Product policy: repair instructions for a true circular economy

Policy briefing

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Context

Europe's "take-make-dispose" economy, also known as "linear economy", is unsustainable and cannot work on a long term. Currently, most products placed on the market cannot be easily reused, repaired, upgraded, remanufactured, or ultimately recycled. On top of that, many products are designed for a short life cycle and to become obsolete (the so called planned obsolescence), so that they can be continuously replaced by a new version. This current throw-away society does not only come at a high cost for consumers, it also entails significant economic loss of valuable materials and resources.

An exemplary case is the one of electrical and electronic equipment, the so called WEEE, including computers, TV-sets, fridges and, cell phones, among others: the WEEE waste stream is among the fastest growing one in the EU, with 9 million tonnes of waste generated in 2005, and more than 12 million tonnes expected by 2020[1]. With this exorbitant amount of electric and electronic products going to waste, it is estimated that a potential value of more than € 48 billion are lost annually. In addition, WEEE contains hazardous materials and components that can lead to toxics leaking into the environment if their disposal is not properly managed.

The conclusion is: in a linear economy system, everybody loses. Our planet cannot provide limitless resources, neither can it absorb the never-ending waste generated by the production and consumption of bad-designed and poorly managed products. It is time to reverse this toxic trend, and the good news is: improving EU product policy might be the key instrument to make this happen.

EU Product Policy: The cornerstone of the circular economy

A circular economy is a system under which the value of products, materials, and resources is maintained in the economy for as long as possible, and the generation of waste is minimised[2].

Product policy has an important role in the transition to the circular economy, by putting in place the right measures to reduce overall consumption of resources in the EU as well as prevent waste generation.

Zero Waste Europe (hereinafter, "ZWE") believes that EU product policy needs to be improved in order to build synergies and integration within the current product policy framework (including product design, market incentives, chemical restrictions, consumer information) and promote a resource-efficiency circular economy in Europe.

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[1] European Commission - Environment - Waste – WEEE. Available at:
http://ec.europa.eu/environment/waste/weee/index_en.htm
[2] European Commission, Eurostat Circular economy, Overview. Available at:
https://ec.europa.eu/eurostat/web/circular-economy/overview

An integrated EU product policy paving the way towards a circular economy

A circular economy can only work when the EU product policy framework is consistent and coherent for the whole value chain and the multiple life-cycles of a product, as the EU Commission has already acknowledged in its *Circular Economy Action Plan*[3] adopted in 2015. ZWE believes that an integrated product policy mix is crucial to pave the way towards a circular economy, by building bridges between the different instruments within the EU product policy framework, and addressing eco-design requirements, economic incentives, chemical restrictions, informative measures, and consumer rights.

Ecodesign for material efficiency

When products are discarded their material value is lost, including critical and expensive raw materials. It is estimated that 80% of the environmental impacts of products are determined at the design stage[4]. Therefore, in order to prevent waste and value loss, action needs to happen at design stage.

Another basic premise to reduce the environmental impact of products and move towards a circular economy is to use better materials and extend product lifetime, so they can be reused multiple times. Better material means non-toxic, reusable, and with integrated recycled content.   A product can have its lifetime extended by allowing maintenance, repair and upgrades, for instance.

Nevertheless, when it comes to product design, EU policies are still piecemeal and fail to address some of the biggest barriers, resulting in the EU market being flooded with short-lived products that cannot be reused or repaired, and that can impact consumers' health due to the amount of toxics they contain.

Improving product design is not only necessary to prevent pollution and preserve natural resources, it also makes sense economically. Reducing material consumption can bring benefits of up to 640 billion for EU businesses[5] and can create "greens jobs", for example in the circular economy sector.

Moreover, better product design can allow and encourage better service provision of products, from reuse to leasing, including easy repair and upgrade. Consequently, EU product policy should ensure that all products in the market are designed with circularity in mind, meaning free of any potentially harmful substance, reusable, durable and repairable, separately collected, fully recyclable, and integrating recycled content.

