-counter medicines like Theraflu, Excedrin and Maalox, has combined education and sales efforts to create a for-profit initiative to improve health outcomes for poor, rural communities in India. Previously, many people in these communities have not had access to healthcare or have not been able to afford it. Novartis has tried to alleviate that challenge through the Arogya Parivar model.

Using a "1 plus 1 education" model, Arogya Parivar employs health educators who are trained in general health principles to educate a group of villages on a number of health topics, with the goal of creating faith in medicine. An accompanying supervisor educates doctors, service providers and pharmacies, and assesses an area's needs. Where necessary, Novartis seeks local partners to build up capacity to meet those needs.

Novartis has also had to consider its pricing structures. For this initiative, the company has made its medications available in small packs at affordable prices, in most cases not exceeding \$1.25 a week.

Novartis reports that the program broke even within 30 months, and they now have ambitious plans for expansion to other countries. By investing in an entirely new business ecosystem, Novartis has earned trust (and revenue) from a new group of consumers – 42 million and counting.

Other Examples:

- **CEMEX's Patrimonio Hoy** initiative uses a combination of microfinance, distribution innovation and sales training to reach 35,000 families with home construction materials.³⁰
- **MicroEnsure** provides micro-insurance to poor people in developing countries, often through partnerships with mobile phone providers, whose access to communities helps achieve scale across communities.



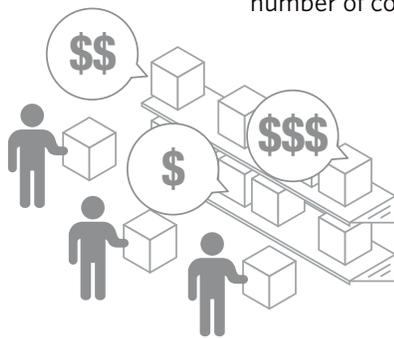
Base of the Pyramid

Differential Pricing:

Some customers are not willing—or able—to pay as much as others for the same product. Take seniors, for example, who are often on fixed incomes, and are offered reduced rates at restaurants, movie theaters or museums.

Realizing that customers might need the same product but have different payment thresholds, companies sometimes subsidize those who can't afford to pay as much by charging others higher prices. The airline industry has used this model for years by selling business class and economy tickets to fill a plane.

The model has most recently been put to use in developing world contexts where many consumers need essential services (e.g., health, education) but cannot afford the market price. Institutions that offer different prices enable access to a greater number of consumers from a range of economic levels.



Spotlight: Narayana Health

Narayana Health: This Indian hospital chain, dubbed “Walmart meets Mother Theresa” by Fast Company,²⁴ uses a pricing model that is focused on reaching the poor by treating the rich. Usually private hospitals in India build their model the other way around: they focus on the rich who can afford treatment. This hospital system was designed to service the poor from the start. These patients pay discounted prices for services like surgery and are subsidized by those who can afford to pay full price.

Narayana Health set up shop in Bangalore more than a decade ago, and now manages or owns hospitals in 14 other Indian cities. Its doctors service local patients as well as those farther afield, using Skype connections, allowing the service to reach 100 additional facilities in India as well as more than 50 in Africa.

The company also exploits every possible efficiency, negotiating for better prices from suppliers and cutting out middlemen.

Other Examples:

- **Aravind Eye Care System**, in India, provides free or subsidized care to two-thirds of its patients.
- **Novo Nordisk** sells insulin at or below 20% of the average prices for insulin in the Western world in the developing countries it operates within.



Base of the Pyramid

Microfinance:

Microfinance is the provision of small loans—and in some cases access to financial services more broadly—to low-income borrowers who do not have access to a traditional bank account.

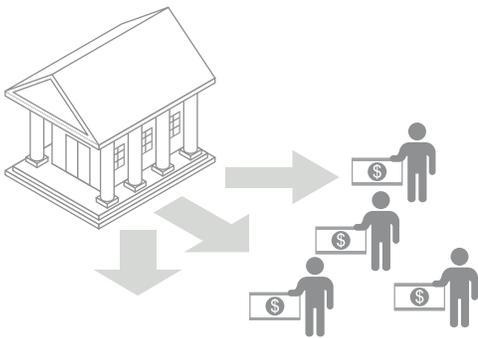
Banks are less inclined to give low-income customers loans because of the high associated costs with managing a small loan and the lack of collateral and credit history. Independent community moneylenders have served as a bank alternative in the past, but they charge borrowers exorbitant interest rates.

The model has spread widely in developing countries in the last decade as a way to advance financial inclusion and financial literacy.

Microfinance is often provided via a group lending system of 8-15 community members who vouch for one another to receive a loan. Dependent on social capital and networks within the group, borrowers are incentivized to repay their loans with interest to stay in the good graces of their neighbors.

Many believe that when microfinance loans are given to entrepreneurs and small businesses, it can alleviate poverty and drive greater prosperity for families and communities.

The microfinance concept has expanded to support the provision of housing loans, water and sanitation loans, and insurance.



Spotlight: WaterCredit

WaterCredit: A program of the non-profit Water.org, which was co-founded by Matt Damon and Gary White, provides access to safe water and sanitation in developing countries. WaterCredit uses microfinance loans to provide clean water and toilets to individuals and communities.

Low-income individuals who live in informal communities and slums often have to pay premiums to access clean water because they are not connected to the municipal water system. WaterCredit starts from the premise that there are many people who can, and want to, finance safe water and sanitation if they are able to pay for these services over time, as well as have a voice in their development and operation.³¹

To date, WaterCredit has provided \$34 million in loans, with the average loan size \$179. The program has had a 99% repayment since 2007.

Other Examples:

- **Equitas** is a Chennai, India-based microfinance institution that extends microcredit to people who are otherwise unable to access finance from mainstream banking channels.
- **Jamii Bora Bank** is a fast-growing microfinance bank in Kenya.



