



# Closing the Circle: Reshaping How Products are Conceived & Made

*Ideo & Ellen MacArthur Foundation create an outline for a New Plastics Economy & launch a Circular Design Guide to help*

By Robert Grace

Ideo, one of the world's most influential industrial design and consulting firms, wants to change how products are created. Headquartered in Palo Alto, Calif., but with offices around the globe, Ideo joined with the UK-based nonprofit Ellen MacArthur Foundation recently to launch a design guide for the "circular economy."

Working with the foundation, which aims to inspire a shift to this new economic model, Ideo said, "We've designed this guide to meet an emerging need among industry leaders — an alternative, restorative and regenerative approach to business, one that creates new value and delivers long-term economic, social and ecological prosperity."

"Transitioning to the circular economy is one of the most important design challenges of our time," said Ideo CEO Tim Brown. "For designers, it means rethinking traditional approaches and retraining in circular principles. This guide was created to provide the tools needed to move from ideas to action, creating solutions for the circular economy that give businesses a competitive edge and are regenerative for our world."

## Three strategies to transform the global plastic packaging market



World Economic Forum and Ellen MacArthur Foundation  
*The New Plastics Economy - Catalysing action* (2017, [www.newplasticseconomy.org](http://www.newplasticseconomy.org)).



Figure 1.

So what is this all about? The goal of the circular economy is to move us all from our traditional take-make-dispose economy, to one that has a closed loop, where materials, nutrients and data are continuously repurposed. The partners want this new Circular Design Guide ([www.circulardesignguide.com](http://www.circulardesignguide.com)) to raise awareness of this concept, while also nurturing a systems perspective, and sharing practical innovation methods.

Ideo said the guide was developed with input from leading businesses, more than 400 students and specialist design institutions. It includes 24 methods, as well as video interviews with designers, worksheets, case studies and links to helpful technical tools. These include advice on how to get started, and on how to get buy-in within your company from those who might not fully understand or support the concept.

The guide's high-profile launch event — which took place on Jan. 20 at the World Economic Forum in Davos, Switzerland — featured presentations from Ellen MacArthur herself, plus Philips CEO Frans van Houten, Nike COO Eric Sprunk and Ideo Tim Brown. In a symbolic move, the launch gathering itself took place in the ICEhouse™, a modular structure made possible by its use of several versions of SABIC's energy-efficient, Lexan-brand polycarbonate sheets. Assembled in just a few days prior to the WEF, the aluminum-framed ICEhouse — where ICE stands for "Innovation for the Circular Economy" — aims to provide an example of sustainable design in the construction market by showing how structures can easily be built, disassembled and reused with advanced materials that support such a concept.

The design guide's partners noted that the guide taps into "an emerging business appetite for a restorative and regenerative approach that delivers sustained prosperity; an alternative to the increasing costs and risks associated with a 'take, make, dispose' linear economy." Such risks, they said, include price volatility, resource supply constraints and increased regulation.

The guide supports complex circular challenges such as rethinking global plastics flows, which also was on the agenda at Davos. This involves a wide range of stakeholders and a fragmented value chain. Here, they said, the guide can act as a central, neutral resource on how to design for the circular economy.

## Defining 'The New Plastics Economy'

Meantime, on Jan. 16, the day prior to the start of the World Economic Forum's annual gathering in Davos, the Ellen MacArthur Foundation ([www.ellenmacarthurfoundation.org](http://www.ellenmacarthurfoundation.org)) — in collaboration with a broad group of companies, cities, philanthropists, policy makers, academics, students, non-governmental organizations, and citizens — launched a report called "The New Plastics Economy: Catalysing Action."

The WEF noted the 44-page report has been endorsed by more than 40 industry leaders, including Constantia Flexibles CEO Alexander Baumgartner, Amcor Ltd. CEO Ron Delia, and Dow Chemical Co. Chairman and CEO Andrew Liveris.

In addition to Amcor, other core partners include Coca-Cola Co., Danone, Mars, Novamont, Unilever and Veolia.

