**Transcript**

Reduce, reuse, recycle (song)…

‘Reduce, reuse, recycle’ – that’s the mantra of waste reduction. So use less stuff; reuse the stuff that you do use so that it last longer; and when you really don’t need it recycle it, so that it’s converted into another reusable product or material. These same principles are at the heart of something called the circular economy.

Right now the economy is what academics call ‘linear’. Stuff is made, it is used, and then it is thrown away – often ending up in landfill. So for example, you buy a washing machine, use it for a few years until it breaks and then instead of getting it fixed you chuck it a buy a new one, because it’s easier and it’s also cheaper to do so. This is how much of our economy in the West is set up. Sadly, this isn’t so good for the environment, so the idea of a more circular economy is gaining currency.

To find out more about it I spoke to Anna Mestre. She’s a researcher at the Centre for Sustainable Consumption at Nottingham Trent University. She told me how the circular economy can majorly reduce the amount of waste we produce.

‘If we change this linear idea for a circular idea we actually don’t think about waste – we think that in the end of this linear system there is not actually an end; so the waste is actually a resource – a resource that can be reused and reused and reused, ideally in an infinite way. If not, it should go optimally to the biosphere – by biodegradability, or decomposition’.

Now this requires a massive re-think of the way that most products we use every day are manufactured and used.

‘If you think of a product and the way it’s developed, it’s … there’s a lot of failures: like the production, or before the production the selection of materials, and the processes and the types of energy that you use to produce that specific product. Then there’s the transportation and the packaging’.

So there’s lots of different ways of making the economy more circular. Some of them can be a bit counter-intuitive. Take plastics for example.

‘Typically in terms of the environment, we have an idea that plastics are not good. Right? But we can have a different view on that. If we extend the use of life of a plastic, actually what we will highlight, in terms of performance, is the durability and the longevity of the resource’.

Plastics are often seen as the bogeyman of the waste world. They can take centuries to decompose, potentially leaking pollutants into the soil and water in the process. But the long life of plastic can be a virtue - if we design products so that they actually last longer, instead of constantly wanting to upgrade to newer models. On the other hand, if we do want to live in a world where we want to upgrade, say, our mobile phones every two years, don’t make those phones from a material that will end up sitting in landfill for millennia.

‘If we actually need to design a product that shouldn’t last long, then we adopt a different strategy. For instance, the one that I call ‘biobase’ - basically a consideration, for instance, of biobase materials from the beginning of the process’.

So these biobase materials are biodegradable. And there’s been huge amounts of research into replacing existing plastics with biodegradable versions known a bio-polymers.

‘Natural rubber is a bio-polymer, or polymers made from corn, for instance. So they have as raw material biological ingredients, so meaning they don’t’ need to last long. They can live short lives, but when they finish their lifetime they can go back to the biosphere with the least impact possible in terms of emissions’.

So far the use of bio-polymers is limited to the packing industry – a pretty good place to start.

‘As we know, packaging materials last very short. It’s sometimes just the time of packing the product, putting it in the supermarket, then going to a home. So a material doesn’t need to last 100 years for such a short cycle’.

But this mentality could be applied to more advanced products.

‘Even if a consumer knows that they will probably change a mobile phone in two years’ time, you still think that you want quality in terms of longevity, right? We have the technological options available, more and more. They’re a bit slow in coming to the market, because of the consumer side - what the consumer is actually prepared to receive.

And therein lies the rub. Consumers. We’re a fickle bunch – and we’re the ones buying all this stuff that we’re not very good at reusing or recycling, and that’s even when we think we care about the environment.