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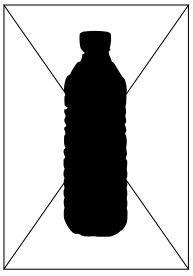
CURRENTS OF CHANGE:
NEXTWAVE PLASTICS
STORIES OF IMPACT

Reinventing The Supply Chain

CASE STUDY 03



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Reinventing The Supply Chain

Ocean-bound plastic is unfortunately abundant, but difficult to source. Getting it into products requires problem-solving, persistence, and the right partners.

For several years now, HP has been diverting almost a million plastic bottles a day from landfills, putting that plastic into ink cartridges for printers. The bottle plastic, collected from North American waste streams, mixes with that of used cartridges that customers return through HP's Planet Partners program.

It's a success story HP's chief impact officer Ellen Jackowski has been accustomed to sharing at sustainability conferences. She was doing just that in 2016 when a new opportunity arose. Someone in the audience came up after her talk, saying there was an effort underway to recover ocean-bound plastic in Haiti, but the program needed more demand. Would HP consider sourcing some of its plastic from there?

That audience member was Ian Rosenberger, CEO of First Mile, now HP's partner in a landmark project in Haiti that not only diverts plastic but creates livelihoods for collectors and provides education for children.

"It was just luck that the right person was sitting in the audience and brought this forward," recalls Jackowski, who is HP's chief impact officer and head of sustainable impact.


TREK

> *"JUST BECAUSE YOU HIT A WALL, THAT DOESN'T MEAN YOU SHOULD STOP,"*
>
> -STEFAN BERGGREN, PRODUCT COMPLIANCE MANAGER AT TREK

Since then, HP—with First Mile and recycling partner Lavergne—have sourced more than 3 million pounds of plastic from Haiti, keeping more than 110 million bottles out of the environment. Even more, this is plastic that is difficult to use by others due to its dark coloring. This number is set to increase substantially with the installation of a $2 million wash line, which will eventually enable the processing of up to 20 million pounds a year.

A DIFFERENT KIND OF RECYCLED PLASTIC

It's one thing to recover plastic from U.S. waste streams, where typically a bottle goes from the end consumer straight into a collection bin. Ocean-bound plastic is different. It comes from places such as Haiti or Southeast Asia, where there is no formal waste management system. These plastics tend to be contaminated with sand or dirt, so it needs to be washed intensively and can be more challenging to thoroughly dry.

A growing number of companies are surmounting these challenges, putting processes in place to reliably and consistently process ocean-bound plastic. They share both problems and solutions through the NextWave Plastics consortium.

The snags can be daunting. Bicycle company Trek uses fishing nets recovered in Chile from partner Bureo to make its Bontrager Bat Cage for mounting water bottles. The first factory run resulted in an unusual smell that required the facility to be aired out.

"I got a call from the manufacturer, 'Yeah, we're never doing this again,'" says Trek Product Compliance Manager Stefan Berggren.

Experts at the University of Georgia's New Materials Institute helped Berggren pinpoint the problem: Not

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> - BIN JIANG, DIRECTOR OF GLOBAL SOURCING AND PRODUCT DEVELOPMENT AT VERITIV

enough drying time. He convinced the supplier to give it another try.

"We ran it a second time, and it worked out perfectly. Just because you hit a wall, that doesn't mean you should stop," Berggren said. "We had resources through NextWave that we could use to analyze what happened and try another run."

Trek and other NextWave members share experiences like this so that others can avoid similar issues or know how to fix them when they pop up. They also help each other locate the right partners. Getting a steady supply of ocean-bound plastic is challenging enough, but companies also need experts to help ensure social responsibility on the ground, as well as vendors willing to process the material and try new manufacturing techniques.

For example, founding member Dell Technologies worked with supplier Veritiv to use ocean-bound plastic in a packaging tray for its laptops. The tray's surface wasn't coming out with the even, smooth finish Dell required during the initial tests. As a solution, Veritiv applied the design-of-experiments methodology to identify the right balance between the new material characteristics and manufacturing process controls to achieve the desired finish.

Veritiv joined NextWave last year and is now working on a second packaging solution for Dell, a nonwoven bag for laptops that integrates ocean-bound plastic. The two companies have built strong trust over many years of working together, says Bin Jiang, Veritiv's director of global sourcing and product development.

"We challenge each other all the time: "What's next, what else can we do?'" Jiang says. "Now that we're part of NextWave, we're working really hard to find other applications for ocean-bound plastic so that we can contribute even more."

REINVENT YOUR SUPPLY CHAIN

- Look for raw material suppliers that prioritize social responsibility
- Rely on samples and prototypes to verify quality
- Push for another try if the first effort fails
- Find suppliers that will really partner with you through challenges
- Be open to creating solutions to the problems you didn't even know existed

Visit nextwaveplastics.org to learn more.

DELL TECHNOLOGIES

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