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[3] COM (2015) 614 final - Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Closing the loop - An EU action plan for the Circular Economy. Available at https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF

[4] Ecodesign Your Future; How Ecodesign can help the environment by making products smarter. Available at: http://www.buildup.eu/en/practices/publications/ecodesign-your-future-how-ecodesign-can-help-environment-making-products

[5] European Commission, Final Report. The opportunities to business of improving resource efficiency. Available at: http://ec.europa.eu/environment/enveco/resource_efficiency/pdf/report_opportunities.pdf

Expanding product policy coverage

The Ecodesign Directive provides consistent EU-wide rules for improving the environmental performance of products by setting requirements for each product category that meet certain minimum standards. However, so far, the focus of the Directive has been only on some energy related products.

ZWE acknowledges the success of the Ecodesign Directive in the reduction of energy use in energy-using products, and welcomes the proposals under the Ecodesign Working Plan 2016-2019, which considers, for the first time, resource and material efficiency aspects when revising or preparing specific product measures, such as durability, reparability, upgradability, design for disassembly, ease of reuse, and recycling.

Nevertheless, a similar resource/material efficiency approach is needed for product design, not only for energy-related products, but for all product groups, including packaging, textiles, sanitary items, tires, batteries, vehicles, among others.

Therefore, ZWE recommends the expansion of the scope of the Ecodesign Directive to cover all product groups and include minimum and binding performance requirements as regarding durability, reparability, reusability, secondary raw material content, and recyclability.

Reparability and durability

According to a Eurobarometer survey[6], 77% of EU citizens would rather repair their goods than buy new ones, but ultimately have to replace or discard them because they are discouraged by the cost of repairs and the level of service provided.

Consumers are increasingly frustrated with products that are not durable and repair services that are not reliable, accessible or economically viable. Besides, the lack of information on product reparability, makes it even more difficult for consumers to take informed sustainable choices. Therefore, the right to repair, as well as adequate consumer information about the durability and end-of-life of products, should be guaranteed and safeguarded.

The EU product policy framework should also ensure that products are designed to last longer. ZWE believes product durability should be systematically addressed for all product groups under the Ecodesign Directive, for instance by establishing minimum durability requirements on the products and their key components. Likewise, the lifetime of a product could also be addressed through the development of a reliable durability standard or label at EU level.

In addition, alongside with guaranteeing consumers with the right to repair their products, EU product policy should ensure, as far as possible, that products are easy to disassemble (in a nondestructive way), and preferably with the use of widely accessible tools (that could be found in independent repair shops, for instance). Also as part of a legitimate right to repair, manufactures should be required to provide replacement/spare parts during the entire lifecycle of a product.

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[6] Making durable, repairable goods for consumers and tackling planned obsolescence. Available at:
http://www.europarl.europa.eu/news/en/press-room/20170530IPR76313/making-durable-reparable-goods-for-consumers-and-tackling-planned-obsolescence

Consumers must be able to easily replace, repair or upgrade essential components, such as smartphone batteries (which used to be a reality in the past).

Furthermore, planned obsolescence should be tackled, i.e. in cases of intentionally shortening the useful lifespan of their products.

In sum, EU eco-design should encourage:

- a repair culture and the right to repair,

- the design of products that are easily disassembled (non-destructively, and preferably by any user, not only professionals), and that are repairable with wide known and accessible tools,

- the accessibility and availability of spare parts during the entire life cycle of the product

- consumers' information by manufacturers on durability and reparability (e.g.: labels)

- consumer's access to repair manuals and service centers.

A toxic-free loop

Designing products with circularity in mind is not about durability and reparability only. Better product design also means non-toxic products.

A report published in October 2018 by the Changing Markets Foundation[7] revealed the presence of toxics – including suspected carcinogens and endocrine disruptors – in carpets produced and sold by some of the largest carpet manufacturers in Europe. A few months later, toxic products made the news again[8], as a large numbers of toys were found to contain dangerous chemicals that had been banned for years in more than half of EU. In addition, several studies demonstrate alarming levels of very toxic brominated dioxins in toys made of recycled plastic stemming from electronic waste.

