Forget recycling.
Upcycling is a treasure trove for green business ideas—and the force behind a fresh new industry.

BY JENNIFER WANG

Like everything about Looptworks, the signature on CEO and co-founder Scott Hamlin’s e-mail is a call to action: “Did you know that it requires more than 400 gallons of water to make one organic cotton T-shirt? Upcycle.”

If you’re not up on the green lingo, the best way to think of upcycling is that it’s like a sexier, even greener version of recycling. When something is recycled (or “downcycled”), it’s broken down into something of lesser quality—a process that consumes energy. Upcycling adds value by transforming or reinventing an otherwise-disposable item into something of higher quality. It’s the ultimate in reuse—and a whole new industry sector is shaping up around it.

Looptworks personifies the upcycling trend. Hamlin launched the Portland, Ore.-based company with partners Gary Peck and Jim Stutts in September 2009. The three apparel industry veterans were inspired by the sustainable manufacturing methods of outdoor gear companies like Royal Robbins and Patagonia, but they wanted to take it even further—all the way to what Hamlin calls “closed loop manufacturing.” Looptworks was one of the first players to truly close that manufacturing loop and make a business of upcycling—but it certainly is not alone.
There’s a plethora of people looking into different angles in different industries—the opportunities in upcycling are fascinating,” Hamlin says. For its part, Looptworks uses what it calls “pre-consumer excess” as source material for its accessories, gear and apparel. Most of that is factory textile waste that, if Looptworks didn’t intervene, would be headed for incineration or the dump. The result is a collection of bright and stylish offerings—like the Hoptu, a neon orange laptop sleeve made of leftover wet-suit material ($30), and a patchwork sweatshirt-fleece hybrid Tranquilla vest equipped with “rescued” buttons and tags ($120). The fact that production is limited based on available materials ups the items’ production price—and their appeal.

Upcycling has proved to be great business for Looptworks, though Hamlin is more likely to brag about the 16 million gallons of water he’s conserved by upcycling and the fact that he’s only bought five brand-new hard drive, cables, a stamp to make business cards and some signs. After less than two years, the company employs 12 full- and part-timers and creates nearly 50 retail offerings. Hamlin says factories have started to approach him for ideas about how to deal with their excess.

“Our goal,” he says, “is to influence consumer awareness and figure out a way to promote this non-mass-produced approach on a large scale.”

A GREEN MOVEMENT GOES VIRAL
Upcycling is ushering in an entirely new wave of entrepreneurial innovation. Its popularity is particularly clear in online artist marketplaces like Etsy and ArtFire, which offer an abundance of upcycled goods: colorful jewelry cuffs made from old vinyl records ($10 to $28), chairs constructed out of used baseball bats and hockey sticks ($299), dinged-up suitcases made into pet beds (around $70) and trendy suitcases crafted from jerry cans ($140). For artists, the materials for upcycling can cost next to nothing. The number of products on Etsy tagged with the word “upcycled” rocketed up from about 7,900 in January 2010 to nearly 30,000 a year later—an increase of 275 percent.

Even luxury-goods firms like Hermès are in on the act, repurposing leftover scraps from their signature scarves and Birkin bags for a home furnishings and accessories line dubbed “petit h.” (It debuts in the states in October.) And celebrity chefs like Mario Batali, like the state in October.) And celebrity chefs like Mario Batali.
Batali have teamed up with upcycling companies to make lotions and soaps out of waste grease from restaurants.

That scale that Loopworks’s Hamlin is aiming for is already happening on the post-consumer end of the upcycling market. If Etsy is considered the epicenter of do-it-yourself upcycling, then New Jersey-based TerraCycle takes on that same function in mass upcycling. The company turns actual garbage into hundreds of products, like Oreo wrapper backpacks and bicycle chain picture frames. With a large-scale collection infrastructure developed over the past 10 years, TerraCycle nabs about 1 billion pieces of garbage every quarter that ultimately end up on the shelves of big-box retailers like Target and The Home Depot.

Tom Szaky, founder and CEO of TerraCycle, started the operation as a humble provider of worm poop while he was a Princeton University freshman. But over the years the company’s increasing fortunes have mirrored the burgeoning opportunities in the green market. In 2009, sales revenue hit $7.5 million; in 2010, it jumped to $20 million. Since January, Szaky has added operations in nine more countries, bringing the total to 20.

