



EU regulations and industry still need to change to let in a leaner, fitter, more circular economy

➤ Circular economy for faster change

EFCA's President has welcomed the raised profile the European Commission is giving to the 'circular economy' as it seeks faster change towards a more sustainable European way of life.

"Putting it centre stage at this year's Green Week in Brussels shows the Commission is as keen as we are to develop a faster, more integrated way of greening our economy," says President Flemming Pedersen (Chair of Trustees for the Danish Rambøll Foundation).

"Consulting engineers work at junctions – where sectors and disciplines cross – and can see connections and opportunities that will improve the use of resources," says Mr Pedersen. "That's why we are at the forefront of this new wave of thinking. We have seen good progress already but it is only the beginning. The potential for change using a circular perspective is enormous."

"Let's get more supportive legislation and more creative partnerships to do it," he says.



Jan-Paul Kimmel

A change in the way we do business must follow the technology and efficiency innovations of recent years if we are to implement a more sustainable, 'circular' economy. Further improvements in performance are not only feasible, but logical, with a new generation of business models and a complete rethink on the way we produce and purchase. Any associated EU regulations, several of which are up for revision in 2014, should provide the flexibility and support to make it happen.

Jan-Paul Kimmel, Sustainability Manager Industry Energy & Mining at Royal HaskoningDHV (NL) explains that the circular economy is more than just recycling and energy efficiency for industry. It is, he says, about looking at whole supply chains and optimising their performance. EU industry is facing an increasing scarcity of largely imported raw materials, rising costs and falling margins; and Member States continue to grapple with problems of waste, pollution and environmental degradation. The problems are inter-linked and the solutions should be too.

Nature as a model

The circular economy reflects the cycles present in nature. It encompasses 'closed loops' where products at the end of their useful life are transformed in some way and reintegrated into another process.

"A solution might focus not on how someone's needs are being fulfilled but on what is the 'performance' provided," Mr Kimmel explains. Performance is already being defined and is becoming an increasingly important notion. You might not pay for a chemical but you could pay for its function; you might not pay for a lamp but you could pay for some light.

So where do you start? Mr Kimmel refers to "sub-optimised business chains" containing lots of economic value that could still be retrieved by innovation in re-use, recycling or recovery. "We don't need to start with design, or even innovation," he says, "we need to start with organisation, to bring actors together from different ends of a chain, compare their needs, see where loops can be closed." The magic lies in developing new relationships and ways of working. "This circular system allows us to step away from a traditional hourly-based consultancy business model, for example. Once you have a new model in place, then you can start to see opportunities to optimise a chain and add value."

The magic lies in developing new relationships and ways of working

Co-creation

Consulting engineers appear to be well placed to take up the baton and run with the principles behind a circular economy. They understand, operate in, and bring experiences from more than one industry which means they can broker productive partnerships amongst

↳ Liability and insurance legislation – EFCA helps to lower a barrier for the internal market

EFCA has published a 2014 update of its comparative study on **legislation for liability and insurance**, undertaken for 15 EU Member States. The lack of harmony between European countries in these fields remains a hurdle to the provision of trans-national consulting services and thus to the continued development of the internal market.

The report, first published in 2010, includes detailed information on the situation in Austria, Belgium, Denmark, England, Finland, France, Germany, Hungary, Ireland, Italy, the Netherlands, Norway, Spain, Sweden and Turkey. It provides a good reference base for companies working in more than one country in the EU having to align their projects to national legislation. It is available for download from www.efcanet.org.



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previously unrelated businesses. "We are in a position to do this," says Mr Kimmel, "It is not hard for any consulting engineer to see the potential of working in a circular economy – their job is to make it more tangible.

"We believe we must be able to 'co-create'," he continues, "to be committed to an initiative as more than just a consultant. We need to become actors, to join the consortium. A company understands its own business but not necessarily that of another. We do."

So why isn't the circular economy more advanced? "It has been discussed by the European Commission for 30-40 years," explains Mr Kimmel, "previously as cradle-to-cradle cooperation or closed loop systems. We already have examples that are in this direction – the design-build-maintain model of the construction industry for one, and here at Royal HaskoningDHV we are involved in a chemical leasing initiative – not for core products but for residual streams."

Royal HaskoningDHV is working on another model with Siso which demonstrates the user also has a role to play. "Once a product has outlived its use in the linear economy it usually goes to the rubbish dump or the incinerator", according to Mr Kimmel. "We are working on a Recover-E Program which aims for shared responsibility through the whole supply chain and a true circular economy through innovation within the ICT lifecycle, not just the WEEE¹ minimum recovery and recycling targets." In the value chain they saw that 're-use' had not been 'optimised' and that it held a lot of economic value that could be retrieved. "We are creating a new model for users, and we are starting with professional users of ICTs."

Another example relates to the rare metals used in laptop computers. The commodity industry dominates the recovery of metals and what is inside a laptop is seen as having small value. "But that all depends on what glasses you are wearing," asserts Mr Kimmel, "if you look for copper you are only going to see copper, if you look for gold – same thing. The business model with the laptops is running on their re-use value and linking to their potential for recycling – with a business case of about €200 per device."

How an issue is perceived is key – waste in the construction industry could be rubble from demolished buildings, or it could be empty offices and depreciated real estate. Waste that can be used is the issue, rather than where to put it.

The need for trust...

Central to a more rapid uptake, however, is the need for trust and collaboration between businesses. According to Mr Kimmel, they don't always have this as they are still acting in another business model. Ironically, the sort of collaboration and chain-based approach necessary is not always supported by EU legislation either.

... and supporting legislation

EU procurement regulations still require three parties to tender for a service or product. Where parties collaborate and work in a closed or organised loop, where they share all information to track and trace materials it can be seen as an infringement of EU competition law. "But we are working on this," says Mr Kimmel. The REACH Directive which regulates the use of chemicals and was so long in the making, contains elements which could hinder the effective recycling of chemicals. "We cannot change the nature of the REACH legislation," he adds, "but we could perhaps adapt the Waste Framework Directive to include recycling, recovery and second use in the REACH risk assessments to provide a more enabling environment."

Mr Kimmel sees the circular approach going far into the future. "Where you act in a 100% circular chain," he says, "the role is to continue that chain, and for such a continuation you need innovation. We are making good progress and on a global level – Europe is well ahead of the game."

¹ Waste electrical electronic equipment

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EFCA has member associations in 24 countries, and is the sole European federation lobbying on behalf of engineering consultancy and related services, a sector that employs around one million staff in Europe. EFCA contributes with a strong and cohesive input to legislative actions of its national associations on issues affecting market conditions. Furthermore, the organisation works as a Europe-wide platform for national associations and their member firms to gather relevant facts and discuss issues with their counterparts.