Base of the Pyramid

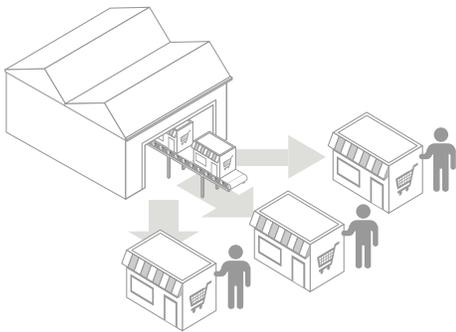
Micro-Franchise:

This model leverages the basic concepts of traditional franchising, but is specifically focused on creating opportunities for the poor to own and manage their own businesses.

This model has become popular in developing economies where it is often risky to start a small business. Sometimes called a “business in a box,” the micro-franchise model entails less risk for the would-be entrepreneur because it utilizes a tried and tested model.

Several multi-national companies, including Unilever and SC Johnson, have piloted this model to reach new customers in hard-to-reach areas or to access a new, lower-income customer base.

The advantages of using the micro-franchise model for a large company include the utilization of a workforce with extensive local knowledge and networks, the financial empowerment of community members who can later become customers, and the establishment of local brand ambassadors.



Here, as in the *inclusive sourcing model*, the exchange between company and employee becomes much more dynamic than merely a payment for services—both are incentivized to engage more deeply. With a micro-franchise model, the knock-on benefits are felt within the company’s value chain as well as within the communities the company operates within. Employees gain more than a job—they become entrepreneurs.

Spotlight: Fan Milk Limited

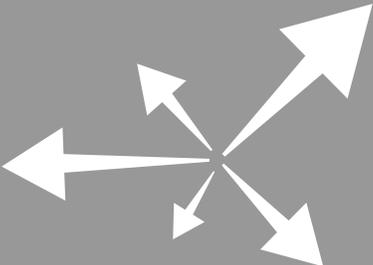
Fan Milk Limited: Fan Milk is a West African dairy business, started by a Danish entrepreneur in the 1960s. The company uses a network of vendors to distribute its products to more than 200 million people across seven countries in West Africa.

Fan Milk offers micro-franchise opportunities to people in local communities to become bicycle vendors. The startup cost is the equivalent of about US\$22 for a Fan Milk bike, which is equipped with a cooler, and vendors must buy the products they will sell each day up front. Fan Milk offers vendors free bike repair, training on product handling and hygiene, and prizes for being high-sellers. It also requires its vendors to save a portion of their earnings each day.³²

Last year, Fan Milk sold \$166 million of dairy products. In October 2013, Danone and a Dubai-based private equity firm announced their intentions to acquire it.³³

Other Examples:

- **Hapinoy**, a Philippine network of small consumer goods stores, uses a conversion micro-franchise model which transfers existing businesses into members of a standardized network.
- **SC Johnson’s Community Cleaning Services**, a Nairobi-based program, creates income generating opportunities and drives sanitation improvements by delivering more hygienic toilets at an affordable cost for low-income clients.³⁴
- **Unilever’s Project Shakti** is a rural distribution initiative providing employment to over 45,000 women in India.



Diverse Impact



Diverse Impact

Alternative Marketplace:

An *alternative marketplace* occurs when a firm circumvents a traditional method of transaction or invents a new type of transaction to unleash untapped value. Alternative marketplaces can reveal unused resources, disintermediate hierarchical systems, and in unique cases, create new channels for exchange. The model often, but not always, manifests through technology network innovations, like using the Internet to make a marketplace more transparent or using cellular phones to transform airtime into money.

Ultimately, alternative marketplaces provide a platform for exchange that matches unused supply and unmet demand.

While alternative marketplaces are not inherently more sustainable than other marketplaces, entrepreneurs are increasingly using this business model type to increase social and environmental impacts.

Spotlight: ITC e-Choupal



Farmer weeding maize field in Bihar, India. ITC's e-Choupal terminal is now providing farmers direct access to markets previously inaccessible.

Image: © CIMMYT, Flickr

ITC e-Choupal: This rural agribusiness arm of the Indian conglomerate ITC provides Internet access and market pricing information that can boost farmers' earnings and eliminate middlemen through a technology terminal called an e-Choupal. For over a decade, ITC has placed 6,500 e-Choupals in 40,000 villages servicing more than 4 million families.

e-Choupal works by breaking down the information asymmetry that has long hindered rural farmers. Further, it incentivizes farmers to work with ITC. These farmers previously had little negotiating power when they sold their goods because their only option was the government-mandated marketplace—the *mandi*.³⁶ ITC's e-Choupal has enabled access to market pricing information for farmers, giving them the choice of when to sell their crops and for how much.

e-Choupal began as an agricultural commodity sourcing business, but has evolved into a gateway for rural communities to connect to goods and services providers. The model has strengthened ITC's agribusiness supply chain and its relationships with farmer communities—e-Choupal brings in 40% of the revenues in the agribusiness division—and increased growth for the packaged foods side of the business, while offering farmers choices and reforming the *mandi* system.

Other Examples:

- **ezetop** enables people living abroad to send mobile phone top-up instantly to family and friends in over 100 countries.
- **OneMorePallet** helps small businesses find available space in freight trucks.
- **Safaricom's M-Pesa** enables low-income Africans who can't access bank accounts to transfer money via their cellular phones.
- **Tesla** circumvents the traditional car dealer sales model and sells direct to consumers.



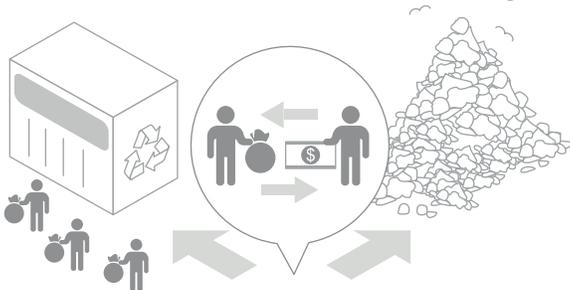
Diverse Impact

Behavior Change:

Convincing consumers to change their behavior is a significant component of the sustainability agenda. Business models designed to stimulate behavior change for sustainability are a relatively new concept, but demonstrate that profitable models can coincide with decoupling from resource use. These models aim to reduce consumption, change purchasing patterns or modify daily habits. Most often, they empower consumers with knowledge about their consumption, helping them track product or service use, often using game dynamics to create competition between customers.

