

The Circular Economy – same old, same old or the Holy Grail?

We have many problems in the world: one of them is the problem of scarce resources and electronic waste which arises from the way our modern economy currently operates. This approach is 'linear' in design where products are made, used by consumers and disposed of without a great deal of thought to environmental sustainability. The linear economy is powered by increasingly expensive fossil fuels, relies on continual economic growth and generates waste.

An alternative approach to a linear economy is a circular economy. This is an industrial system which benefits society and nature; it aims to reuse products and the materials they are made of to realise their maximum value, as in a natural ecosystem. It is an industrial system that is intentionally regenerative in its design.

The circular economy replaces the 'end-of-life' concept with restoration and moves towards the use of renewable energy. It reduces the use of toxic chemicals, which impair reuse, and aims to eliminate waste through the considered design of products and systems. In order to achieve this transition some experts see that a change of the entire operating system is essential.

The Ellen MacArthur Foundation has undertaken significant research into circular economy frameworks, and the benefits to business (see diagrams below). They found that circular economy thinking and methodology is now being used in a variety of business applications. For example, recycling toner cartridges (HP), selling of light rather than light fittings (Philips) and motor vehicle take-back schemes (Renault). The lessons learnt in these environments are being considered for other applications such as the design, reuse, repair, repurposing, refurbishment and recycling of mobile phones.

A recent report from the Ellen MacArthur Foundation, McKinsey and SUN estimates that a circular economy could allow Europe to grow resource productivity by up to 3% annually, creating a net benefit of €1.8tn (£1.27tn) by 2030. The report also suggests that a circular economy would increase the average disposable income for EU households by €3,000 (£2,110).

On 2nd December 2015, the European Commission published their Circular Economy Package which has been many months in the making. It certainly takes the agenda forward but, in the opinion of a number of industry watchers and experts, it is not going to have the impact that had been hoped for. The Guardian newspaper has highlighted five key elements of the package:

1. The original municipal waste recycling target of 70% by 2030 has been reduced to a mandatory target of 65%.
2. The original target to recycle 80% of packaging waste by 2030 is now 75%.
3. The commitment to reduce food waste by 30% between 2017 and 2025 has been scrapped.
4. The obligation to separate collection of bio-waste by 2025 can be waived if it is considered not to be technically possible.
5. The package does address preventing the obsolescence of products. The commission has said it will initiate work to detect planned obsolescence and ways to address them through an independent testing programme.

Yet, it would seem that the business opportunities are there for the taking. The EC package suggests that, in the electronics sector, re-use, re-manufacturing and repair can play a big part in using scarce resources more efficiently. For example, the cost of remanufacturing mobile phones could be halved if it were easier to take them apart. If 95% of mobile phones were collected, this could generate savings on manufacturing material costs of more than €1 billion.

Circular Economy Roundtable 28th October 2015

Blog for Tomorrow's Company

To consider these matters more fully, the School of Business Management and Economics (BMEc) and the Institute of Development Studies (IDS) co-hosted a roundtable discussion in October 2015 to explore the benefits of the circular economy to business and what might be the impact on developing countries. Roger Strange, Professor of International Business at BMEc introduced the event and noted the importance of the circular economy to business and development.

The roundtable was given a general background on the subject prior to the roundtable discussion. Professor Hubert Schmitz, development economist at IDS gave a talk on "From throw away to circular economy: why does it matter?". This was followed by Peter Desmond, MA student at IDS and director of Growth International, who provided a summary of his dissertation research into the circular economy and recycling of mobile phones in South Africa.

The 40 people who attended the event then broke into small discussion groups to consider the question "What are the key enablers for the creation of a Circular Economy for mobile phones?".

The diagram below summarises the discussion and the inter-relationships of the key enablers. Points which arose included:

- Rethinking the value chain – users from the Global South help design phones and manufacturers partner with local entrepreneurs to help collect, repair and resell handsets.
- Industry collaboration to increase standardisation across manufacturers.
- Academic institutions undertake research into current good practice and case studies.
- Increase consumer awareness of environmental and social impact of their product choices.
- Retailers provide take-back schemes with incentives to return end of life products.
- NGOs lobby for change in business practices and regulatory improvements.
- Governments create an enabling environment for local entrepreneurs and enforce legislation for scarce resources to be reused.
- Engage with stakeholders in the Global South to support the inclusion of entrepreneurs and small businesses in global value chains.

The meeting concluded that, in order to start to create a circular economy for mobile phones, a collaborative effort is required between business, academia, government, consumers and NGOs. This would also apply to any product which is made up of complex value chains and has significant potential impact on the Global South. The myth that the circular economy is just another short-term fad was not accepted by the delegates: they saw the potential that this approach could have for reducing adverse environmental and social impact whilst creating new profit opportunities for business. However, it is not a quick fix but rather a longer-term strategic option which requires collaborative working amongst a diverse range of stakeholders.

Following the plenary discussion, Jodie Thorpe proposed some next steps for BMEc and IDS to work together with other institutions, such as Tomorrow's Company and SPRU, on research projects. These could include understanding good practice, standards, and case studies where the circular economy can provide benefits to businesses in both the Global North and South.

If you would like a copy of the notes from this Roundtable please email Peter Desmond at peter@growthinternational.com.

