

Inspiring Impact through Decarbonized Products

Authored by Student Sustainability Associates Laura Romine and Maude Hoffmann

Under the leadership of the [Business & Environment Initiative](#) (BEI), Lynn Schenk and Professor Toffel, sustainability is being integrated in the [Harvard Business School](#) (HBS) ecosystem - through curriculum, clubs, and now an exhibit showcasing decarbonized products. Class of 2023 SSA's Laura Romine and Maude Hoffmann supported this showcasing project, highlighting decarbonization success stories that are changing the game of fossil fuels dependence and greenhouse gas emissions. The exhibited research will serve to raise awareness within the HBS ecosystem of decarbonization as a successful business strategy, as well as dive into the details of each business case so that members of the HBS community can put themselves in the shoes of leaders working towards a lower carbon future.

We focused on three categories of decarbonization: decarbonized **inputs**, materials, or ingredients for a product; decarbonized **operations** of production, manufacturing, or logistics in the economy; and fundamental new **technologies** that enable decarbonization through substitutes or otherwise.

Our process for sourcing products and companies started with individual research using our networks, Pitchbook, [Harvard iLab](#), other SSAs, and BEI contacts to build a list of more than 40 potential products, from Schneider Electric's ocean plastic light switches made from recycled fishing nets collected out of the Indian Ocean to Mori's silk-based protective coating which slows down the spoiling process and keeps food fresh to eat longer. Our initial list represented a wide variety of decarbonization examples, including some that may be surprising or unfamiliar to our peers, such as AirCarbon, a durable biomaterial made using carbon and natural ocean microorganisms in a carbon-negative production process that can replace synthetic plastic. From there, we narrowed the list down to products and companies that we felt most strongly about researching for their keen innovation, potential scalability, game-changing impact, sustainability democratization features, and the power of the story to tell. Shelly Xu Design, an innovative company that uses design-tech software to minimize waste in the fashion industry by turning leftover textiles into beautiful zero waste clothing, was ultimately not included as the decarbonization story in particular felt less clear and compelling.

After selecting several products and companies each to pursue, we dug deeper into the technologies, business models, carbon emissions and economic impact, and managerial decisions responsible for the products' success. Working with BEI's consultant support, we completed disciplined research and reached out to company management to address any remaining questions.

The final summary will highlight management trade-offs or compromises, any technological advances, and the quantified impact as well as potential co-benefits of the product.

Moving forward, the BEI team will build out a collection of showcases to display around campus, with the potential for a recurring exhibit highlighting new decarbonizing products in each display.

Contributing to this project gave us a deeper understanding of the multitude of ways businesses can develop products for a decarbonized future. We look forward to walking through campus next year and hearing student discussions sparked by these decarbonization displays, happening upon debates of the most efficient path to a greener energy system transition, planning climate change mitigation educational events for clubs to address the questions that arise when students read into a product, and supporting our classmates that dive into impactful careers related to decarbonization. Whether the highlighted products are just being introduced or originate from large companies that have been around for decades, we do not doubt the impact these showcases will have on HBS. We're excited to see the impactful solutions the exhibit inspires our classmates to dream up!