



POLICY BRIEF

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Ecodesign and New Business Models for a Circular Economy

Summary

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- *Conclusion*

1. Sustainable raw materials management, ecodesign and circular economy

Raw materials are crucial to EU industry and a building block for its growth and competitiveness. At least 30 million jobs in the EU depend upon access to them.¹ Highly dependent on imports of raw materials, the EU is currently facing an increase in demand for unprocessed minerals and metals and, in parallel, strong challenges to the supply of certain raw materials combined with price volatility and market distortions. In response, the European Commission launched [the European Innovation Partnership \(EIP\) on Raw Materials](#) with the two-fold aim of ensuring the sustainable supply of raw materials to the European economy and increasing benefits for society as a whole.

Ensuring a sustainable management of raw materials across the value chain (exploration, extraction, processing, recycling) through innovation, co-operation and exchange of best practices between stakeholders is now a key objective for the EU. The linear approach to industrialisation ('take-make-dispose' industrial processes²) is

¹ http://europa.eu/rapid/press-release_IP-13-863_en.htm

² *Towards the circular economy: Economic and business rationale for an accelerated transition*, EMF (2010)

Sustainable management of raw materials is crucial to EU growth and competitiveness.



not optimal, neither from a materials use nor from an economic perspective, and places an unnecessary pressure on the environment. This is why it is important to move from today's linear economy, towards a more circular one, where **one's waste becomes another's raw material**. The circular economy can be defined as an alternative economic model in which resources are kept as long as possible, maximum value from them is extracted whilst in use, and products are recovered and regenerated at the end of each service life.³

At this moment, there is no single European policy framework on circular economy; rather, certain related policy actions and Directives exist, such as [the Resource Efficiency Roadmap and Flagship Initiative](#), the [European Commission's Innovation Union Flagship Initiative](#) and others. However, with the increasing momentum for a more circular economy, the European Commission is preparing the **Commission Communication on the circular economy** which will be published in June 2014 and is expected to set out upcoming plans and identify priority areas (e.g. the need to revise product design to enable circularity, remanufacturing and recycling).

Four key aspects should be taken into consideration within a circular economy: reduction (design for the lowest footprint), re-use, repair (power of cascaded use), recyclability (power of pure and easy to separate design).

One of the main pillars of the circular economy is **product eco-design** for ease of reuse, disassembly and refurbishment. Eco-design increases the life of products from their conception stage.

In line with the [Directive 2009/125/EC](#) eco-design means “the integration of environmental aspects into product design with the aim of improving the environmental performance of the [product] throughout its whole life cycle”. Currently, the EU approach to eco-design is focused on products' energy performance. This scope could be expanded in order to include the sustainable use of raw materials.

Product eco-design will require advanced skills, information sets, and new working methods. The shift to a circular economy will encourage **innovative business models** and practices that will generate more durable products and facilitate re-use

³ <http://www.wrap.org.uk/content/wrap-and-circular-economy>

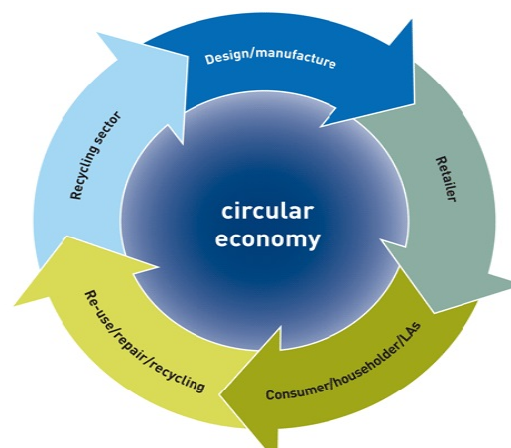


Figure 1: WRAP's approach of circular economy

Source: WRAP (2014)

There is a need to move from a linear approach of the economy to a circular one where one's waste becomes another's raw material

Product eco-design is a key pillar of the circular economy



A circular economy will require new business models and will encourage cross-sector cooperation between actors

and repair. New business models will encourage a **cross-sector approach** and **cooperation** between actors along the whole supply chain of a product.

The success of new business models will be driven by the response of **intermediate or end consumers** who will have to adapt their consumption patterns and habits. Acceptance will require raising awareness among civil society and business alike. A variety of actors can be involved in raising consumer awareness and informing them about the role they have to play in new business models.

2. The 1st COBALT EU Dialogue and stakeholder perspectives on Ecodesign and New Business Models

The 1st COBALT EU Civil Society-Industry Dialogue, which took place on 27 February 2014, brought together a group of high-level participants for a discussion on the topic of “Ecodesign and New Business Models for a Circular Economy”.

The presentations and discussions which took place during this Dialogue pointed to certain key issues – or ‘wicked issues’ – which should be considered further and on which additional action can be taken via increased stakeholder cooperation.

Wicked issue 1: How can a circular economy be scaled up?

Collaboration between stakeholder groups can play a major role in driving systemic change towards a circular economy. The multi-stakeholder approach aims to bring together industry, civil society, researchers and policy makers to cooperate and engage in dialogue, decision making and implementation of solutions to a common goal.

