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Is Your Company Ready for the Circular Economy?

by Eric Hellweg | 2:09 PM January 25, 2013

There's nothing like being alone on a highly experimental 75-foot boat five days from anywhere to make you realize some pretty profound things. For Ellen MacArthur, who twice solo circumnavigated the globe on said sailboat — the second time setting the world record for speed in doing so (71 days, 14 hours) — her realization came when she considered the finite resources she had to pack with her for those two-plus months alone. Seeing the world as she did through her trip, she began to appreciate the finite resources of the planet.

Not long after she reached shore, she decided to do something about it. She started an eponymous foundation (<http://www.ellenmacarthurfoundation.org/>) focused on understanding a better way for the economy to manage its resources. Her investigation led to a concept now known as the "circular economy" — a phrase I heard quite a bit at the World Economic Forum's Annual Meeting in Davos (<http://www.weforum.org/>) this year. If some of the buzz is any indication — and I believe it will be — it's a concept that will gain a lot of traction this year as more companies look for ways to better manage dwindling natural resources and more consumers demand action on environmental issues.

I had a chance to meet with Ellen in Davos to learn more about the concept of a circular economy. Below is an edited transcript of our conversation.

So talk to me about how you became interested in finite resources.

When you're out there on the ocean, 2,500 miles from the nearest town, when it would take someone five days to reach you by boat — helicopters can't reach you — you have to have everything you need with you on the boat. It's very concrete and finite. And you begin to understand what finite means. When I reached the finish line, I translated that into the global economy. Our economy today is built around taking something out of the ground, building something with it, selling it, and then ultimately it's thrown away. We have three billion new middle class consumers coming into the world and there's more and more pressure to find out how to manage these resources. So in 2006, I started talking with people to understand more. I talked with farmers, teachers, scientists. I read a lot to learn how our economy worked. I had no experience here.

When I would listen to CEOs, I heard them say things like we're going to use five percent less materials in five years or make a product with 10 percent less material. But when you play it out, it just doesn't work. It still doesn't address the fundamental problem. Then I met three people — a Dutch CEO, a Welch education expert and a German scientist — who saw things in a very different way. The CEO said: "I want our products to be made again." He said: "I want to make our carpets to come back into our factory. I want to lease them so they can be

disassembled — melt down the base material so they can be rebuilt and resold and [I] want to do that by 2025." That was totally different from any other point of view. No one else had looked at that way to design out waste. I wanted to understand the economics of this approach. So in 2010, I started this foundation and coined the "circular economy" term to help frame the concept.

When we launched we focused in three areas. First, business because they can drive change fast. Second was education, so we've piloted with 1,000 secondary schools in the UK, training teachers how to teach [the] circular economy idea and the results have been extraordinary. Students really understand it and support the idea. The third was around thought leadership.

The whole circular concept sounds daunting — there's quite a bit involved with an approach like that: reverse logistics, cost incursions, consumer awareness. How do you begin to address those?

It's a huge challenge. The product design changes. The business model changes. The marketing model changes. So we went to McKinsey in 2010 to ask them to help us and write a report (<http://www.ellenmacarthurfoundation.org/business/reports>), focused on the European Union, that answered three questions. Does the circular economy decouple growth from resource constraints? Is this profitable? And does it work for the wider economy? We focused on a category called medium complex goods, specifically mobile phones, smart phones, washing machines, and cotton. The report came back in the affirmative and found that across those sectors in Europe there would be \$630 billion per annum of net material cost savings through adopting a circular economic approach.

That's pretty impressive.

We were really excited. We have a new report out this week that looks at consumer goods and extends it globally and the results are similarly encouraging. We looked at the three biggest segments — packaging, food waste, and apparel.

So give me an example of how this would play out for, say, a car manufacturer.

We work with Renault. They're one of our foundation's five founding partner companies (along with Cisco, BT, Kingfisher, and National Grid). Renault has a 230 million Euro remanufacturing business with engines and gear boxes. The remanufactured cars leave the factory with the same warranty as a new engine. It's fascinating. Energy costs are a huge concern for car manufacturers. An engine that leaves the remanufacturing plant will have 75 percent less energy embedded in it than a new one. So the energy costs are not there either. Renault can resell the car for half cost of a new car and make three times the profit.

I imagine in a circular economy approach, products have to be designed in a different way.

That's right. We looked at mobile phones and thought it would be difficult given the size of the product and the complexity of the components but there are already companies doing this like Vodafone and O2. No one wants to lease a phone, if you ask them that way, but if you position it that they will get a new phone with the latest technology every year, the value proposition gets more compelling. And product designers need to think "we're going to get 500,000 of these back in a year for remanufacturing so I need to design it in a way to facilitate that."

So you have the new report (<http://www.ellenmacarthurfoundation.org/business/reports>) out. What's next to help continue the momentum with this effort?

We have a new initiative coming in February to help companies get started with adopting a circular approach. One is with executive education programs. One is to establish communities of companies so they can collaborate and share best practices. When an individual company tries this alone it can be daunting, but working together some of it gets easier.

A circular economy explainer video:

The circular economy: from consumer to user