In the model, the nature of the transaction between consumer and company becomes nuanced: it is less about selling more goods or services and more about building brand trust and engagement. Companies employing this model aim to increase “stickiness” with the customer, making him or her less likely to buy from another good/service provider.

The fundamental challenge for behavior change business models is to find a way to drive revenue growth while continuing to encourage a decrease in consumption. The apparel brand Patagonia has experimented with behavior change marketing in recent years, by encouraging consumers to buy less and repair more. However, because Patagonia is a private company, it’s hard to know if the company’s bet has resulted in greater revenues or greater loyalty.



Spotlight: Opower

Opower: This software company partners with utility providers around the world to promote energy efficiency among energy users. Opower helps utility companies capture and analyze large datasets to create business value, and offers various platforms for consumer engagement to help them understand their energy bills and encourage them to save energy, save money and reduce carbon emissions.

Opower’s business model is directly tied to the amount of behavior change it drives. By empowering consumers with knowledge about their energy consumption, and by leveraging proven behavior-changing techniques (e.g., social proof, commitments, and fear of loss), the company is changing the way people think about their energy use and driving further engagement between the consumer and the utility.

The company is now serving more than 90 utilities—including 8 of the US’s 10 largest utility companies—and it reaches more than 22 million homes around the world.

Other Examples:

- **Recyclebank** rewards people for taking “green actions” with discounts and deals from local and national businesses.



Diverse Impact

Product as a Service:



Rolls Royce plc handles service and maintenance of its products through a TotalCare model focused on achieving outcomes for each customer.

Image: © onesevenone, Flickr

Frequently, when consumers buy a product, they assume the responsibility for disposing of it. How many of us have old cell phones piled in a kitchen drawer because we are not sure how to safely throw them away?

In this model, consumers pay for the services that a product provides without the responsibility of repairing, replacing or disposing of it. The company takes ownership for the lifecycle of the product whereas that responsibility was previously transferred to the consumer.

This model shifts the burden of product repair and replacement to the company, and offers customers top product performance at all times, creating more accountability within the broader system for product disposal, and higher likelihood of product repair, reuse and recycling.

Spotlight: Hilti

Hilti: Operating across the United Kingdom, Hilti develops, manufactures and markets products, such as power tools, for the construction and manufacturing industry. Its primary customer is the professional contractor. Seven years ago, the company decided to diversify its offer with the Fleet Management tool program. Instead of selling tools, the program provides the service of tool use, allowing contractors to replace tools at any time and an evaluation system to calculate tool use and age, insurance to cover theft, and anytime-replacement, all for a monthly fee.

Other Examples:

- **re.source** offers a monthly membership fee for waste collection services and processing of waste into useful products such as organic fertilizers and energy.
- **Rolls Royce plc**, the aerospace, power systems and defense company, handles service and maintenance of the products it manufactures; rather than charging per transaction, the company uses a TotalCare model focused on achieving outcomes for each customer; service provision comprises between 43-64% of annual revenue in each business unit.
- **Xerox**, for several years, has been making the transition to a services-based company, away from being solely a hardware provider.



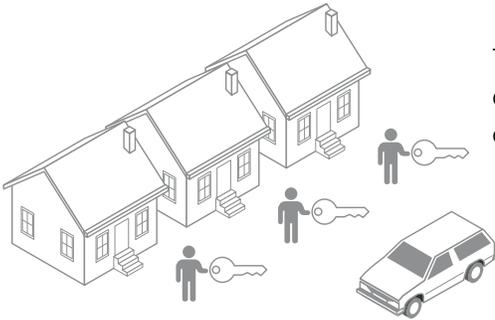
Diverse Impact

Shared Resource:

The sharing economy has changed the way consumers think about ownership and created a new level of engagement between perfect strangers in cities around the world.

Shared resource models enable customers to access a product, rather than owning it, and use it only as needed. Because the product is shared, the model enables efficient, productive use of a resource that might otherwise sit idle.

This model differs from *product as a service* in that usually product users depend on the participation and good behavior of other users for the model to operate effectively.



