



# BUSINESS INSIGHTS FOR ACTION

IXL White Paper Series

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## Making Sustainability Innovations Last Part 2

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**Making Sustainability Innovations Last**

The first article summarized some of the major drivers behind the sustainability trend. We also described three common success factors for building innovative sustainability businesses that were behind most of the Sustainability Innovations we examined: Patient Planning and Patient Capital, Passionate and Persistent Sponsors, and Profitable and Innovative Business Models. These success factors should not be surprising as they are common for any business innovation whether focused on sustainability or not.

The second set of insights we uncovered are related to how these innovations achieved more sustainable outcomes. In other words, what made them better for the environment than existing alternatives? Four primary “sustainability pathways” became apparent – 1) focusing on efficiency gains with non-renewable resources; 2) substituting more environmentally friendly materials, processes, or technologies without sacrificing performance; 3) creating simple but effective information collection and monitoring systems; and, 4) creating non-linear benefits across multiple stakeholders.

1) Do More With Less: Some examples focused on improving the efficiency of technologies that use traditional non-renewable resources. In doing so, these offerings will prolong our ability to use the finite amount of such resources. While not “silver bullets,” these incremental innovations are critical as they act as a bridge to technologies that can take full advantage of renewable resources that are either too new or too costly to be effective substitutes today. Furthermore, when such technologies are widespread, our systems and infrastructure will sip rather than

**Editor’s Note:** *This article is the second in a multi-part series adapted from IXL Center’s upcoming book **Sustainability Innovations – The New Ways Companies are Making a Difference and Making Money** by Dr. Hitendra Patel, Ronald S. Jonash, and Tyler McNally. The book features more than fifty examples of the best products, services or initiatives that simultaneously provide real value to customers, companies, and / or shareholders and improve the environment.*

guzzle, lowering the capacity and level of investment required in the future.

For example, as the world's first mass produced hybrid vehicle, the Toyota Prius achieves incredible gas mileage with a car that works with the existing transportation system. Though both Toyota and other car companies started work on alternative fuel vehicles at roughly the same time, the others have required many more billions of dollars and development years on full electric vehicles that require entirely new infrastructure and customer behavior. And while the other car companies have quickly rolled out hybrid options in the past few years, Toyota has built a dominant position — the company will release its third generation hybrid system this year.

2) Substitute Without Sacrificing Performance: These products and technologies replace scarce or finite resources with more widely available or renewable ones — organic plastic instead of petrol-based plastic or bamboo instead of wood. These innovations also include fully recyclable and upcycled products.

For example, Patagonia's Common Threads program uses advanced technology to break down old polyester jackets and use the materials in new clothing of equal quality. This was not an easy achievement. Patagonia knew its demanding customers would not be satisfied with clothing that was recyclable, but less effective. The company spent years looking for the right material and recycling system that maintained the performance of its outerwear and could be fully recycled. After succeeding in a pilot project with fleece jackets, the company plans to expand its program to cover all of its clothing lines.

3) Inform and Empower: These solutions provide people with accurate, relevant information on how, when and why

resources are being used. Armed with this information, users are changing their behavior in significant ways. These types of innovations are critical — while technology will drive many of the sustainability gains, these benefits would be eclipsed by the environmental returns that simple changes in human behavior can deliver. These systems are twenty-first century solutions to a problem that has existed for centuries — the "Tragedy of the Commons." Providing detailed information on how community resources are used by individuals enables those individuals to self-monitor and adjust.

Two pilot projects — Google's PowerMeter and Oberlin College's Energy Use Feedback System — have demonstrated that as information on resource use is made more granular and more widely available, individuals make better and smarter decisions that greatly reduce use and waste. And both initiatives are working to lower implementation costs and increase the return on investment via lower operating costs for homes, offices and other buildings.

4) Find the Win-Win-Win: This final case includes sustainability innovations that align the incentives of many to achieve sustainable outcomes. These examples usually involve at least three different groups, each with very different needs, resources and behaviors. Developing products or services and an appropriate business model that unites these seemingly disparate groups can create powerful collaborations that are profitable and create real environmental and societal benefits.

For example, PFNC converts empty shipping containers that are too expensive to recycle or ship empty back to China into affordable, stackable homes for Mexican workers directly across the US border who typically

live in cardboard and aluminum shantytowns. Though these basic structures, outfitted with renewable or recyclable materials, cost less than \$8,000 to create, the houses are still too expensive for the workers. PFNC is working with the large US corporations that employ these low-income laborers to pay the upfront housing cost to PFNC and deduct a manageable amount from the employee each month. The US firms like the idea because it creates sturdy homes and stable communities that lower the high attrition rates typical of these workers. PFNC makes enough money to continue upcycling shipping containers costs and to invest for future growth. And the Mexican workers get afford-able developed world housing.

While these four pathways are not the only ways to pursue sustainability innovations, in example after example we have found that the most successful sustainability businesses use some combination or slight variation to deliver more sustainable outcomes in a profitable way. As you and your organization look for new ways to confront the sustainability challenge and take advantage of this growing trend, look for ways to build off of the knowledge and experience of these leaders to increase speed to market and success rates.

(Note: For more information on IXL Center's research, the Sustainability Innovation book or to recommend a company, product or initiative for inclusion, please contact Tyler McNally at [tyler.mcnally@ixl-center.com](mailto:tyler.mcnally@ixl-center.com)).

### **Business Insights for Action**

Business Insights for Action is a collection of ideas generated through surveys, work with clients, education and workshops that provide unique insights. The objective is to demystify what it takes to make innovation real and to add practical and actionable ways to help practitioners and create the foundation to drive the next generation of thought.

### **About IXL**

The Center for Innovation, Excellence and Leadership (IXL Center) was founded by individuals who previously led the Innovation Practice of Arthur D. Little, IMI and the Monitor Group. The mission of IXL Center is to (1) provide training for practitioners and managers to become high performing innovation managers, (2) develop and publish deep insights on the topic of innovation breakthroughs and innovation management, and (3) build a community of innovation thought leaders and practitioners. The IXL Center has locations in Boston, Bolzano, Dubai, London, Shanghai, São Paulo, Seoul and Toronto. The Center has strategic partnerships with Hult International Business School, Imaginatik, InnovationTools and Arthur D Little. IXL Center's faculty includes innovation leaders from companies like Motorola, Osram Sylvania, Natura, GEN3, Palladium Group and Arthur D. Little. For more information, please contact [milagros.masini@ixl-center.com](mailto:milagros.masini@ixl-center.com), call +1 857 212 3430 or go to <http://www.ixl-center.com>.