



## Meet The Man Figuring Out What To Do With All That Plastic Waste

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The recent winner of a prestigious environmental prize, Mike Biddle and MBA Polymers are changing what we think of as recyclables.

When the [Gothenburg Prize](#) called Mike Biddle and told him he'd won this year, he didn't understand the message at first. "I couldn't get the Swedish accent. I thought they wanted me to be a judge," he says. "When they said, 'Oh no, we want to give you the prize,' I was literally speechless."

The Gothenburg, which focuses on sustainable development, isn't the Nobel, but it's prestigious enough (Kofi Annan and Al Gore are previous recipients). Biddle is bashful about why he was chosen, but thinks it may be because he's "stuck with something for 20 years," and achieved something "quite difficult."

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"That's why you don't see hundreds of companies like us out there, sorting plastics. We figured out how to do it, and took it to a commercial reality. That's not something you always see with new technologies."

[MBA Polymers](#), the company Biddle founded 20 years ago, goes after the recyclables others don't want, or don't know how to deal with: plastics from coffee makers and toasters, TVs and cell phones, fittings from cars and trucks, and so on. These materials are actually more valuable, and more plentiful, than steel, Biddle says. But they don't get recycled in high volumes, because they're more difficult to separate from the waste stream.

You can use a magnet to extract metals, or sort them by hand: They have different colors and tell-tale densities. But plastics are much less distinguishable. They have infinite different colors, share similar densities, and have no electrical or magnetic properties that make sorting easier. Hence, metals are recycled at an estimated 90% rate, while plastics have only a 5% to 10% rate. The rest ends up in landfills, burned in incinerators, or shipped to dangerous and inefficient sorting plants in the developing world.

MBA Polymers takes waste from "shredders" that have already separated out metals, then isolates up to 40 plastic types in a multi-stage process. It produces virgin plastic pellets that can be reused in the same way as traditional plastic, but with an 80% savings in energy, and a lower cost. Biddle calls this "above the ground mining," and thinks there is a huge potential, if only we could see used plastic as a resource, instead of as a disposable good.

MBA has three plants so far--in China, Austria, and the U.K. But it's still only scratching the surface of what gets thrown out every year. In fact, the overall problem of un-recycled plastic is getting worse. While many developed countries now collect standard recyclables such as PET Coke bottles and milk jugs, the rates for other plastic types are pathetic. Computer and electronics waste is the fastest growing part of the world's waste stream.

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Biddle says the problem isn't necessarily technological. Plants like his, while costly upfront, are economical. The issue is having reliable incoming waste streams, which means better collection in the first place. "[Single-stream recycling](#) has gone a long way to solving the problem of household waste. But if my coffee maker or vacuum cleaner dies, you can take it to Goodwill, and that's about it. They throw the rest away."

"But if you can get the collection right, the economics take care of the rest. The problem in developed countries is the first mile from the home to the recycling plant."

The issue in developing countries is different, Biddle says. There are thousands of "pickers" who already sort through the trash looking for materials they can sell to make some extra money. There is no lack of willingness to sort the waste, or manpower to do it. The problem is that the

work is often unsafe, and the economic opportunity and environmental benefits aren't maximized. "Pickers can play a vital role if we can figure out how to get them to collect stuff and bring it to processing centers like ours," he says.

Biddle's currently looking at ideas for coordinating informal pickers into organized teams, possibly working in some kind of public-private partnership. And he thinks he can improve incomes, and health and safety standards, as a result.

"[The pickers] don't necessarily get treated fairly in my experience. We're trying to get around that and give them another option, and provide a more environmentally safe way to market," he says.

[Images: [World Economic Forum](#) and [Dmitriy Shironosov/Shutterstock](#)]



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