This three-year initiative aims to build momentum toward "a plastics system that works." As Ellen MacArthur puts it, by applying the principles of the circular economy, the New Plastics Economy ([www.newplasticseconomy.org](http://www.newplasticseconomy.org)) "brings together key stakeholders to rethink and redesign the future of plastics, starting with packaging."

It is calling for strategies to boost the recycling of plastic packaging to 70% — up from just 14% today. The group divides plastic packaging into three segments:

- It says that 50% of plastics packaging today could be "profitably recycled" if improvements are made to packaging design and waste management systems.
- A further 20% could be profitably reused, "for example by replacing single-use plastic bags with reusable alternatives or designing innovative packaging models based on product refills."
- And finally, it suggests that 30% of plastic packaging, such as multi-material wrappers, are particularly problematic for recycling.

The New Plastics Economy initiative focuses on what EMF calls five interlinked and mutually reinforcing building blocks to create the enabling conditions for a system redesign:

- **Dialogue mechanism**, with cross-value collaboration at its heart;
- **Global plastics protocol**, aimed at overcoming today's "ineffective plastics economy," which it says is the result of decades of highly fragmented, uncoordinated and incremental innovation;
- **Innovation moonshots**, aimed at mobilizing innovations that can scale across the system;
- **Developing an evidence base**, designed to create transparency on the realities and best practices of

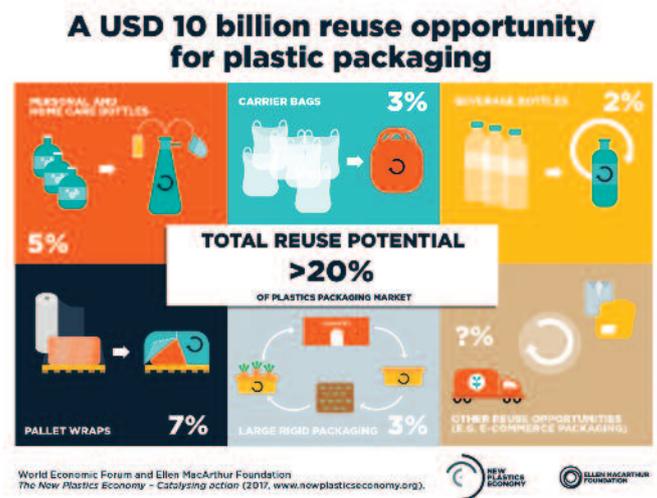


Figure 2.

today's system to inform the global debate; and

- **Outreach**, to engage stakeholders to learn, inform and amplify what works.

Several plastics and global industry leaders and politicians hailed the report's release, including:

Unilever CEO Paul Polman: "We urgently need to transform global plastic packaging material flows if we are to continue to reap the benefits of this versatile material. This report marks a major milestone, calling out specific actions to capture opportunities for redesign and innovation, reuse, and recycling. It's now up to us all to get it done."

Borealis CEO Mark Garrett: "The initiative has already convened all stakeholders to work effectively together. With this new report, the initiative now offers a roadmap to create effective markets based on circular economy principles – an action plan where Borealis wants to take an active and leading role."

Phoenix Mayor Greg Stanton: "The City of Phoenix handles more than 54,000 tons of plastics every year, and has been actively working with local partners to boost plastics recycling over the past few years. The report 'New Plastics Economy: Catalysing action' is helping cities like Phoenix build a framework for systemic change to transition plastics from the linear take-make-dispose model to a true circular economy."

## A pair of U.S. Plasticity Forums

An event already exists for those wanting to meet like-minded innovators on these topics, and to engage in dialogue about

plastics-related best practices and scalable solutions geared to advancing the concept of a circular economy.