Various Dialogue presentations underlined the need for and effectiveness of a collaborative approach. For instance, a case study from the Ecodesign Centre highlighted the importance of eco-innovation across the value chain – from value production before the “use” phase, to value retention and recovery in later stages – in order to decouple resource use from market growth. Furthermore, multiple case studies presented by the Industrial Mineral Association (IMA) Europe demonstrated that collaborative action and innovation can successfully boost sustainable material use and reduce environmental impacts in the industrial minerals sector.

Wicked issue: Scaling up circular economy requires collaboration between stakeholders



Wicked issue 2: What role can civil society organisations play in driving sustainable raw materials management?

Civil society organisations can serve as key multipliers to consumers and the general public, and can give a voice to consumers' opinions, preferences and needs. Collaboration between civil society organizations and industry can bring benefits such as:

- *CSO input and feedback for designing better products which respond to consumers' needs*
- *Increasing consumer awareness regarding recovery and recycling of products*
- *Providing space for creating a respectful, constructive dialogue between the two parties involved*

CSOs can also equip consumers with specific skills and tools to participate in driving a circular economy. For example, a case study presentation by the Restart Project, an initiative dedicated to teaching consumers to repair electronics, highlighted the active role that consumers can play in extending product lifetimes and, thus at the same time save money and resources.

Wicked issue:
CSOs have a key role to play as liaisons between consumers and other stakeholders

Wicked issue 3: How can industry's development of new products and business models be best supported?

Some of the Dialogue's presentations and discussions highlighted the role of industry in driving a transition to circular economy by optimising products and services and rethinking or adapting to new business models. For instance, Philips discussed the integration of service-based models into its business.

However, transitioning to new business models can represent a substantial – and risky – investment for companies of all sizes. Smaller companies may be more agile when it comes to change, but may also face greater risks in developing new models. The inverse may be true for larger enterprises. Development of more resource-efficient products and models – whether through eco-design, eco-innovation, creation of service-based models or other efforts – can be facilitated by addressing key barriers to innovation and providing incentives and support, for instance through public procurement. Such efforts can also be boosted by better communication and exchange of best practices, as well as collaboration with other stakeholders.

Wicked issue:
Addressing barriers, providing incentives and supporting exchange of best practices can boost industry innovation

Wicked issue 4: How can consumers' needs be taken into account within product design and service development?

Consumers are becoming increasingly vocal about their needs and preferences, in line with growing awareness about products and sustainability. Nonetheless, the integration of consumer needs into product design and development of new business models remains challenging. Facilitating exchange between industry and consumer associations and conducting research to increase the knowledge base on consumer needs can help bridge this gap. Furthermore, new technologies, such as social media and others, can allow businesses more direct access to consumers and can enable them to solicit consumer' opinions and feedback. Incorporating consumer needs into new products and business models can help increase their uptake and can potentially reduce risks associated with innovation.

Wicked issue:
Consumers' needs can be increasingly integrated into design of products and business models



3. Conclusion

One of the key conclusions from the 1st EU Dialogue is the recognition that a **transition to a circular economy is essential for driving more sustainable raw materials management, and that this transition can be most effective if it involves collaboration between all key stakeholders.**

The transition to a circular economy should take place via **shifts in both consumption and production patterns.** In order to facilitate this transition, products should become less material-intensive, more durable and easier to recycle. Improved product design should also be accompanied by a shift towards new business models, for example those which favour services over products and performance over ownership. In parallel, consumers should be equipped with the tools to make sustainable consumption choices and use decisions, and to participate in better management of end-of-life products, including recycling, reuse and recovery.

Each key stakeholder has a role to play in driving a circular economy, and core competencies to bring to the table. *Industry* can take the lead on developing new business models and designing more sustainable products, drawing on its market expertise and product knowledge. *Civil society organisations* can bring knowledge of consumer needs and/or environmental expertise, and can help raise awareness, boost consumer engagement and transfer information to and from consumers. *Researchers* can provide findings that support a paradigm shift towards new economic models. Finally, *policy makers* can help steer more sustainable behaviour and develop a strong underlying policy framework to support the transition to a circular economy.

Successful collaboration between these stakeholders can benefit from various underlying factors, including:

- a cross-sector, iterative approach
- clear problem definition and project-specific action
- greater awareness of consumer needs in design of products and services
- use of new technologies
- a supportive legislative framework

While the transition to a circular economy is already underway, the need remains to **improve communication** between stakeholders, to **strengthen the business case** for new business models and to **address remaining questions and barriers.**



Policy has an important role to play in this transition period. Policy makers can incentivise more sustainable production and consumption via financial mechanisms, awareness campaigns and other policy mechanisms. Furthermore, policy makers can remove barriers to – and provide incentives for – development of new resource-efficient business models, including service-based models, amongst both large enterprises and SMEs. The European Commission’s increasing uptake of the concept of circular economy, and particularly its upcoming Communication on the Circular Economy, are, therefore, welcome steps towards this important transition.

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