



Circular Economy Now!

**How to benefit from the
transformation to a closed
loop economy**

By Andreas Neef
and Christian Rudolph

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1 / Circular Economy: More than just Recycling

The Circular Economy is an issue with transnational reach, and bound to be of increasing importance for corporations across the globe. This becomes evident when considering the basic features of the concept of a Circular Economy. Its objective is to conserve the value of existing products whenever it makes sense to do so from a business and quality perspective. It is about moving away from the resource exploitation approach – production, consumption, disposal – and towards a type of value creation system in which optimised products and business models enable a variety of utilisation cycles prior to traditional recycling. So, the Circular Economy implies an approach to profit creation based on the notion of closed loop systems at various levels, including resources and materials, products and supply chains.

Considered in this light, the circular economy entails much more than just recycling. This observation is confirmed by Christian Rudolph, an expert in the Circular Economy and since January 2016 Foresight Consultant at Z_punkt, in the following interview.

2 / Interview with Christian Rudolph

Creating closed material streams to make more efficient use of resources – that sounds like something for sustainability experts and environmental scientists. But is the Circular Economy also important for strategists and innovators in the business world?

If we extend the notion of closed resource cycles by taking the business model perspectives into account then yes, absolutely. The more a given company depends on specific raw materials, the greater the strategic importance of the Circular Economy for its long-term stability. Innovation managers are needed at two levels: first, in connection with the development of recyclable products and services; and second, in relation to the adaptation of business models within the existing portfolio, for example by transitioning from per-item sales to selling on the basis of product utility value.

At least on some level, the Circular Economy concept has been well established in Germany for a long time now. The first "Closed Substance Cycle Waste Management Act" was enacted here back in 1997. Is Germany in the vanguard of the Circular Economy?

Well, possibly, if you reduce the Circular Economy concept to the title of "global recycling champion". However, at the same time, at 614 kg of refuse per capita per year, we are also among the world's most prolific waste producers. The current average for OECD member states is much lower, at 483 kg. In a Circular Economy, recycling is just one option (and not even one of the most profitable). The objective of the Circular Economy is more about conserving the value of existing products whenever it makes sense to do so from a business and quality perspective. Unfortunately, in these terms, Germany is no trailblazer.

And where are the trailblazers to be found?

One of the best-known examples is eBay, but there are many others. Caterpillar, the biggest construction machinery manufacturer in the world, participates in the Circular Economy, primarily through its nine re-manufacturing works where they refurbish

everything from pumps to gearboxes and even entire engines to reuse them in new models. Just outside Paris, Renault's only profitable production facility is actually a re-manufacturing plant. Clients of Philips, the electronics giant, can lease complex office lighting systems ("pay-per-lux") rather than buying them outright. EPSON, the printer manufacturer, will be launching a new printer this year that lets you recycle confidential documents on site to produce new paper, which saves disposal costs. The Norwegian fashion house Vigga provides sustainable baby clothing for a monthly fee, which can be swapped for free when they no longer fit. And, as recently as January 2016, British Airways announced that they will expand their fleet primarily with second-hand A380s.

How does the Circular Economy concept differ from "cradle-to-cradle" approaches that have been the topic of discussion for many years now?

The Circular Economy is a holistic business concept that unites the advantages of many schools of thought, including industrial ecology, certain approaches from the bionics sector, the share economy, and also the cradle-to-cradle concept. Cradle-to-cradle is a design philosophy that aims at ensuring that new products are constructed from scratch to be 100% recyclable whether biologically or technically. Circular economy products need not necessarily comply with this narrow definition of cradle-to-cradle.

The field of resource exploitation is highly regulated. Can companies even benefit by going beyond the statutory requirements?

Absolutely! The EU Commission ratified the "Circular Economy Package" in December 2015. Whilst this mandates a recycling quota for member states of 65% by 2030, it also ring-fences over

six billion euros in funding for qualifying companies via the Horizon 2020 framework and EU structural funds. But even without subsidies, there are huge incentives, especially in the face of increasing and fluctuating prices for raw materials.

So, the Circular Economy is primarily of interest to resource-hungry sectors such as the chemical industry?