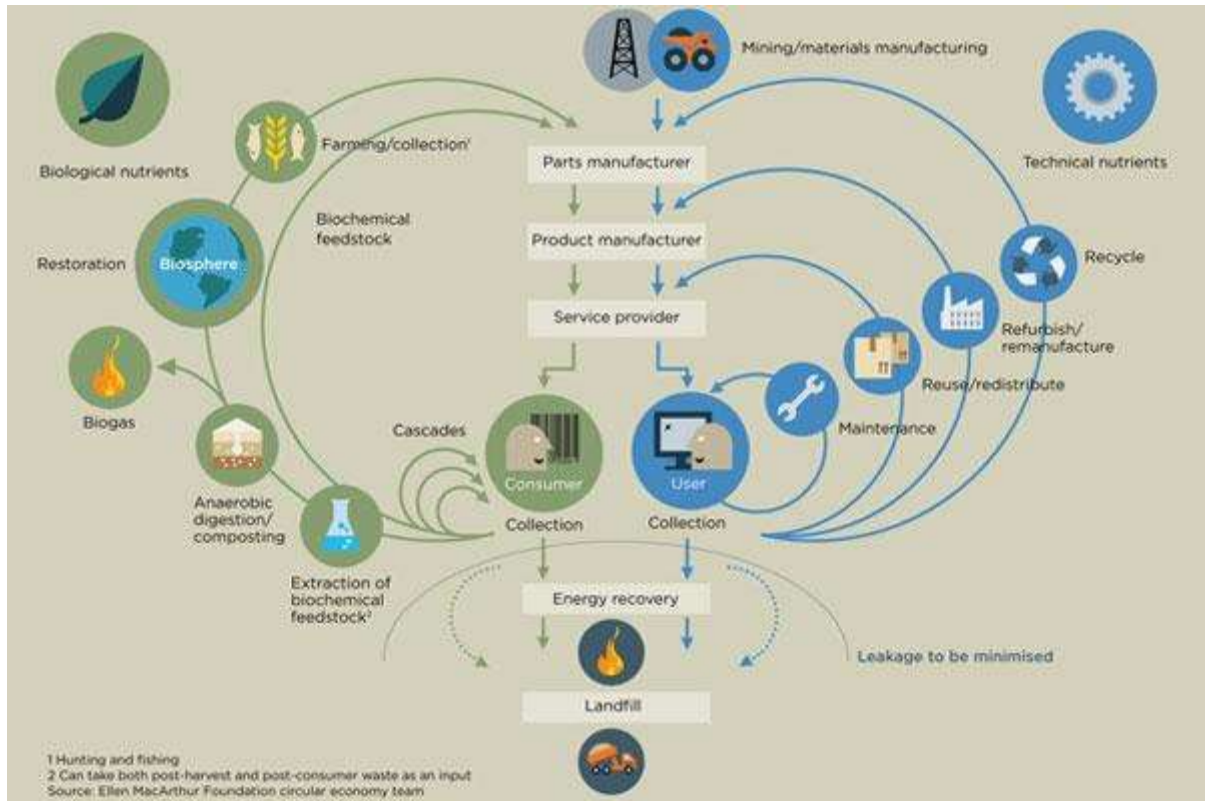
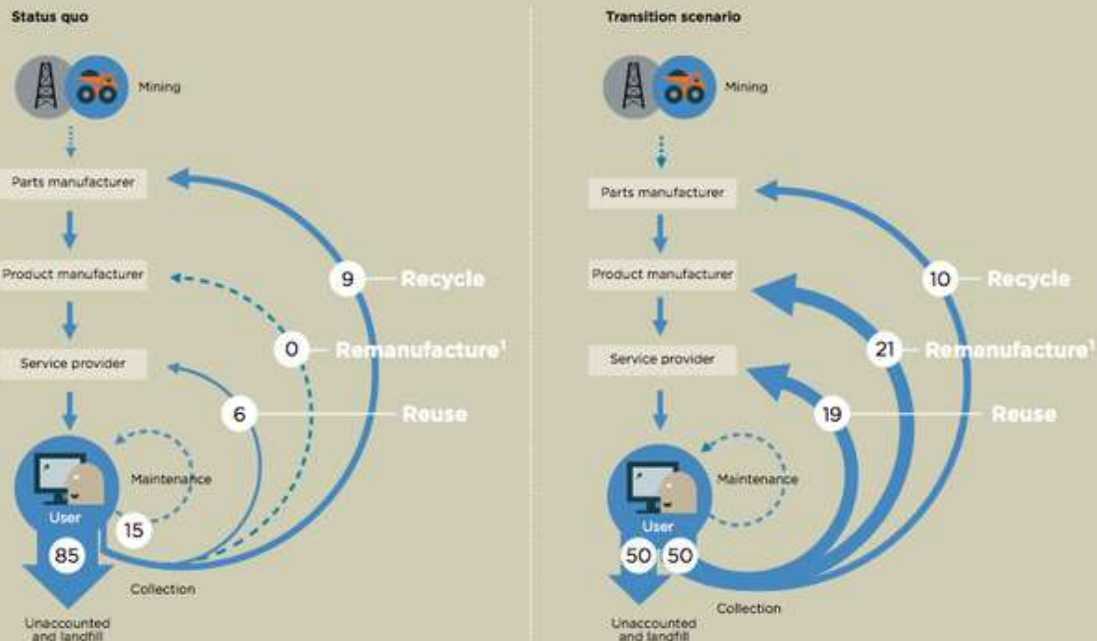


FIGURE 11A
Mobile phones: Reuse and remanufacturing as a viable alternative to recycling

ESTIMATES

End-of-life product flows based on 2010 EU figures
 Percentage of total end-of-life devices



¹ Remanufacturing, here refers to the reuse of certain components and the recycling of residual materials
 SOURCE: Gartner; EPA; Eurostat; UNEP; Ellen MacArthur Foundation circular economy team