There’s also serious behind-the-scenes innovation happening. TerraCycle employs “polymer scientists” who are immersed in figuring out ways to manipulate paper, organics and plastics into materials like a new plastic lumber and textile made from Capri Sun drink pouches. Meanwhile, teams of designers are figuring out how to make jackets from Doritos bags and luggage from energy bar wrappers.

“When the market is ripe for more innovation,” Szaky says. “[Valued at $12.5 million, TerraCycle is, without any debate, the biggest upcycler in the world. But compared to other industries, that’s small—and that means there’s way more opportunity.”

REUSING, AND DIVERSIFYING

Upcycling can be a boon to existing businesses as well. For Hammer & Hand, a Portland, Ore., design-build construction firm, upcycling became a jobs-saving revenue stream during the recession. It began a decade ago, when co-founder and president Sam Hagerman quit using dumpsters.

“I was writing the garbage man a $10,000 check every month, and I realized that could support a living wage and a half,” he says. So he bought a truck and started an in-house recycling system (which boasts flooring made from recycled bleacher seats).

From then on, Hagerman took reusable parts from construction sites—framing components, light fixtures, appliances and lumber. “I realized we could get a beautiful pile of lumber for free,” he says, “and turn around and add value to it.”

When the construction industry got a walloping in 2008, Hagerman weathered the downturn by entering the upcycled furniture market, along with the home energy and the handy-man business. “We saved the jobs of 40 people,” he says. “We got creative by necessity, but we changed our business because it also makes financial sense.”

If there is a downside to upcycling, Hagerman says, it’s the inefficiencies related to organizing, moving and storing the supply. Regardless of how cheap any reclaimed materials are, they can represent a huge waste of energy and time if you don’t already have a purpose in mind when you take possession of them. Plus, there’s the danger of running out.

“You can’t develop a line of something, because there’s no guaranteed way to get more of the material,” he says.

Changing consumer attitudes are contributing to the upcycling boom, says artist Justin Gignac, who started the NYC Garbage project in 2001, when he made a bet that with the right package design, you could sell anything, even garbage. These days, there’s a waiting list for his prettily packaged clear plastic cubes of Manhattan-scavenged trash ($50 a piece), and he’s sold more than 1,300 of them to buyers in 29 countries. Gignac believes that today’s consumers are more aware of waste and appreciate the ingenuity of people creating new stuff from old.

As Hamlin of Loopworks points out, success is mostly about quality and style, not just green. “The product has to be best-in-class, and it has to be cool, innovative, stylish, fit right—all of those things,” he says. “And at the end of it, it happens to be upcycled. That’s the way it should work. To me, it’s a win-win for business and the environment.”

---

WAYS TO UPCYCLE

When it comes to collecting recyclable and upcyclable materials, the business opportunities are “amazing,” says Gal Raz, associate professor at the University of Virginia Darden School of Business. “There are so many ways to incorporate reuse in your business model and branding approach, but you have to figure out how it fits.”

No kidding. Check out all the different ways businesses are upcycling. —J.W.

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>WHAT THEY UPCYCLE</th>
<th>BRILLIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equator Coffees and Teas</td>
<td>Coffee waste to grow protein-rich mushrooms in developing countries</td>
<td>Promoting sustainable farming—and good coffee</td>
</tr>
<tr>
<td>Hammer &amp; Hand</td>
<td>Home construction and repurposing materials for furniture</td>
<td>Saving jobs with a new revenue stream</td>
</tr>
<tr>
<td>Hello Rewind</td>
<td>Customers’ favorite old T-shirts are turned into laptop sleeves; profits help sex-trafficking victims</td>
<td>A self-sustaining social enterprise that capitalizes on a sentimental, one-of-a-kind product</td>
</tr>
<tr>
<td>Hermès</td>
<td>Leftover material and damaged goods for a new line of accessories and décor</td>
<td>Proving that luxury can be sustainable—yet equally expensive</td>
</tr>
<tr>
<td>Looptworks</td>
<td>Overproduced textile waste to create a new retail line</td>
<td>Going straight to factories and rescuing raw materials (for a great price)</td>
</tr>
<tr>
<td>Patagonia</td>
<td>Fleece made of plastic bottles</td>
<td>Spawning a clean manufacturing movement among outdoor-clothing manufacturers</td>
</tr>
<tr>
<td>TerraCycle</td>
<td>Trash to make new retail products</td>
<td>Turning trash into treasure, literally</td>
</tr>
</tbody>
</table>

SCHOOL SUPPLIES FROM TERRACYCLE ARE MADE FROM DISCARDED WASTE PACKS AND CONTAINERS