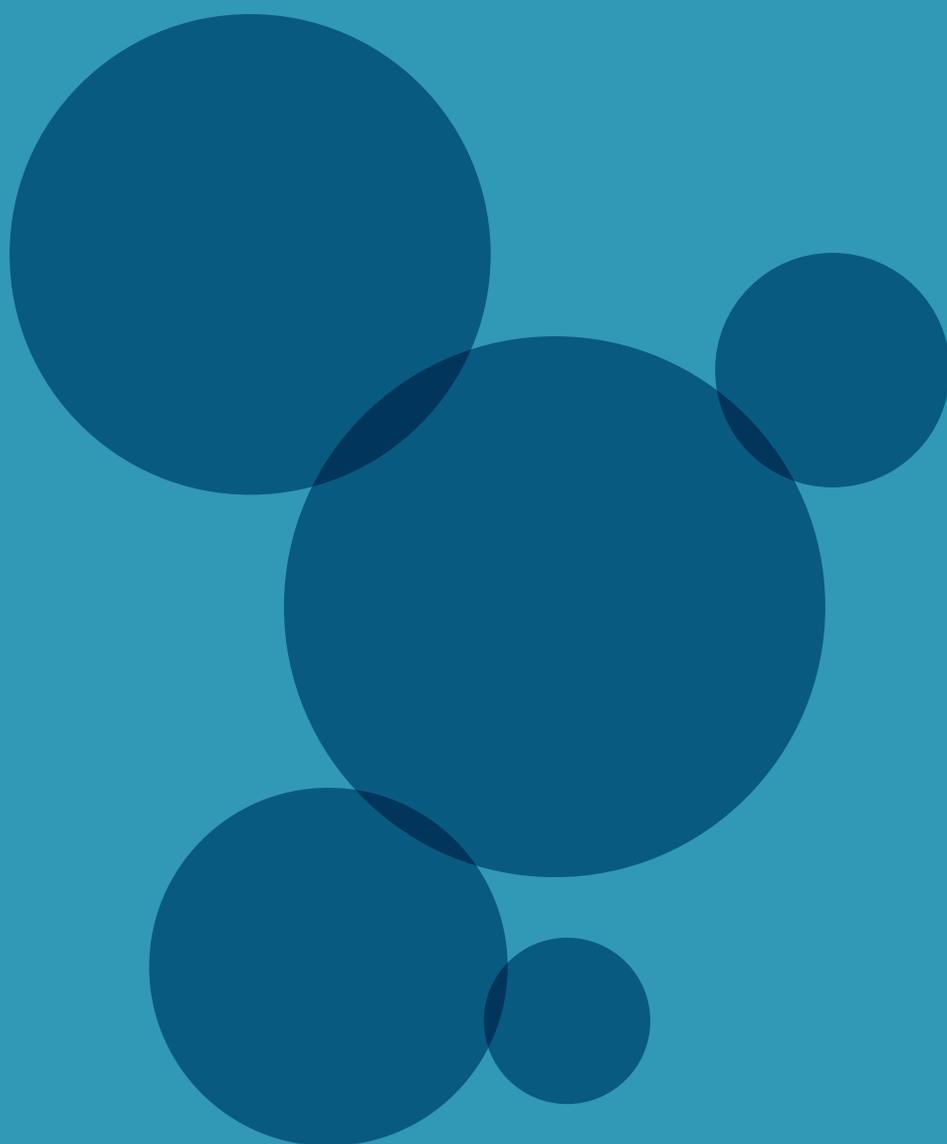
Spotlight: Fon

Fon: Fon attempts to solve the challenge of Internet accessibility for consumers while they are away from their home, office or other readymade Internet networks. Fon allows home WiFi users to safely share a signal with others through a Fon Spot and in return use others' networks while away from home. All the Fon Spots together create a crowdsourced network where everyone who contributes connects for free.

Other Examples:

- **AirBnB** provides a platform for those with an empty room or apartment to rent it out on a short-term basis.
- **ParkatmyHouse** enables those with an available parking space, garage or driveway to rent it out to others in the community.
- **RelayRides** allows private car-owners to rent out their vehicles via an online interface.
- **Zipcar**, bought by Avis last year, is a member-based car-sharing company.
- **Zilok** provides a platform for owners of things like cameras, cars, or drills to rent them to others.

Patterns: Industry, Geography, Size and Type of Innovation



Patterns: Industry, Geography, Size and Type of Innovation

We catalogued over 100 examples of business innovations, but when we took a closer look, several of them were actually product and process innovations. We culled our list to 87 business model innovation examples and arrived at the following conclusions.

Business model innovators tend not to be Global Fortune 500 companies.

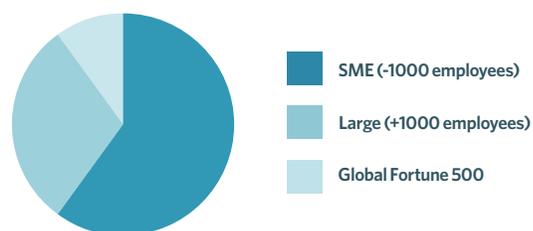
Over half of the companies that demonstrated business model innovation were small- or medium-sized (less than 1,000 employees) such as startup businesses like ParkatMyHouse, based in the UK, and Simpa Networks, based in India. Only seven of the 87 companies evaluated are members of the Global Fortune 500.

Over half of the companies that demonstrated business model innovation were small- or medium-sized.

Within this small cohort from the Global Fortune 500, the business model innovations observed are all transformations of an established model, but are mostly limited in scope to a small segment of the business. For example, in 2012, Starbucks launched a pilot with The Climate Group and researchers at the City University of Hong Kong to experiment with the rematerialization of coffee grounds and uneaten baked goods into new products, like “detergent ingredients and bio-plastics that can be incorporated into other useful products.”³⁷ Although the partnership is a pilot, it holds promise for a new business model transformation that would create value and a new source of revenue in the future for Starbucks.

Chart 1:
Business model innovations
by company size

Percentage of examples



Most business model innovations come from the ground up.

More than three-quarters of the companies we reviewed demonstrated a more sustainable model from the start (or “from scratch” as we’ve called it), rather than as a transformation of an established business model. It is clearly easier to build a new model that takes social and environmental concerns into account from the ground up, rather than trying to transform a pre-existing model already in operation—to put it simply, few want to try juggling while riding a bike.

Patterns: Industry, Geography, Size and Type of Innovation

More than three-quarters of the companies we reviewed demonstrated a more sustainable model from the start.

Some large companies (those with more than 1,000 employees) have explored business model transformations in parts of their businesses with varying levels of success. Until a few years ago, Panera Bread, the St. Louis-based restaurant chain, had a traditional food retail business model, similar to Starbucks, Chipotle or Dunkin' Donuts. Customers see a price on a menu and pay that amount to get the item they want. But, in some select locations, including 48 St. Louis area stores, Panera has experimented with a pay-what-you-want concept for certain menu items. A customer picks the item she wants and pays what it is worth to her. Panera's CEO hoped that the model would benefit hungry customers who might not be able to afford a sandwich, and that costs would be offset by more generous customers. The model depended on social capital and trust between consumers and the brand in order to work.

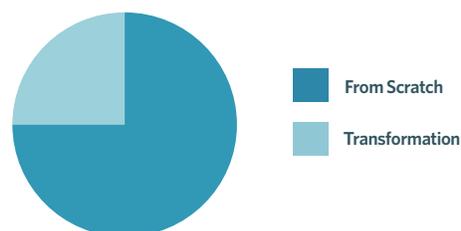
Unfortunately, Panera found that the model didn't have the desired effect of helping the hungry. Without the right marketing, the needy were not aware of the program, and employees stopped explaining it. Media outlets report that the company may retool the idea before bringing it back to stores.³⁸

Panera demonstrates that not all business model transformations will work. That said, those transformation attempts provide tremendous opportunity to learn about consumers and test ideas. On that front, there appears to be a group of emerging pioneers from which other companies can learn. Large companies that are building base of the pyramid businesses into scalable endeavors may be ones to watch as these experimental parts of their businesses grow to comprise more revenue. Novartis' Arogya Parivar, for example, started as a pilot operating only in South India, but has now spread to 10 states and reaches over 40 million people. The program has recently expanded to Kenya and Vietnam with plans in place to open in Indonesia.

