

From linear to circular: the companies revolutionising the supply chain

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David Thorpe, News Editor – Energy & Environmental Management

Many companies are still missing out on big savings from reducing carbon use and other resource efficiencies, particularly those in the supply chain for larger companies.

But this is only the beginning of a transformation from a linear to a circular economy, in which today's pioneering corporations will be tomorrow's successful giants.

This is the implication of two new high-level studies involving companies as diverse as Renault, L'Oreal, PepsiCo, B&Q, BT, National Grid and Walmart.

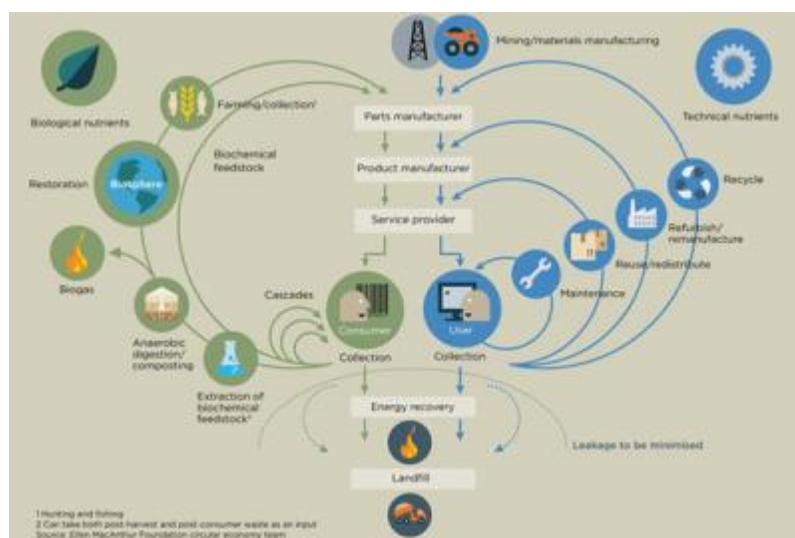


Photo (cc) One model of how the circular economy could work, from the Ellen MacArthur Foundation report.

Step One: Greening the supply chain

The first survey looks at the current state of play regarding the greening of conventional, linear, supply chains.

The new annual report from [The Carbon Disclosure Project \(CDP\)](#), on the performance of the top 50 organisations which have joined its Supply Chain programme, says that while 43% of them are reporting absolute carbon emissions savings and 39% are saving money as a result, it's taking a while for their procurement standards to effect changes in their suppliers' behaviour, with just 28% yet following suit. Frances Way, programme director for CDP, said: "Such a large shift in companies' procurement models is encouraging but since these trends are only now emerging, we are yet to see a transformational impact on suppliers' emissions".

The Carbon Trust has found that by using its online tool, [Carbon Trust Empower](#), to engage employees in cutting unnecessary energy, paper and travel, a typical small business can save over 15% of their energy bill or more than £6K per year. Larger businesses could save £150K and over 500 tonnes of carbon dioxide a year.

So there are obvious benefits to doing this, and indeed the CDP's survey reveals that progressive companies are discovering "significant opportunities to reduce emissions throughout their supply chains, leading to reduced risks of climate change-related disruptions, lower costs, and new business opportunities".

The commonest means by which they achieve this are through applying conditions to procurement contracts and rewarding those suppliers that apply strong environmental practices.

The number doing this has "increased dramatically" to 62%, from 28% in 2010 and 19% in 2009". 7% of companies award preferential status to suppliers who show strong sustainability measures, 17% recognise them through external communications such as press releases, and 38% highlight their performance in internal documents.

The report says that Asian-based and European-based companies are better at disclosing their performance and score higher than the companies from North America and the rest of the world. They have more comprehensive climate change strategies in place, and so have generated better results than their competitors elsewhere.

This suggests that North American suppliers are losing out in capitalising on the opportunities of climate change.

Half of the companies who responded to questionnaires are developing, or already have in place, a contractual obligation for suppliers to manage greenhouse-gas (GHG) emissions, and include information about emissions management in RFPs.

