



TELLING THE STORY OF HP'S CIRCULAR ECONOMY LEADERSHIP

By Anneliese Olson, Global Head of Print Category at HP Inc.



Picture a world without waste. This is what the circular economy dares us to act on and, at HP, we believe it's entirely possible. The emerging circular model for industry leaves the outdated "take, make, consume, and dispose" way of doing business in the past. It demands, instead, that we design products and services in ways that ultimately support living systems and communities.

At HP, we're committed to a "make, use, reuse" model, and we're executing on circular principles within our supply chain, business models and product design. This includes relying less on mining raw commodities than on mining the materials already circulating through the market and our ecosystems. It's about designing for durability and engineering to the highest possible standards of quality and safety.

We belong to a cooperative of corporations that are advancing toward a waste-free, circular economy. It's why HP is an early member of the [Ellen MacArthur Foundation's commitment](#) to prevent plastic from becoming pollution in the first place.

Only 16 percent of businesses have embraced circular practices so far, according to an [ING survey](#) of 300 U.S. executives in 2018. However, 62 percent of businesses eventually plan to move toward circular operations, and one-third of those adopting a circular framework named customer demand as the key driver.

As the latest example of our sustainability leadership, today, I am humbled to announce that HP has just been named a winner of the [Keypoint Intelligence BLI PaceSetter award in Sustainability](#). Keypoint specifically lauded HP's sustainability work in areas such as printer cartridge recycling, environmental advocacy and performance management.

"HP is not only striving to combat plastic pollution but is also committed to tackling social and economic issues tied to pollution," says Deborah Hawkins, Associate Director at Keypoint.

Lifespan of a Cartridge

The lifespan of an HP printer cartridge epitomizes why HP's journey toward circularity is being celebrated. For more than a quarter century, the [HP Planet Partners program](#) has collected used printer cartridges from customers in order to make new ones. The numbers are staggering: 236 million pounds of print cartridge plastic, 4.37 billion plastic bottles and 101 million plastic garment hangers kept out of landfills. That adds up to 4.2 billion Original HP printer cartridges produced with [recycled material](#) (PDF).

As a result, 80 percent of the content of HP printer ink cartridges is recycled — and all of HP's LaserJet toner cartridges contain some recycled materials. No HP cartridge sent to HP Planet Partners is ever sent to landfill.

But it's about more than simply recycling. The circular economy isn't only designed to do less harm; it's ultimately about [regenerating natural systems as well as communities](#).

That principle is at play in Haiti, where since 2016 HP and its trusted partners have been providing income opportunities for local residents who gather discarded plastic water bottles from streets, fields and waterways — bottles that can later be upcycled into HP supplies instead of flowing into the Caribbean Sea. From a recycling center run by our partner nonprofit, the bottles are shipped to facilities where they can be shredded and combined into material for new, Original HP ink cartridges.

HP has sourced more than 700,000 tons of plastic from Haiti to be used in hardware and supplies. Since 2000, more than 199 million pounds of recycled plastic have been fed into new HP printer cartridges.

In Haiti, creating a market for this otherwise wasted and polluting material offers personal advancement in a challenging environment for people like [Rosette Altidor](#), who supports six children on her income.

HP has recently purchased a [\\$2 million washing line in Haiti](#) to help improve the quality of the plastic recovered, in turn offering workers there more outlets for the material they collect. The process works with the partnership of [Thread International](#) and the [First Mile Coalition](#).

Finding New Ways to Close the Loop

Meanwhile, nearly anywhere in the world, HP's customers use Original HP cartridges for their quality and reliability. Through the free HP Planet Partners program available in more than 50 countries and territories, consumers send us their empty cartridges by envelope, box or pallet load. To date, they have taken the initiative to send in 830 million cartridges — an incredible vote of consumer confidence in closing the loop.

HP's recycling centers around the globe receive these spent cartridges. One HP recycling facility in Nashville, for example, operates a reverse-manufacturing process that disassembles printer cartridges down to their individual components, recovering 50 percent more plastic than a simple shred-and-separate process would obtain. It extracts and sorts the useful plastics, metals and labels into organized piles.

From there, the cartridge manufacturing process begins (again). HP combines recycled ink plastic (either with recycled PET water bottles or polypropylene hanger material) and reformulates a new plastic to be used in HP cartridges. That material is then shipped to HP manufacturing locations to be molded into new cartridges. HP has partnered with [Lavergne Plastics](#) in Montreal, Canada, which has created a formulation to bring the plastic back up to virgin quality.

Nothing goes to a landfill. Any material that can't give new life to a new HP cartridge can be fed into other products, and a small percentage is sent to a waste-to-energy plant. All in all, the carbon footprint of the plastic is one-third smaller than it would be with virgin plastic.

While authentic HP cartridges epitomize the company's commitment to circularity, imitation cartridges sold by third-party manufacturers demonstrate some of the negative side effects of the old, linear economy we're trying to leave behind. Nearly 90 percent of imitation cartridges wind up in landfills because the companies producing them provide no recycling solutions — and independent lab tests found that 73 percent failed to work in the first place. Copycat cartridges come with other ugly surprises too: a larger carbon footprint across their lifespans.

By contrast, HP commits to ongoing research, ensures that stringent product quality and environmental regulations are adhered to around the world and safety tests its cartridges, making sure they meet quality standards related to indoor air quality.

HP's innovation with printer cartridges marks the very cusp of our circularity journey; we are beginning to introduce closed-loop recycled content in the hardware of some of our HP printers.

With a history of pioneering the IT industry's recycling movement in the 1980s, HP is now blazing a trail toward twenty-first century circular solutions. It's about more than engineering reverse-logistics innovations, using resources intelligently and shrinking our carbon footprint. From the lifespan of a printer cartridge to helping to improve the quality of life of people in the developing world, at HP, we aspire not just to do less harm, but to do more good.

¹Data from production yield of shred and separate process. Original estimated plastic yield on TIJ 2.x supplies: 60%. Disassembly plastic yield on TIJ 2.x supplies: 90%. Yield improvement of 50% from original results.

²Feb 2018 RPET and RPP Four Elements Consulting Life Cycle Assessment (LCA), commissioned by HP. See hp.com/go/recycledplasticsLCA.

³2018 NA InfoTrends Supplies Recycling study, commissioned by HP. See hp.com/go/NA-2018InfoTrends.