Likewise, Cemex, the global materials and construction company, has built a successful new marketplace in Central America through its program Patrimonio Hoy, which provides housing microcredit. The 15-year-old program has helped more than 35,000 families finance the construction of new homes.³⁹

Chart 2:
Most business model innovations start from scratch

Percentage of examples



Patterns: Industry, Geography, Size and Type of Innovation

Business model innovation benefits from technology use.

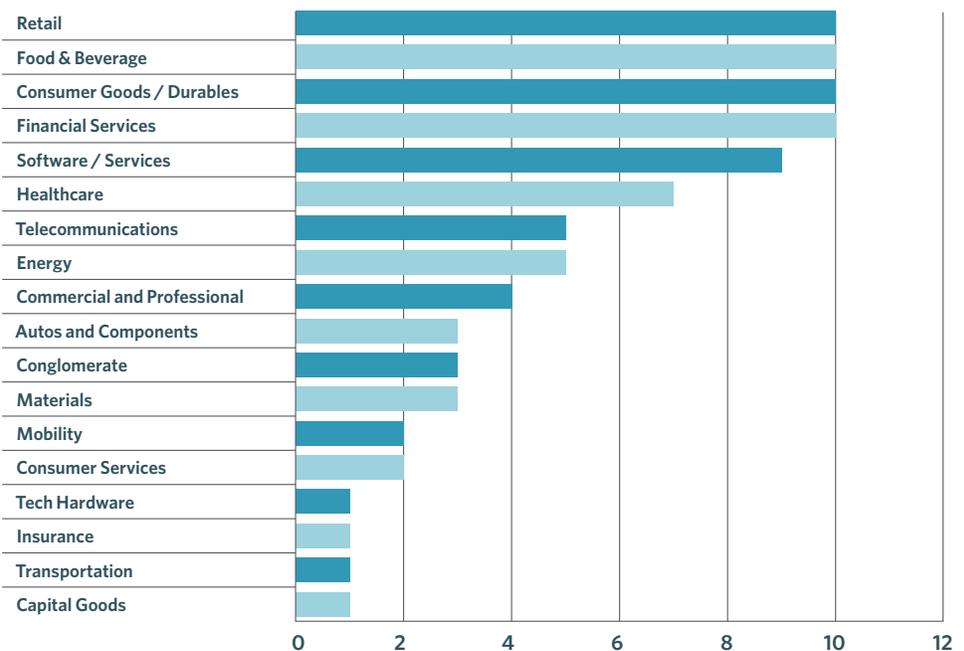
Business model innovation examples occur across industries, but within our sample they were most prevalent in retail, food & beverage, consumer durables, and financial services, which together comprise just over a third of the companies we reviewed. However, within those industries, the models in use are diverse, making it difficult to find patterns unique to any industry.

What we do see is the increasing utilization of technology to bring innovation across industries. For example, the retail apparel arena is now peppered with new online marketplaces, like Bonobos, Threadless, MUD Jeans, or Patagonia's CommonThreads initiative with eBay. In the materials industry, RecycleMatch creates a market for discarded yet recyclable material from large companies by using an online platform to match latent supply and demand. In the transportation/shipping industry, OneMorePallet uses its online platform to find empty spaces in freight trucks and auction the spaces to buyers. All use technology—particularly the Internet—to match supply and demand.

Of course, not all prevalent models are technology dependent. Plenty of innovation is happening in healthcare, largely due to experimentation with delivering affordable services to low-income customers in developing countries. This is seen in the *differential pricing* models used by Novo Nordisk and Narayana Health; *building a marketplace* by Novartis' Arogya Parivar; or *innovative product financing* used by Vestergaard's LifeStraw.

However, the ability to measure, track and connect instantly using technology is likely to be a major disruptive innovation across multiple industries and, if present trends continue, is likely to yield even greater innovation in years to come.

Chart 3:
Business model innovation
by industry



Number of examples

Patterns: Industry, Geography, Size and Type of Innovation

Alternative marketplaces, cooperatives, microfranchises appeared most frequently.

In part, this project started because we had grown weary of hearing Zipcar cited as the ultimate in business model innovation. The concept of the sharing economy excites us, but we felt that there had to be more to business model innovation. The results suggest our instinct was correct, although sharing models did feature high on the list.

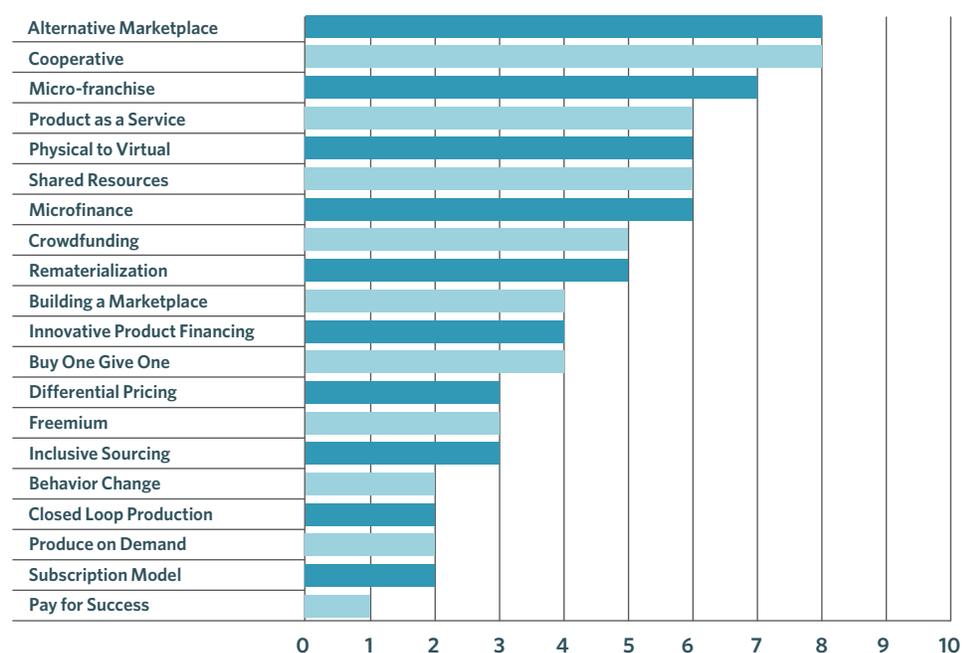
In fact, the *alternative marketplace* model appeared most frequently (tying with the cooperative model), perhaps because many of these models take advantage of relatively recent technologies like mobile messaging, remote sensing, and online networks. We hope to see more of these models emerge in the future, as they are extremely innovative, creating new currencies, circumventing traditional transactions, and reaching new stakeholders.