Many say they will go further and soon deselect suppliers who fail to implement formal environmental criteria.

Supply chains stretch across the world, and are vulnerable to disruption and the legacy influence of trading conditions that are becoming increasingly redundant or inappropriate.

For example, the 2011 floods in Thailand significantly disrupted the personal computer industry, because suppliers weren't prepared for this extreme weather event. The frequency of such events is increasing as climate change takes hold.

Amongst the many other risks to supply reliability are changes in fuel costs and in local environmental conditions (such as the effects of new water shortages, for example), according to Paul Donovan, global economist at UBS and the co-author of the book *From Red to Green: How the Financial Credit Crunch Could Bankrupt the Environment*'.

Leading companies named

PepsiCo estimates its total potential exposure to ingredients and agriculture from climate change at \$12 billion per year, and so has instigated several programmes to improve resource conservation and crop yields along its supply chain through more efficient use of water and less reliance on synthetic fertilisers.

Consequently it has a policy to "promote best practices among our business partners, in order to protect natural resources and mitigate business risks through innovation and more efficient use of land, water, energy, and packaging".

L'Oreal is singled out for its strategy to give buyers the information they need to evaluate suppliers on climate change action in their quarterly business reviews.

Their solution starts with a scorecard document that summarises suppliers' Carbon Disclosure Project (CDP) responses. Its plan is to make responding to CDP mandatory for all key suppliers.

Walmart has a goal of eliminating 20 million metric tons of GHG emissions from its supply chain by the end of 2015, in large part through collaboration with its 60,000 suppliers, who were responsible collectively for 72% of the company's total emissions in 2006.

It has begun by focussing on China, setting a goal of becoming 20% more energy efficient per unit of production in its top 200 factories.

One supplier, Dana Undies, subsequently saved 71% from its annual energy bill.

Another, Intex, reduced coal consumption by nearly 12,000 tons, equal to almost 30 million metric tons of CO2 emissions, and has invested another \$1.2 million into 16 energy-saving projects.

The Bank of America reports that a growing number of its existing clients and prospects are "asking sustainability questions and inquiring about the bank's operations and what it's doing to influence suppliers".

Step Two: Towards a circular economy

So far so good. But the ultimate goal of this trend to greater involvement of supply chains in reducing a large corporation's environmental footprint, is to make that chain circular.

The benefits of this goal are outlined in a new report that looks at the economic and business rationale for an accelerated transition [towards a circular economy](#).

Presented at Davos last week, the report was commissioned by the Ellen MacArthur Foundation with the support of B&Q, BT, Cisco, National Grid and Renault, and produced with help from McKinsey & Company.

It finds that by designing products for easy disassembly, reuse and recycling, and by creating tight reclaim and refashioning chains, the cost of remanufacturing mobile phones, for example, could be reduced by 50% per device.

Leasing instead of selling products is seen as one way to tighten the chain. For example, high-end washing machines would be accessible for most households if they were leased instead of sold, the report notes, building on ideas developed by Paul Hawken and Amory Lovens at the [Rocky Mountain Institute](#) since the 1990s.

Another conclusion is that the UK could save £8bn a year on landfill cost by keeping organic food waste out of landfills, and thereby reduce greenhouse gas emissions by 7.4 million tonnes a year, delivering up to 2GWh of electricity and provide much-needed soil restoration and specialty chemicals, using anaerobic digestion.

It sees hope for this market transformation in the fact that "we are in the midst of a pervasive shift in consumer behaviour" which means that "a new generation of customers seem prepared to prefer access over ownership".

The next five years will be the pioneering phase, it says. "We expect that industry pioneers will start building competitive advantage in various ways."

Moving manufacturing away from wasteful linear material consumption patterns could prove to be a major innovation engine, much as the renewable energy sector is today. Far-seeing companies are already forging the route ahead.

Link to Original Article:

<http://www.eaem.co.uk/news/linear-circular-companies-revolutionising-supply-chain>