

Where Next for the Circular Economy?

By Wayne Visser

It is not hard to make the case for a circular economy, ie one where closed-loop production brings us closer to the goal of zero waste; according to Hunter Lovins, author and founder of [Natural Capitalism Solutions](#), our global economy is so inefficient that less than 1% of all the resources we extract are actually used in products and are still there six months after sale.

Not only is this unbelievably inefficient, it is also profoundly unsustainable. As Richard Heinberg says in his book, [Peak Everything](#), "The 21st century ushered in an era of declines", from global oil, natural gas, and coal extraction to yearly grain harvests, climate stability, population, fresh water and minerals like copper and platinum.

The idea of a circular economy is not new. In the 1960s, US economist Kenneth Boulding called for a shift away from "the cowboy economy", where endless frontiers imply no limits on resource consumption or waste disposal, to "[a spaceship economy](#)", where everything is engineered to be constantly recycled. Mariska van Dalen, a circular economy expert at the consultancy and engineering firm Tebodin, captures the essence of the concept as: "Waste is food, use solar income and celebrate diversity."

One of the most prominent advocates for the circular economy is Michael Braungart, [co-author of Cradle to Cradle](#) (with Bill McDonough). Today, Braungart holds academic chairs in Cradle to Cradle [innovation](#) and quality at Rotterdam School of Management and for design at the University of Twente in the Netherlands, where Braungart has found his intellectual home.

When I interviewed Braungart for the [Top 50 Sustainability Books](#) a few years ago, I found out that he regards the Netherlands as most likely to become the first circular economy. "The Dutch never romanticised nature, so it's different to the United Kingdom or Germany," he said. "There's no 'mother nature', because with the next tide they would just swim away. It was always a culture of partnership with nature, learning from nature, and that's what we need. We can learn endlessly from nature, but it's not about romanticising nature."

The Netherlands also have a culture of support, whereas the Americans, Germans, British and Swedish have a culture of control, Braungart said. "They assume human beings are bad anyway and we need to control them to be less bad. But the Dutch culture is a culture of support, because if you don't support your neighbour, you will drown (because your neighbour couldn't take care of your dyke). Even if you don't like your neighbour, you need to support your neighbour. So Cradle to Cradle is a culture of support."

I was interested to find out whether experts working on the circular economy in the Netherlands also shared Braungart's confidence. Krispijn Beek, who worked at the [Ministry of Economic Affairs, Innovation and Agriculture on sustainable business policy](#), said "Cradle to Cradle was a big hit in the Netherlands, including government." Apparently, the trend really took off after a 2006 television documentary, Afval = Voedsel (Waste = Food).

However, at a later point the idea stalled – at least in government. Beek claims that "one of the showstoppers was the commercial certification process, which made it impossible to use Cradle to Cradle in public procurement."

More progress in the private sector?

Michel Schuurman, a director at [MVO Nederland](#), agrees that "the concept gained a lot of attention some years ago but has faded a bit in recent times." He believes the reason, at least partially, is

that "businesses are in the process of experimenting with it and are not yet ready to communicate publically." Another reason is what he calls "the closed system of Cradle to Cradle" – "its monopoly, lack of transparency and (expensive) certification has been a reason for some to follow the principles but not the scheme."

Beek expresses a similar frustration. "The Dutch government had a chance to get Cradle to Cradle thinking into the [Reach regulatory framework](#) [but] this momentum was lost because the owners of Cradle to Cradle stayed vague about their objectives against Reach and which changes would be required [to] fit into the Cradle to Cradle framework."

The private sector has seen more progress. In fact, Beek believes that a critical factor for its success here is that design of the circular economy uses a business perspective, while similar earlier concepts were too driven by non-profits or government policy. Beek is now CSR manager at Strukton, one of the top 10 construction companies in the Netherlands. "We are working on a process called 'concrete-to-concrete aggregates' (C2CA)", he says. "With international partners (universities and companies), we are recycling not only concrete but also concrete aggregates."

This is only one of many circular economy initiatives and [leading corporate examples in the Netherlands](#). Others I came across in my research include Aveda, Auping, Philips and Interface FLOR. Some local municipalities and regions have also taken a lead, such as Venlo, which hosts a Cradle to Cradle expo lab and Paviljon at [the annual Floriade flower exhibition](#).

As far as spreading these best practices goes, Schuurman observes that, so far, the circular economy has been "driven by visionary and bold leaders" and "the increasing need and desire to have closer relationships along the value chain." Van Dalen stresses that scaling up the circular economy requires it to be translated into concrete measures and clearly demonstrated as a way to meet multi-stakeholder sustainability targets.

Besides these drivers, it is also important to stimulate public debate. According to Beek, this includes ideas like upcycling, the process of converting waste materials or useless products into new materials or products of better quality or for better environmental value, and service lease concepts like Turn Too, Rendemint, or Philips, where you can now lease lumen ([units of luminous flux](#)) for your office instead of buying LED lights.

Finally, we should not forget that, beyond being a solution to our global environmental crisis, the circular economy is also a business opportunity. A recent study commissioned by [the Ellen MacArthur Foundation](#) concluded that there is an annual net material cost saving opportunity of up to \$380bn (£237bn) in a transition scenario and of up to \$630bn (£393bn) in an advanced scenario, and that is only based on a subset of EU manufacturing sectors. "It's not about using less and less," the Foundation concludes. "It's about finding a cycle that works."

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