

# nextwave

CURRENTS OF CHANGE:

NEXTWAVE PLASTICS

STORIES OF IMPACT

## Taking Ideas To Reality

CASE STUDY 02



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# Taking Ideas To Reality

So your company wants to use ocean-bound plastic in its products. How do you go from talking to doing?

Plastic, by nature, lends itself to creativity. Shape-shifting and versatile, the material can be a soda bottle in one form, a watch or a desk chair in another. Repurposing ocean-bound plastic, however, requires a creative spirit apart from design. As Max Michieli of CPI Card Group knows, that means being willing to rethink long-established norms.

In 2018, Michieli, then CPI's director of new card development, was having a conversation with his managing director about the problem of plastic waste in the ocean. The question was posed: Did Michieli think he could make a credit card out of ocean-bound plastic? Michieli, who today is CPI's director of sustainability products, thought he could.

"It was really just brainstorming together. At that point, we didn't know where to start," Michieli recalls. "Dealing with recycled plastics in any way, shape, or form was a little bit foreign to me."

## REIMAGINING THE CREDIT CARD

On the surface, the idea seems simple enough. How hard could it be to swap materials in a roughly 3" by 2" rectangle? But the payment card industry is dominated by polyvinyl chloride, or PVC. The form factor of the card is strictly defined. It must be able to take on a variety of colors for designs and branding for CPI's customers, which are financial institutions. And most importantly, it must reliably store sensitive



data. PVC has done that job for decades, but you won't find it among suppliers of ocean-bound plastic, which is dominated by other types of plastic.

Despite the challenges up front, Michieli was given license to figure it out. CPI sourced high-density polyethylene (HDPE) and began working with it. The process was bumpy.

"We went through many, many iterations trying to get this polymer into a sheet form that we could use in our processes and failed miserably many, many times," Michieli says. Among other problems, the HDPE tended to crumble when it was run through the same calendaring presses used for PVC.

Through perseverance and finding the right partners, CPI succeeded in creating a patent-pending process to integrate ocean-bound plastic into the core layer of its cards. The Second Wave® card was released in 2019, and Michieli says it's been tremendously successful in the marketplace. The following year, CPI Card Group joined the NextWave Plastics consortium, where members share insights and collaborate on solutions for ocean-bound plastic.

## SHINOLA'S SUPPLIER-DRIVEN INNOVATION

For NextWave member Shinola, the Detroit-based maker of lifestyle goods, the idea started with a supplier relationship. The company connected with Thomas Schori co-founder of #tide ocean material. #tide sources ocean-bound plastic from Southeast Asia for use in a variety of products. In 2021, Shinola released *Sea Creatures*, a line of watches made using #tide ocean-bound plastics.

"We were continuously looking at using that material in strap format for watches," says Shinola's Vice President of Product Design, Brandon Little. "That

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-BRANDON LITTLE, VICE PRESIDENT OF PRODUCT DESIGN AT SHINOLA



sparked the conversation of how ocean-bound plastic could be used in a variety of ways across the product's composition beyond the strap and to the case and beyond." Stemming from the success of Shinola's first iteration of its Sea Creatures line, the brand is looking at other ways it can innovate and use #tide ocean-bound materials in other products and categories.

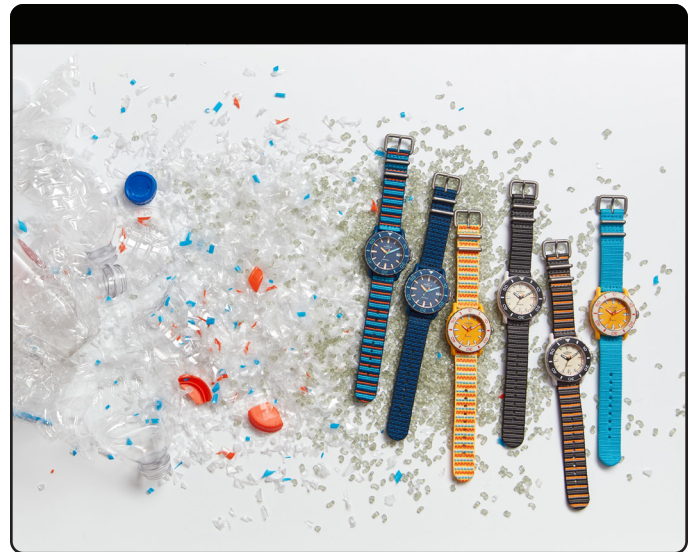
Emerging companies like Shinola and lifestyle brand Solgaard, which took its [HomeBase](#) wireless charging system made from ocean-bound plastics from idea to reality in under three months via Kickstarter funding, are well placed to take a concept and run with it. For a multinational corporation like HP, the beginnings of a project may be more conservative and have a longer timeline, but the ability to scale makes the endeavor worth the persistence.

HP was already using recycled plastic from North America for its ink cartridges when the idea came up to use ocean-bound plastic from Haiti and provide a market for less desirable dark color materials - an infinitely more risky prospect. HP already had a stable process. The company was already doing a good thing. Why make it harder?

"We made it harder so that we could make it better for all of the parties involved—and it has," Ellen Jackowski, HP's chief impact officer, said. "This is a project of long-term investment and attention. As we continue to strengthen it, it proves to all of us what is possible in the world."

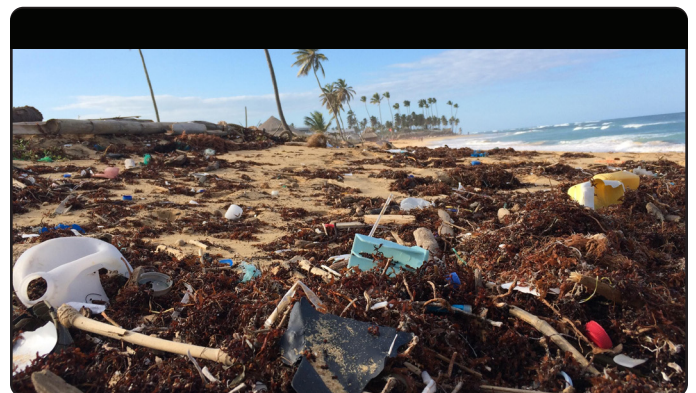
**BRING YOUR IDEA TO REALITY**

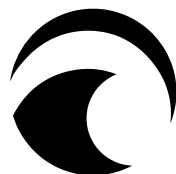
- Ensure buy-in from decision-makers
- Think big, but start small with a pilot or a single product component to build momentum
- Expect and plan for trial and error
- Build on successes
- Stay true to your commitment as a company



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- ELLEN JACKOWSKI, CHIEF IMPACT OFFICER AND HEAD OF SUSTAINABLE IMPACT AT HP INC





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