

# THE DAME WHO SANK THE LINEAR ECONOMY

HOW AND WHY AN EXPERIENCED YACHTSWOMAN HAS BECOME THE ICON OF THE CIRCULAR ECONOMY. THE STORY OF ELLEN MACARTHUR AND HER FOUNDATION, A TRUE GLOBAL FORCE TO HELP THE OLD ECONOMY'S TRANSITION. INTERVIEW BY "RENEWABLE MATTER" MAGAZINE.

**E**nergetic, discrete, influential, outspoken, complex, Ellen MacArthur is the Dame of the circular economy. She convinced Google and the World Economic Forum that the linear model is over and that the way we produce and consume across the world can actually be changed. Ellen MacArthur was born 40 years ago in England. At the time, she didn't know that her fate would be influenced by the most perfect geometrical shape: the circle. In the small Derbyshire village of Whatstandwell, far from the sea, she saved every penny to buy a boat. Her goal? Circle the globe, crossing the oceans as a yachtswoman. And that's exactly what she did and better than anyone else. On 7 February 2005 she broke the world record for the fastest solo circumnavigation of the globe, a feat which gained her international fame. It took 71 days, 14 hours, 18 minutes, 33 seconds to sail for the 27,354 nautical miles (50,660 km). In 2010, she decided to focus on another circle. She retired from her sailing career on September 2nd. She had something unique in mind: creating a foundation (today globally-known as the Ellen MacArthur Foundation) to work with business and education to accelerate the transition to a new type of economy. Designing a new model, where everything is regenerative and restorative at the very core. A system where no output is wasted, no material is worthless, where products enter a circle of reincarnation and transformation, using sustainable energy sources and impacting positively the economy. An economy shaped like a circle, a circular economy.

Ellen and her foundation worked together to give this new model prominence, involving the World Economic Forum, big corporations like Google, Ikea and Banca Intesa. She partnered with consulting firms such as McKinsey and inspired thinkers and researchers. Waves never stopped her. Once you tame the



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oceans, nothing can stop you. So, she decided to do something even braver, to sail the Earth-ship out of the traditional, linear, petro-capitalist, economic model. And she might set a record too. *Renewable Matter* reached her in the Foundation's HQ in Cowes – Isle of Wight – to discuss the exciting future of the circular economy and her endeavor to achieve something no-one has ever been able to do and to understand how sailing solo can change the world.

*Dame MacArthur, 6 years ago you started the EllenMacArthur Foundation, one of the most successful initiatives to establish a new industrial model, inspired by thinkers as Amory Lovins, Gunter Pauli and William McDonough. How has this journey been and what is the aim of the Foundation?*

The aim is to extend the idea of a circular economy to the global economy. Our first step to success was to work on the circular economy and define it, trying to understand the circular economy as best as we could. It's continuously evolving and we still only understand a very small percentage of what it really is. But to understand the circular economy's systemic nature and systemic mutation,

we have to take into account raw materials, biological cycles, technology, the service industry and banking, it encompasses everything. Furthermore, it is fundamental to understand that a grasp of the circular economy is systemic. Once defined what the circular economy was we needed to take the idea out there. So, over the years, we have introduced eight reports and three books on the circular economy. The first report, launched at the World Economic Forum in 2012, was looking at medium-complex circularity to more than one year and to less than ten. The top line figure was US\$ 600 billion dollars worth of economic opportunity in 2005. The numbers were big, even if they were only looking at recycling 25% of products' components per year. But the report was an epiphany and an eye opener, people really began to realize that it was indeed a real opportunity. We then went on a second report, which was January 2013, looking the Fmch (Fast-Moving Consumer Goods). We discovered an economic potential of US\$700 billion in the global market, not much harder not to achieve because the Fmch is much faster. We looked at the biological elements of food waste

and plastic packaging as material with high potential. With the second report, we were invited to the World Economic Forum (Wef) in Davos. By year three, we had a partnership with the Wef. The third report, which was looking at how the global and economic value supply chains can become circular, was co-branded with the Wef. We had an impact on the global economy.

*And how did you evolve from there? Revolutionizing the global economy, I must say, is no small task.*

When we launched the Foundation we set out to work in three key areas. First: working directly with businesses, looking at how they could become more circular. At the beginning we knew very little about that journey, we just had a vague idea of what success looked like. Another area we wanted to work on was analysis insight: understanding the economic rationality. The third area was looking at the opportunity through education for the circular economy. I stress this aspect in particular, as we do executive education. It is beyond just publishing economic papers: we show the value of the education of the circular economy. We do this education project to create real circular business leaders but also to provide an inspirational perspective, so that people can see there is a different way in which our economy can function, especially for young people, who are still in the phase of life where ideas are being imprinted. We receive fantastic feedback from them because suddenly there's so much to be done, the more we do, the faster, the better we can get to a restorative, regenerative, powerful economy. We hope that in the future there will be a circular generation.

