

Harvard Business Review

Green Innovation Shows New Markets Don't Have to Be Disruptive

by W. Chan Kim, Renée Mauborgne and Mi Ji

November 18, 2024

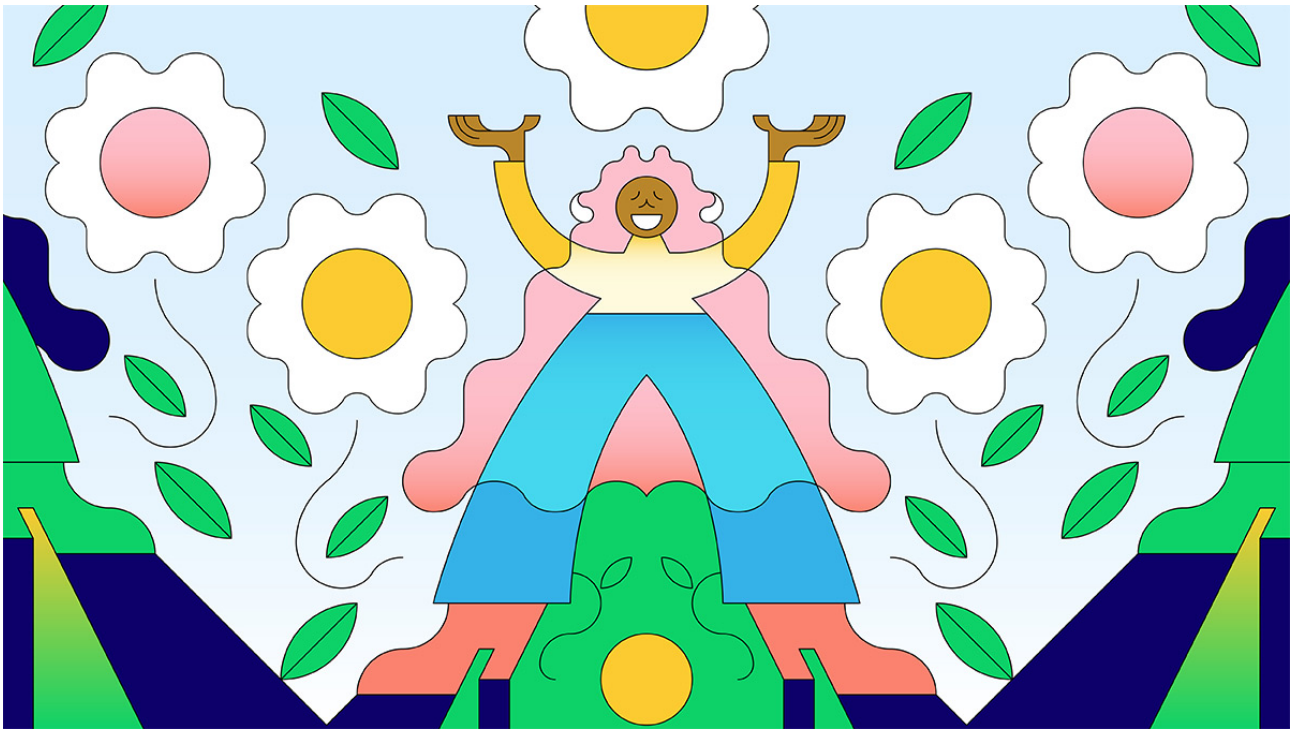


Illustration by Maus Baus

Summary.

Contrary to popular belief, companies can create innovative solutions that address environmental challenges for society while delivering immediate economic benefits for themselves — it doesn't have to be either or.

Nondisruptive creation, an approach to innovation that is comfortably familiar without being fully familiar could open up profitable path for industries while you address environmental concerns, falling-out achieve positive-sum outcomes for your company, your industry, and society without compromising either or.

We all value a good environment and understand its importance for the future, but the environmental mandate is often viewed as a noble yet daunting goal that usually or typically requires considerable costs and sacrifices in the short to medium term. Adopting green technologies, for example, can cause [notable disruptions to existing industries and impose significant corporate and social](#)

[adjustment costs](#). But must advancing one priority always come at the expense of the other? Our answer is no. In many cases, companies can create innovative solutions that address environmental challenges for society while delivering immediate economic benefits for themselves.

Consider the emerging marriage between the [oil and gas industry and Bitcoin mining](#). Oil companies have long faced intense pressure to reduce carbon emissions and pollution. One issue is the excess natural gas released during extraction, primarily methane, which is typically burned to relieve pressure and mitigate its harmful environmental impact. This process, known as gas flaring, emits large amounts of carbon dioxide and other pollutants while wasting valuable energy. For a long time, there were no cost-effective alternatives, as the relatively small volume of excess gas didn't justify the costly infrastructure and operational changes required to capture and transport it. Flaring, therefore, remained the primary method. Those companies that attempted to capture the waste gas viewed the endeavor as a significant cost factor to bear for compliance with environmental norms.

Some Bitcoin miners, however, identified an opportunity for addressing this problem in an innovative way that produces win-win outcomes. As energy-intensive operations with high mobility, they saw the possibility of using excess gas at the source, where it would otherwise be flared and wasted. They, in turn, developed various innovative methods to achieve this. Denver-based Crusoe Energy Systems, for example, developed proprietary methods to capture this gas and convert it to electricity for Bitcoin mining at the extraction site. Giga Energy, a Texas startup, created a mobile solution by placing shipping containers equipped with Bitcoin mining hardware directly on oil wells, using generators to convert waste gas into electricity for mining.