We also came across a surprising number of cooperatives, which, it turns out, come in all shapes, sizes and geographies. Cooperatives truly change the incentive system within a company, to make members—whether employees or customers—much more likely to feel invested in the company and its brands.

As companies try to expand through rural emerging markets, *micro-franchising* models appear often. Their turnkey approach to replicating a proven business model makes them a good match for low-income entrepreneurs who need good jobs, but may be averse to starting their own enterprise from scratch.

Lastly, *product as a service* models showed up frequently in our review. The transition from a product-sales model to a service-provision model may feel more comfortable for some companies for whom business model innovation becomes a matter of capturing and packaging their internal knowledge and experience to share with others. These models may be a natural evolution for large, hardware-driven companies where resource scarcity looms as a future challenge.

Chart 4:
Business model innovation
by type



Number of examples

Patterns: Industry, Geography, Size and Type of Innovation

Business model innovation can happen anywhere.

It's important to understand where business model innovation is finding a foothold. For this paper, we considered where the actual innovation takes place—in established, developed markets like the Netherlands, Spain, US and UK or in fast-changing developing markets like China, India or Kenya. In other words, even if a company is based in Europe, if the innovation in question is deployed in Mozambique, we consider it a developing world innovation.

Admittedly, the division is nuanced; yet there are distinct differences between the innovations prevalent in established economies versus those seen in less developed economies, and we wanted to understand what role geography plays in business model innovation.

We assumed that most of the business model innovations we came across would originate in the developing world because of the high incidence of path-breaking enterprises, the proliferation of creative new ventures spun out of established companies (e.g., Safaricom's M-Pesa, ITC's e-Choupal), technology penetration and the freedom of multinationals to innovate for new customer segments in these markets. However, the examples that emerged from our research were geographically diverse. In fact, about half (51%) of the business model innovation examples occurred in the developed world.

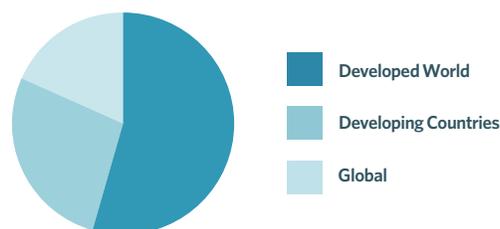
About half of the business model innovation examples (51%) occurred in the developed world.

Only a handful of innovations are global (i.e., both developed and developing world), leading us to believe that either it is difficult for companies to create new business models that can succeed in both the developed and developing world, or few have moved beyond testing and succeeding in one market to rolling out in the other. For example, Walmart practices inclusive sourcing with small farmers in China and the US. The company is innovating its business model globally, but the processes and pricing models are no doubt very different.

It's clear that business model innovation for sustainability can happen anywhere. It's not limited to wealthier countries or dependent on frontier marketplaces, but is likely more successful when focused on a particular marketplace.

Chart 5:
Business model innovations
by geography

Percentage of examples



Patterns: Industry, Geography, Size and Type of Innovation

Not all innovation is truly business model innovation.

Sometimes, what appears to be business model innovation is in fact, process or product innovation. In searching for business model innovation examples, we found that roughly two-thirds of the examples did, in fact, include a novel form of exchange somewhere along the value chain. The other cases demonstrated process or product innovation—worthwhile innovations, without a doubt, but just not the ones we explored for this report.

Evolving into business model innovation.

While the majority of business model innovation examples clearly involve the creation of a new model, there are a handful of notable examples that evolved from process or product innovation into business model innovation. For example, when SABMiller, the global alcohol beverage maker, entered Mozambique, the company discovered a new local, raw material to make beer—cassava—a product innovation.

However, the company's website explains, as SABMiller began sourcing the cassava, it interacted with local subsistence farmers, paying them a wage that boosted income, thus creating a novel form of exchange within the value chain. Meanwhile, the government supported the effort by eliminating the excise tax on cassava beer.

Because of the tax break and its local sourcing efforts, SABMiller was able to sell the beer for 70% less than other similar beers in the marketplace making the beer an affordable alternative to informal/illicit alcohol, which causes a number of deaths from poisoning each year.⁴⁰ What began as product innovation transformed into business model innovation.

Models with the most potential.

This report highlights many types of business model innovations for sustainability, some of which are, no doubt, more catalytic than others. This comes from a model's ability to impact the systems that a company is part of while also functioning as a more commercially viable alternative to current models. As we reviewed and researched each model, we developed viewpoints on which models hold the most promise for catalyzing change while continuing to generate commercial value.

Four models that we believe have great potential for the future, and which large companies can consider as they experiment with business model innovation are *closed loop production*, *product as a service*, *inclusive sourcing*, and the *alternative marketplace*.

Closed loop production models present tremendous opportunities for companies to cut costs and meet ambitious sustainability waste goals, while significantly impacting the system. These models reduce the quantum of resources extracted from the system. Several Fortune 500 companies, like Alcoa, Maersk and Nike, are experimenting with these concepts on a product level—a move that could lead to further innovation at the process or business model levels.

Patterns: Industry, Geography, Size and Type of Innovation

We're also seeing several multinational companies (e.g., IBM, Rolls Royce plc, Xerox) experiment with *product as a service* models. This approach can reduce resource use and challenge companies to focus on product performance rather than product sales. Depending on what a company produces, transitioning to a more services-based model can be a more natural and gradual shift than some other models.