*What direction will your work take in the future?*

In the future, I see the Foundation continuing to work on education, with businesses, cities and governments, on communication and publications, accelerating ideas, and promoting systemic initiatives. Our view is that we will continue to focus on those five areas and push, as hard as we can, as we always have, as a team. Now we work in many areas: we have people in Brazil, the States, here in the UK, across Europe. We have a team in Brussels, India and China, looking at economic studies and building initiatives. Our work is expanding very quickly, it's becoming

global at a breathtaking speed I could not even imagine only three years ago. Just bringing those five things to a global level, in the way that we know it worked at the World Economic Forum, will entail a great deal of work ahead of us. It's so complex that it's impossible to say where we will be in ten years' time.

*Yours is the most sophisticated and global observatory on the topic. Where is the circular economy establishing solid roots?*

I would say it's definitely more advanced in Europe. There are elements that occur in many countries, but an understanding of the systemic nature of this change, I would say it is more of a European phenomenon. Overseas, the market is beginning to kick off: we have a team in the US and we have incredibly positive conversations, we have global partners in the US. Emerging markets have also a huge potential in the circular economy. In the Western World, we have built the linear system, we have a linear production, a linear thinking, a linear design, it's hard to get out of it. In emerging markets, you can escape the linear system. It would make much more sense to start from scratch and embrace the circular economy straight away.

*How are you pushing circular economy's ideas in developing economies? Has the Foundation tried to lobby cooperation and development agencies, to have them bridging these models?*

We had many conversations with organizations such as the World Bank, the Asian Development Bank, and of course the World Economic Forum; we organized informal gatherings with the world's economic leaders. We are targeting specifically Africa and the potential for its development, there are many conversations going on about circular economic benefits and there is a massive opportunity there. Once you realize how great an opportunity is, suddenly you are building an economic model which is restorative, which manages to keep products and materials with the highest recorded value. It's not just containing the damage on a yearly basis, it's like rebuilding a different model with massive economic potential. It's going to be challenging, there are many barriers along the way.

*The EU has just approved a Circular Economy Package, with a set of policies allocating incentives to the industry in order to develop circular economy business models.*

*Do you think we need more ambitious policies than these?*

It's part of a process. We still know so little about the circular economy. As with policies, trying to do the right thing is actually incredibly challenging because the last thing you want to do is to put something in place, with the right intentions only to find out it generates the opposite effect. The circular economy is policy-relevant not policy-prescriptive. So policies can help, but they don't necessarily have to define exactly what needs to be done. It will be trial and error, I'm sure, but what has been incredibly positive about the process with the European Commission is that it has shifted from being focused on simply waste to a real circular economy package, with systemic change and the launch of a public consultation last summer, which made a difference.

I think the Package has been a very successful start. Look at the feedback from businesses, cities, regions that have worked on this for many years, going back to the Commission after the first package, saying we need the circular economy to happen, not just waste management. I think we have a real opportunity to create an innovative legislation: both parties want to create the circular economy.

*Which EU country is the leader in the field?*

There's a lot of work happening in Holland, for sure. Over the past 10 years they have been working with the government and the general public. In the Netherlands they have a slightly different and open attitude. Some of the challenges they had with the geography and the limited territory are indeed the reason why the circular thinking has gained momentum. There are some astonishing examples of industrial processes. But there are pockets in unlikely places. We worked for example with the city of Phoenix, or with Barcelona, places really forward-thinking.

*How can a city or a region become a circular economy leader?*

You need to involve all the stakeholders. When you are creating a systemic change, it's not easy because you can't do it alone, you have to do it with many other partners, you need to bring everybody to the table in order to create that systemic change.

*Many fear that the circular model might impact jobs. What does your research show?*

When we carried out the study on Europe, at the beginning of the public consultation [for the Circular Package], we worked specifically with the German Employment Economic Group, and we were specifically looking at what influence the circular economy would have on employment. Would employment rise or fall? Results showed that most probably it would have a positive impact. Actually there would be less employment in the raw material industry but there would be more employment in the remanufacturing and service industries. Take Airbnb as an example of the circular economy: you have huge hotels being built all over the world – it is a clear linear model and then suddenly Airbnb pops up, showing there is a lot of unused space in buildings that can be utilized otherwise. And through the IT digital revolution it unlocks spaces which were previously unavailable, almost impossible to find. Suddenly we have this visibility into spare space within the global economy. It could be spare materials, spare equipment, anything: suddenly everything has the ability to be connected. And this creates jobs. This is the time for the circular economy because we have the information technology that can help this. Five years ago we couldn't predict what the digital revolution would have done for employment, suddenly the informal economy, the sharing, the circular are showing opportunities.