No. It is just that resource-hungry sectors such as the chemical, automotive, and construction industries are directly impacted by fluctuating prices for raw materials, which makes the Circular Economy especially profitable for them. Energy and resource efficiency are already top priorities in these industries. But, when it comes to achieving value creation through a high number of utilisation cycles, the Circular Economy becomes interesting to many other sectors. Modular mobile phones, asset sharing, and light leasing are just a few examples. But, service providers are also needed, for example, for leasing contracts, in re-manufacturing, or in the increasingly important field of reverse logistics.

What are some of the steps companies can take to move their business towards a Circular Economy system?

Oh, there are many. To give just a few examples, let's take resource sharing (e.g. devices, premises, vehicles); product life-cycle extension through improved product design (modularity, repairable products, and resource substitution); business model optimisation towards utilisation rather than ownership; using renewable and/or recycled materials in new products; and product and component refurbishment by the manufacturer rather than down-cycling to lower-value products or raw materials.

To put it bluntly, if I were an entrepreneur, what would I gain by investing in the Circular Economy?

Ideally, you would produce a high-quality product just once from which you would earn long-term profits through several utilisation cycles by means of repairs, reuse, and re-manufacture. Short- and medium-term profits can primarily be gained through better

product loading (repair & reuse). In the longer-term, the organisation of product-service systems will prove decisive. A manufacturer of domestic appliances, for example, could extend its value creation chain by leasing products to customers rather than selling them. This would require the establishment and expansion of new business units and skills to provide support during and after product usage. It could be some years before this would lead to the development of a new value creation chain.

3 / Foresight for the Circular Economy

The Circular Economy is no mere abstract vision that has little to do with modern trade. It is about a long-term transformation that needs to be initiated right now in order to reap the future benefits. The fact that none of the best-practice examples of German industry are currently being pushed forward ought to give us pause for thought. And that the pressure to act will only increase is already clearly visible on the horizon. The EU is expediting matters – the "Circular Economy Package" was agreed by the EU as recently as December. Public concern is also mounting: the biggest conference on the Circular Economy to date has just taken place in London. The prices of raw materials remain volatile with an upward trend. Major international corporations are taking the lead in the Circular Economy movement. The Ellen MacArthur Foundation, a global leader in Circular Economy matters, counts Cisco, Google, Philips, Renault, and Unilever among its "strategic partners" — but not a single German company.

Z_punkt provides a number of consultancy packages for companies wishing to improve their position in the circular economy arena, including:

> **Circular Readiness Check**
How well equipped is your business to meet the challenges of the Circular Economy? How high do you rank in the competitor benchmarking tables?

> **Transformation Scenarios
"Circular <COMPANY> 2025"**
Transformation scenarios for potential strategic routes towards a Circular Economy model for your company.

> **Circular Innovation Development**
What products, processes and business models could raise your business profile in the Circular Economy?

About the authors

Andreas Neef is Z_punkt's Managing Partner. He has taken responsibility for a large number of foresight projects – both strategy and innovation-related – since the mid-1990s. A key area of his work is to identify future markets that extend beyond the core businesses of Z_punkt's clients. Additionally, information scientist Mr Neef advises management teams on the implementation of foresight as part of the strategic dialogue at a corporate and departmental level.

Christian Rudolph helps Z_punkt clients tackle long-term, strategic issues, particularly those relating to the circular economy. He investigates the innovation and value-creation potentials for companies that can arise from a circular-economy perspective. Of particular interest is the question of how products and services can be bundled together to create innovative product-service systems. Christian Rudolph holds a Master's degree in Management & Economics.

About Z_punkt

Z_punkt The Foresight Company is a leading international strategy and foresight consultancy that focuses on strategic future issues. It translates findings derived from trend and futures research into practical advice to facilitate strategic management. Using corporate foresight processes, Z_punkt helps companies to make the most of sustainable future markets.

Contact

Z_punkt GmbH
The Foresight Company
Anna-Schneider-Steig 2
50678 Köln
Germany
info@z-punkt.de
+49 (0)221.355 534.0