For companies that source products from small producers, either at home or abroad, *inclusive sourcing* begs a closer look. As detailed in our description earlier in this paper, while inclusive sourcing can require more effort and upfront investment, it can reap dividends in the future by stabilizing the supply chain, building brand loyalty, and creating a new, economically empowered consumer base. It can also have a dramatic social impact on the populations it serves.

Lastly, we are intrigued and excited by the concept of the *alternative marketplace*. Technology—Internet, mobile, big data—can be used by companies to create new markets which can enhance brand value and generate trust. We have seen Patagonia do this through its recycled clothing initiative on eBay. We have also seen the model drive new sources of revenue, as ITC e-Choupal has done in India, and create environmental efficiencies, as OneMorePallet has done.

Making Business Model Innovation Work

Despite the formidable barriers to business model innovation within large companies, the body of research and experience developed over the past decade about “where innovation works” offers a number of useful insights for companies looking to create new models.

1. Don't be afraid to question existing models.

The first step in building something new is having the courage to examine the current model—as business model thinker Patrick Stähler puts it, getting “all the tacit and unspoken assumptions on the table.” Challenging the dominant logic may, in fact, be the most difficult step, but it's the only way to move towards identifying new options.⁴¹

2. Be willing to try something new. If companies are best at maintaining what they already do, recognize that any true business model innovation will require building new skills and applying different capabilities. Innovators should be willing to let go of what made them successful in the past. Some experts recommend taking a “portfolio approach,” maintaining focus on what's worked before, but dedicating some percentage of resources towards development of entirely new business models.

3. Establish and protect an innovation culture. For business model innovation to succeed, some level of cultural support must be present within the company, or at least within a team responsible for innovation. This includes, but is not limited to, a mission and/or goals that promote the pursuit of innovative business models; the right management structure allowing for discussion and connection around innovation; incentives for identifying and cultivating breakthrough innovation; and an entrepreneurial mindset, with the ability to prototype, experiment, fail fast, and learn (as with the “lean startup” model).

4. Stay connected to the market. Business models are ultimately about the value delivered to customers. To innovate, companies must stay connected to ever-changing customer needs and market realities. It can be particularly helpful to understand local communities and their real needs and wants. Design consultancy IDEO, for example, has developed a strong competency around such “human-centered” design.

5. Remain open. In this age of transparency and hyper-connectivity, innovators can benefit from the opportunity to build new capacities and generate new ideas through alliances and sharing. Whether it's new public-private partnerships or crowdsourced innovation, companies have realized the benefit of extending their innovation network.

6. Take a structured approach. Corporate strategy is not a conceptual exercise, nor should it be done haphazardly. Likewise, any business model innovation effort should follow a disciplined, structured approach. While a variety of sound approaches have been developed by researchers and consultancies, the specific approach is less important than insuring that some structure has been introduced.

7. Be prepared to struggle. It may not be the case—and if it isn't count yourself as lucky—but expect that the innovation process will take some time and muddling. Build budgets and project timelines accordingly.

Patterns: Industry, Geography, Size and Type of Innovation

How Large Companies are Finding New Models

Transforming an existing business model is less common than innovating from scratch. As stated above, we see far fewer examples of business model innovation at companies with existing, profitable models. This is likely due to the complexity of transforming a working business model and the vested interests in the current model. Far more often, we observe companies that create business models that have interwoven social and environmental elements. The underlying reason is simple—it is far easier to build a more sustainable structure brick by brick than retroactively retooling a business' underlying framework.

Nevertheless, companies have found creative ways to innovate and experiment with new business models for sustainable outcomes by partnering with social entrepreneurs and using diverse channels to search for and experiment with new business models.

Social entrepreneurs have become a key cohort for sustainability practitioners to watch because they are at the forefront of sustainability. The 2013 Global Sustainability Survey produced by GlobeScan and SustainAbility found that sustainability experts view social entrepreneurs as leading the way on the sustainability agenda, ahead of scientists, NGOs, large companies and national governments.

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Social entrepreneurial ventures have the advantage of being smaller and more nimble than multinational companies, able to tweak their business models as markets change and incorporate social or environmental benefits into their models from the start. A recent Harvard Business Review blog, *Meet Your new R&D Team: Social Entrepreneurs*,⁴² identified social entrepreneurs as the “new R&D” for large companies, describing investments in social entrepreneurs as an important part of the innovation continuum. Indeed, companies seeking to enter emerging markets or source more ethically have benefitted from the on-the-ground intelligence, market expertise and strong relationships with suppliers that social entrepreneurs often have.

Another method of business model experimentation occurs via impact investments by companies. These investments, often led or facilitated by the corporate responsibility team, are one method of “de-risking” new market entry. As the above-referenced HBR blog mentions, this “reverses the traditional CSR model of giving back to communities that a business operates in, and places these investments at the front end of corporate innovation strategy.” The writer, Robert Fabricant of Frog Design, cites the investment by the Shell Foundation into social enterprise Husk Power Systems, a renewable rural electrification enterprise in India.

Patterns: Industry, Geography, Size and Type of Innovation

Companies have also created various means to find and invest in or pilot models that have more sustainable outcomes. Several companies have launched innovation platforms, such as P&G's "Corporate Platforms." Corporate Platforms is the new business "capability building organization" within P&G, with the responsibility and resources to disrupt existing models. Through this unit, P&G is exploring new technologies and smarter products.



BMW iVentures incubation strategy demonstrates how investing in innovation, although focused on achieving business value, can ultimately result in sustainable outcomes.

Image: © BastiaanImages, Flickr

One partnership, with a crowdfunding site called CircleUp, allows P&G to spot business model innovations and new consumer products early. Waste2Worth, another project emerging from Corporate Platforms, eliminates consumer waste to landfill in developing regions by extracting maximum value from waste, thereby stimulating economic development and sustainable infrastructure. At a Charmin plant in Latin America, Waste2Worth converts paper waste fiber into roof tiles, and waste from a site in China is being converted into fertilizer for planting trees.⁴³ These measures are small efforts, but could be viable models for future revenue streams and could help close the waste loop.