*How will trade change with the circular economy?*

If you look at small businesses trying to become more circular, providing a product-as-a-service, they might buy the product upfront from larger manufacture company, of course, but then they need a constant relationship with the manufacturer and the customers, as they might offer life extension services, or they might be able to remanufacture those products locally. Now in the traditional enterprise you buy the product and you sell it and then re-sell it. End of story. That would change because customers will not own the materials, they will only use it for some time. For the company, that piece of equipment will be “in someone else's house” for a while. Indeed for the financial sector this will be a huge change. Financial firms are trying to understand how a business that has adopted a circular model will unlock more economic potential and will set its revenue model. Just having the banking sector understanding whether companies are trying to get to its key, you have this

huge big development of where value changes and who owns value. Having the finance sector understanding the difference between linear and circular is key.

*The Foundation carries out extensive research. Does it work with specific research centres?*

We have 14 university partnerships, to support teaching and research in the circular economy, from London University to Bocconi University in Milan.

We are seeing growing interests in the research partnerships. Professors want to get involved, they see the opportunity, they want to understand the circular economy more deeply. We need to fathom the consequences of the adoption of such models, take Uber or Airbnb as an example. We are going to do things differently, we are going to find spare vehicles, we are going to find spare buildings, to remanufacture everything, and we need to find a way to utilize them, to benefit from these processes. We are building a picture of what the circular economy is, and the more we have of that picture, the more straightforward it would be for new companies, cities, regions to step in the circular space.

*How come that a record-breaking yachtswoman has become the icon of the circular economy?*

It was very unexpected; I never thought I would do this. All I wanted to do from the age of 4 was to sail a boat, and I spent all my free time thinking about sailing. For years, I saved my school money for a boat, I left school at 17 to become a sailing instructor, at 18 I set out for my solo round-the-world tour. Everything was about sailing, everything was about being at sea, everything was about finding a sponsor, everything was about getting out there and being on the water and I absolutely loved it. I still love it as much today as I ever did, it's a massive magnet for me being on the sea. There was absolutely no reason to step out of that, I should still be doing it now. But then suddenly the penny dropped. You know, it's incredibly difficult when you go to sea. Imagine to be about to go off today from Italy to sail around the world, nonstop, you would take everything you need for your survival. Everything. You have a boat, your little world, and you put everything on that, for your survival for the next 3 months, or 4 or 5, depending on how fast your boat is.

Now when you leave, that's it. Your link with the land stop, and you prepare to be at sea for the full duration, if you run out of something, that's it, you can't stop and buy more, in the deep ocean you are 2,500 miles from the nearest town, five days away from everything, so you really are isolated and you really do develop a different way of thinking. You get used to it and you go into a different mode. And suddenly it dawned on me with the second round-the-world tour that our economy is no different than my boat. We have a world with finite resources: it's absolutely no different from the boat. When I finish my journey, I go back and I restock and I set off again. But we cannot do that, we don't have more resources, and it just suddenly hit me, and I knew nothing about the circular economy, I never heard the word, never came across the idea, I knew absolutely nothing. It's what brought me to try to understand the global economy. I started reading every book I could, I met experts, scientist, economists, educators, tried to understand. If this current model that we use doesn't work, what does? And initially you point to “we need to use less, we need to travel less”. But then you realize that all of that is essential, we absolutely need to be incredibly careful with what we use now because we have finite resources. It's not that we are going to educate every young person in the world, “we just need to use everything a little bit less”. You know it doesn't work, because we have desires. And then you start thinking “So what does work?” And suddenly you see that if we change the system, we can recover all the materials, we use biomimicry design, sharing economy models – which brings the utilization of products to the highest level – and the performance economy where they were able to do the same with bigger products. Suddenly you see that systemic thinking can change everything. And it was the personal journey I went on that made me realize that the system doesn't work, the linear economy doesn't work in the long term. That is how I started to think, alone in my boat, about a new economy, which is able to be restorative and regenerative, to rebuild natural capital, which has basically degraded since the beginning of the industrial revolution. And now the race is on!

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