The Plasticity Forum ([www.plasticityforum.com](http://www.plasticityforum.com)) — founded by Hong Kong-based American Doug Woodring — bills itself as "a big conversation about the future of plastic." It began in 2012 in Brazil, at the Rio+20 Earth Summit, and has been held since in Hong Kong; New York City; Cascais, Portugal; and last year in both Shanghai and London. This year the Plasticity Forum will take place on April 21 in Dallas (as part of Earth Day Texas) and on May 9 in Anaheim, Calif. (collocated with SPE's own big ANTEC 2017 conference and trade show).

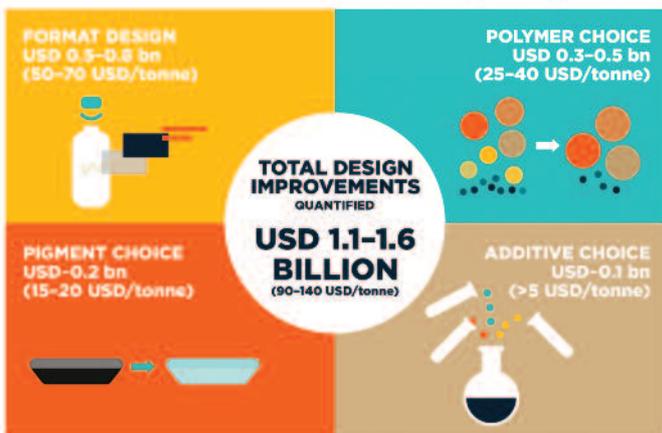
At Plasticity London last September, one of the speakers — Chris Grantham, Ideo's circular economy portfolio director — hinted that announcements about these new initiatives were coming soon. Grantham, who led Ideo's work on the design guide from its London office, said in his presentation:

"We're developing a prototype design thinking toolkit. There are many technical tools out there for designing circularity. They tend to be complex and aren't particularly human-centered to use. So there really aren't that many tools out there focused on the learning you need for circular economy design — the mindsets, the methods — in a potentially scalable way.

"We also want to touch on how circularity is affecting design, e.g., embedding intelligence into products. Design won't have a traditional beginning and end anymore. How do we leverage design? How do we leverage business?"

Grantham also told Plasticity attendees that design think-

## Improvements in plastic packaging design would reduce cost of recycling



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Figure 3.

## 30% of plastic packaging needs fundamental redesign before it can be reused or recycled



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Figure 4.

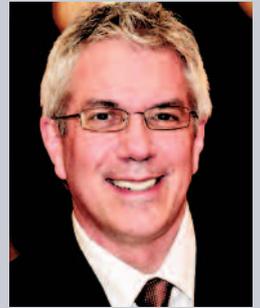
ing offers “a creative and pragmatic approach to systems change. ... It’s not about waiting for a silver bullet, we’re about getting out there, learning by doing, and moving in the right direction.”

He also stated that “Plastics is perhaps the most challenging and complex systems change challenge for a circular economy, in terms of a sector, that I’ve seen so far.” But to make advances, he stressed, one needs to start small and embrace ambiguity as part of the design process.

“The ability to keep going in the fog, believing you will get to the other side, is really important, Grantham said, citing Buckminster Fuller, the famous American architect, designer and inventor, who once said: “There is nothing in a caterpillar that tells you it’s going to be a butterfly.”

## ABOUT THE AUTHOR

A 37-year B2B media veteran, Robert Grace was the founding editor of *Plastics News* in 1989. An ardent design advocate, he struck out on his own in 2014 and launched RC Grace LLC ([www.rcgrace.com](http://www.rcgrace.com)), a consultancy through which he offers services such as content creation, freelance editing, marketing and PR, event organizing, and business development. He also now serves as managing editor of *Plastics Engineering*.



(Full disclosure: Grace assists with organizing the Plasticity Forum and will moderate both 2017 conferences, in Dallas and Anaheim. For more information about the event, contact him at [bob@rcgrace.com](mailto:bob@rcgrace.com)).

**Q:** Tell us about your company’s efforts to advance the Circular Economy. Are you likely to use the new Circular Design Guide? Please login to The Chain online forum and join the discussion in Industry Exchange at:

<https://thechain.4spe.org/industryexchange>