The Bitcoin miners' innovative solutions created a win for the oil and gas companies involved, allowing them to turn excess gas into a revenue-generating asset, reduce the operational costs of flaring, and enhance their environmental standing. The Bitcoin miners, in turn, accessed a cleaner and more cost-effective energy source. Was anyone disrupted here? No. Instead, these initiatives have created a new market beyond existing industry boundaries, allowing everyone to benefit — the oil and gas sector, Bitcoin miners, the environment, the economy, and society.

Now, let's turn to something more familiar — food — and see how magic can happen here. Food waste is a significant source of global waste,

representing [44% of the total and one-third of all food](#) produced each year. When this waste ends up in landfills, it generates methane, a greenhouse gas contributing to [16% of global emissions and 30 to 50% of global warming](#). About [58% of the methane emissions](#) from municipal landfills come from wasted food, with restaurants contributing significantly to this problem. They often keep excess ingredients and prepare more food than needed to ensure customer satisfaction. Due to legal restrictions in many places, restaurants cannot donate expired or leftover food to food banks even though they are still good, hence, they end up discarding it, a practice that has significant environmental implications.

Redressing this issue requires restaurants to improve demand forecasting, repurpose surplus ingredients, and prevent spoilage. However, most restaurants, being small businesses and lacking the necessary resources and expertise, find it impractical to implement these measures given the added costs and complexity involved. They often view food waste as an inevitable expense in their business operations until Too Good To Go (TGTG), a Danish start-up, turned their unconsumed food into cash and a new revenue stream with a magic app.

The TGTG app created a new two-sided market that connects restaurants with users, allowing the latter to purchase “magic bags” of surplus food at significantly reduced prices. Each day, participating restaurants just need to post the food category in their magic bag, such as lunch, vegan options, baked goods, sweets, or a mix of items. Users can use the app to browse for nearby magic bags, and while the specific contents remain a surprise, they can choose a preferred type and collect it at a designated time — all for a fraction of the original price. For each purchase, TGTG charges a small flat fee to the seller. Soon, TGTG’s network expanded to include bakeries and supermarkets.

Did TGTG disrupt or threaten the regular businesses of restaurants and other food services? No. This is a new market outside the spheres of their existing businesses. Restaurants and food service companies love the TGTG app, as it helps them turn an expense item into a revenue generator while allowing them to eliminate food waste and contribute to the environmental cause. Communities appreciate it as it provides affordable food while making our planet greener. And TGTG has grown into a successful and rapidly expanding business. As of March 2023, TGTG had 75 million registered users and 134,000 active business partners across 17 countries and had “saved” [a total of 200 million](#) meals. Its annual revenue is about [US \\$81 million](#).

What do the Bitcoin mining initiatives and the Too-Good-To-Go collaborative business move have in common? In both cases, instead of viewing environmental objectives as being at odds with economic goals, these innovators forged alignment between the two from the get-go, achieving a positive-sum outcome for both business and the environment. They did that by identifying an acute and yet taken-for-granted problem, in this case an environmental issue. These problems had been left unaddressed, as providing a solution was seen as unrealistic and beyond the bounds of the existing industry from a conventional point of view.

Their innovative approach exemplifies the logic of *nondisruptive creation*, a concept we developed in our new book [*Beyond Disruption*](#). Unlike disruption, nondisruptive creation is an approach to innovation that creates new markets *beyond* or *outside* existing industry boundaries, thereby avoiding the costs and displacement of established players' revenues or markets and the loss of existing jobs that can come with it. This contrasts with conventional innovation theories, such as disruption, which typically associate the creation of the new with the destruction of the old.

As a matter of fact, the ongoing global environmental push will inevitably involve some disruptions, as well as the pain and costs of adjustments. However, the experiences of Bitcoin miners, TGTG, and their collaborators illustrate that there are ample opportunities to align business objectives with environmental goals and create synergy between them. Adopting a nondisruptive approach, whenever feasible, transforms the environmental agenda from a mere obligation into a driver for profitable growth that breaks the tradeoff between economic returns and a cleaner environment.

Is your company or the industry you're involved in facing the need to compromise its best potential economic performance to meet environmental goals? Instead of seeing the environmental challenge as an economic burden or potentially disruptive threat, could you turn this into a new, nondisruptive opportunity as those innovative Bitcoin miners and TGTG did? A nondisruptive approach to innovation could open up a profitable path for you while you address environmental concerns, allowing you to achieve positive-sum outcomes for your company, your industry, and society. Both established companies and outside actors like start-ups can take advantage of these types of opportunities.



W. Chan Kim is a professor of strategy and management at INSEAD and a codirector of the INSEAD Blue Ocean Strategy Institute, in Fontainebleau, France. He is a coauthor, with Renée Mauborgne, of the books [*Blue Ocean Strategy*](#) and [*Beyond Disruption: Innovate and Achieve Growth Without Displacing Industries, Companies, or Jobs*](#) (Harvard Business Review Press, 2023).



Renée Mauborgne is a professor of strategy and management at INSEAD and a codirector of the INSEAD Blue Ocean Strategy Institute, in Fontainebleau, France. She is a coauthor, with W. Chan Kim, of the books [*Blue Ocean Strategy*](#) and [*Beyond Disruption: Innovate and Achieve Growth Without Displacing Industries, Companies, or Jobs*](#) (Harvard Business Review Press, 2023).



Mi Ji is Institute Senior Executive Fellow at the INSEAD Blue Ocean Strategy Institute in Fontainebleau, France.