In-house venture funds also advance companies toward "the next big thing"—which just might be more sustainable. For example, BMW's iVenture arm, based in New York, incubates and invests in early- and mid-stage companies with high potential in the area of mobility services. Investments have included ParkatmyHouse, the "AirBnB of parking," MyCityWay, an app for all aspects of urban navigation and ChargePoint, an electric vehicle charging company.⁴⁴ While BMW iVentures doesn't claim to focus on sustainability, it is an ideal illustration of the happy collision of business value and innovation for sustainability. As BMW prepares for a future that may make car ownership unaffordable or inaccessible for many, the company is working to uncover the most innovative tools for the transportation of tomorrow.

Acquisitions also enable companies to co-opt more sustainable models. This trend is most evident in the automotive industry, which has embraced the disruptive waves caused by carsharing initiatives. Large corporations have acquired carsharing start ups (Avis bought ZipCar in 2013), launched their own car sharing services (Daimler, BMW and VW) and partnered to target new consumers (Toyota connected with a real estate developer in Tokyo to offer electric vehicle sharing in local condominiums).⁴⁵ We have also seen values-led food businesses get acquired by large companies interested in reaching a different consumer segment, often in pursuit of a healthier product portfolio or products with a more ethical brand; oft-cited examples include Unilever's acquisition of Ben & Jerry's, Group Danone acquiring Stonyfield Farm and Coca Cola buying a majority share of Honest Tea.

One of the exciting developments coming from corporate sustainability innovation leaders is the launch of dedicated R&D centers focused on innovation that can yield sustainable outcomes. Nike's "Sustainable Business & Innovation Lab,"⁴⁶ Levi's Eureka Innovation Lab,⁴⁷ and Philips' R&D unit⁴⁸ have all produced more sustainable products and processes that advance their understanding of sustainable design and innovation thereby making it more likely they will be at the forefront of business model innovation in the future.

Final Remarks

What are we to do with the 20 models identified in this paper? We hope that they will inspire, for a start, and spur creativity as business and sustainability leaders look across their own value chains for areas of opportunity and transformation.

But, if we're honest, we have to acknowledge that most of the large companies we work with are not changing their business models—many enjoy stable market positions and healthy returns, so it may be challenging to find a reason to shift what's working today.

Many business model innovations occur not as a result of deliberate effort to be more inventive, but rather as a byproduct of coming to terms with other trends and threats that a company faces. For example, Adidas, Nike, Zara and other footwear and apparel brands are only now looking deep into their multi-tiered supply chains to eliminate toxic chemicals as a result of discoveries by Greenpeace that waterways and communities were being polluted. Likewise, companies like Gap, Walmart, Kohl's, Target and Macy's are rethinking how they engage and support apparel factory owners—together they formed the Bangladesh Alliance for Worker Safety which mentions providing owners loans to improve safety—to prevent deadly accidents like the Rana Plaza factory collapse last year.

How can companies get ahead of the curve before an issue becomes urgent? How much destroyed value—lost resources, lost lives, lost sales, dilution of brand value—are we willing to accept? Business model innovation is an on-ramp to getting ahead of the curve.

When we started this report, we intended it to be a short primer covering a handful of models that seemed to hold promise for future sustainability. We have done much more than that. And yet, we haven't covered everything we would like to in this first effort. The questions and the models continue to surface. As such, we plan for this to be the start of a more in-depth exploration.

It's important to dig deeper. If business model innovation is indeed a key ingredient to transforming our economic landscape and improving social and environmental outcomes, it is worth understanding what drives it, what the most promising business models are, and what might compel a company to transform an existing model.

Final Remarks

We conclude the paper with as many new questions as answers:

- What incentives would help companies with commercially successful, but inherently unsustainable business models transform?
- How does the business model innovation process happen within a large company? Who drives it? Who needs to be involved?
- What does a more sustainable business model look like in each industry (e.g., Fast fashion? Coal-powered utilities? Food & beverage?)
- How can we grow the business models that are inherently more sustainable but not currently as commercially successful?

We will explore these and other questions as our research on business model innovation deepens.

What's Next?

From here we plan on holding roundtable discussions in several markets to share the ideas within this paper and evolve our thinking. We will also share some of the ideas and models within this paper in a blog series to be published with the *Guardian Sustainable Business*.

As noted earlier, we are seeking sponsors and partners to help shape and support further research on this topic. To share feedback, and/or to discuss partnership or sponsorship opportunities, please contact Lindsay Clinton (Clinton@sustainability.com).

Appendix

We reviewed business model innovation examples occurring at the following companies.

2 Degrees	Kickstarter	SC Johnson's microfranchise initiative
Aarstidarne	Knowaste	Simpa Networks
ACCION USA	LEGO CUUSOO	SoapBox Soaps
AirBnB	Lehigh Technologies	SolarCity
Amul	LifeStraw by Vestergaard Frandsen	SPUD
Aravind Eye Care System	M-Pesa by Safaricom	Starbucks
Better Place	MicroEnsure	SunEdison
Blissmobox	Mondragon Corporation	Sungevity
BMW iVenture	Mosaic	Sylva Foods
Bonobos	Mud Jeans	Tesla Motors
BRAC	Narayana Health	TextNow
Care Hospitals	Netflix	The Co-operative Group
Cemex	Novartis Arogya Parivar	Threadless
eBay Inc	Novelis	TOMS Shoes
Equitas	Novo Nordisk	Unilever's Project Shakti
ezetop	Ocean Spray	Vancity
Fan Milk Ltd.	OneMorePallet	Grameen Telecom's Village Phone
Fon	Opower	VisionSpring
FreedomPop	OwnMutually	Walmart
Fundly	Panera Bread LLC	Warby Parker
GiveForward	ParkatmyHouse	Waste Management, Inc
Grameen Bank Group	Patagonia	Water.org's WaterCredit
Hapinoy	re.source	Xerox
Hilti Corporation	Recyclebank	Zilok
Indian Coffee House	RecycleMatch	Zipcar
IndieGoGo	REI	
Interface	RelayRides' GM partnership	
ITC e-Choupal	Rolls Royce plc	
J&J's Velcade	Rubies in the Rubble	
Jamii Bora Bank	SABMiller	
John Lewis Partnership	Sarvajal	

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