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Navigating the circular economy: A conversation with Dame Ellen MacArthur

The yachtswoman and founder of the Ellen MacArthur Foundation discusses her vision for a global economy in which scarce resources are reused and not sent to landfills.

At the age of 28, in early 2005, yachtswoman Ellen MacArthur achieved what was then the fastest single-handed circumnavigation of the globe, sailing more than 26,000 miles in just over 71 days. While learning how to cope with limited supplies of water, food, and fuel, MacArthur quickly discovered just how important her scarce resources were to her survival. After consulting experts in the private and public sector, she retired from professional racing and in September 2010 launched the Ellen MacArthur Foundation, with the goal of "accelerating the transition to a regenerative, circular economy." In this video interview, she explains why moving toward an economic system that retains and reuses resources makes both environmental and business sense. An edited transcript of her remarks follows.

When you set off around the world, you take with you everything that you need for your survival. So for three, three and a half months, you're on a boat with everything that you have. You know that you only have so much food, you only have so much diesel, and you become incredibly connected to those resources that you use.

And as you watch those resources go down, you realize just what finite means, because in the Southern Ocean, you're 2,500 miles away from the nearest town. There is no more, you can't stop and collect more.

I'd never made that translation to anything other than sailing, but suddenly I realized our global economy is no different. It's powered on resources which are ultimately finite. And I suddenly realized that there was a much greater challenge out there than sailing around the world, which was, in fact, trying to find a global economy that could function in the long term.

Navigating the circular economy

The best way to illustrate a circular economy is to look at our current linear economy. Our economy today is predominantly driven through taking in material at the ground, making something out of it, and ultimately that material, that product, gets thrown away.

Within a circular economy, from the outset, you design the economy to be regenerative. So you design a car for remanufacture, you design a car for disassembly, for de-componentization. So that the materials that sit within the global economy that currently flow off the end of the conveyer belt can go back in. Which involves everything from different financing of those products and materials to different business models: Do we sell? Do people pay per use for those materials?

If you can understand what a circular economy is, if you set that as the goal, then you know that every decision that you make within your business can take you one stage closer to that point.

That's very much like sailing, because in sailing it's not just the speed of the boat. It's the construction of the boat. It's whether you've got everything in the first-aid kit. It's the weather the boat is sitting in. It's the water the boat's sitting in. What's happening to the water, what's happening to the icebergs, what's happening to the weather? What effect is that having on everything else? You have to look at the big picture, because the moment you focus on the immediate it's all over.

Circular manufacturing

When commodities become more expensive, as they have been doing over the last ten years, the solution has often been, "Let's put less material in the product." But ultimately, you get to a point where you can't recover that material, because it's in such small quantities in that product that you can no longer get it back.

Actually, within a circular economy, you may use reverse logic. You may say, "We'll put more of that material in, and we'll design it in a way so we know we can get that material back." Because we will ultimately have a material flow which includes that product coming back to us to be remanufactured or disassembled.

In our current economy, we have different levels of quality of washing machines that we could buy. You would have your lower-end machine, which is designed to do about 2,000 washes, which will cost you about $0.27 a wash. Your high-end machine, which evidently costs more to buy up front—with more research and development, more materials within it—that will cost you $0.12 a wash.

Within a circular economy, what you would allow is for everybody to have access to that higher-end machine, that only costs $0.12 a wash, because the manufacturer designs it so they get that machine back. They look after it. You pay per wash. You don't buy the machine up front.

So you don't have to pay tax when you buy it, you don't have to pay landfill tax when you throw it away, and the manufacturer—through changing the system—guarantees they can get that machine back so they can upgrade it, they can repair it. They can put it back into their system to recover the raw materials for the machines of the future. You change the entire economic system. The manufacturer makes a third more profit, and the user pays significantly less for a better product.

Making it happen

Obviously, our goal at the foundation is to accelerate the transition towards a circular economy. So we've put short-term goals within that, such as building a program for 100 companies, including regions and emerging innovators, to start to unlock the opportunity of the circular economy through collaboration, through working together, through looking at legislation.

I think there's a massive opportunity for emerging markets in this space. And to think that you have the opportunity to lock into a circular model rather than a linear model, that's a huge economic opportunity. To think that the users of those products can have a better product for less money; that product can ultimately return, creating employment in the remanufacturing or the de-componentization of the product. And then ultimately the manufacturer makes more money because they know they get that component back. That, for an emerging market, is incredible. It allows them to leapfrog our system and gain even more advantage. ▢

Dame Ellen MacArthur is a yachtswoman and founder of the Ellen MacArthur Foundation. She is also founder of the Ellen MacArthur Cancer Trust, and received a knighthood in 2005.