Ensuring that products are toxic-free is not only important to protect human health and minimise the environmental impact: it is also crucial for an effective circular economy, as the presence of toxic chemicals can hamper the reuse and recycling processes.

Preventing the use of hazardous substances is essential to keep valuable materials and components within the value chain, and to not hurdle the circular economy loop. The least additives and mixtures are added, and the simplest the product is, the easier it is to reuse it, repair it, and recycle it several times.

Therefore, setting eco-design requirements could help avoiding the use of hazardous chemicals in products. This could be done through setting up minimum standards within the scope of the

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[7] Changing Markets Foundation, Testing for Toxics: How chemicals in European carpets are harming health and hindering circular economy, October 2018. Available at: http://changingmarkets.org/wp-content/uploads/2018/10/SMALL-changing-markets-layout-EN.pdf

[8] The Guardian, Christmas shoppers warned to avoid plastic toys due to toxin levels, 18 December 2018. Available at www.theguardian.com/environment/2018/dec/18/christmas-shoppers-warned-avoid-plastic-toys-toxin-levels

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Ecodesign Directive alongside with limiting and restricting the presence of hazardous chemicals in products, for instance, through RoHs and REACH regulations.

Moreover, the European Committee of the Regions (COR) has recently stressed in a Communication on the European Strategy for Plastics in a Circular Economy[9] the urgent need to harmonise, and possibly limit, the use of additives to alter the properties of plastics.

ZWE believes EU product policy should include legally binding eco-design requirements to ensure that all products in the market are designed for circularity, and are free from hazardous chemicals.

Setting the right economic incentives

Product design must go hand in hand with economic incentives to support and accelerate the transition towards resource saving and waste reduction.

EU product policy should therefore include the adequate economic incentives to encourage manufacturers to design better and more sustainable products.

Extended Producer Responsibility (EPR)

Extended Producer Responsibility is one of the key tools to address unsustainable design in Europe. EPR systems aim to allocate economic responsibility for a product's environmental impact to manufacturers, by internalising the costs of pollution, waste prevention and waste management, and covering measures to encourage a rational use of resources, in line with the Polluter Pays Principle. However, for this to happen, EPR schemes must be well implemented.

The EPR schemes currently in place in Europe mostly focus on the end of life of products (once a product has become waste). Or else, they have served to introduce, and partially fund, the sorting and collection of some waste streams. However, this limited implementation of EPR schemes has not proved successful to ensure effective end-of-life collection, nor to promote reuse or recycling. A study by ZWE[10] highlights how less than 18% of all waste collected in a municipality is covered by an EPR scheme, which means that the public funds still have to foot the bill when it comes to waste management.

Also, in order to encourage producers to make eco-design efforts, EPR schemes must be implemented with eco-modulated fees, rewarding good design and service provision of products, while penalizing linear products. On this regard, while 26 Member States have already implemented EPR schemes for packaging, a report[11] highlights the need for a system of modulated fees where the packaging designed for single-use, incineration and landfill have higher fees than packaging designed for a circular economy.

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[9] Opinion of the European Committee of the Regions - Communication on a European Strategy for Plastics in a circular economy. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018AR0925&from=EN
[10] Zero Waste Europe (2017) Extended Producer Responsibility : Creating the frame for circular products http://zerowasteeurope.eu/wp-content/uploads/edd-free-downloads-cache/ZWE-EPR-policypaper.pdf
[11] EPR in the EU Plastics Strategy and the Circular Economy: a focus on plastic packaging. Available at: https://zerowasteeurope.eu/downloads/epr-in-the-eu-plastics-strategy-and-the-circular-economy-a-focus-on-plastic-packaging/

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ZWE believes that EPR schemes must reflect the waste hierarchy, where prevention, reuse and recycling are preferred options, in that very order, and should be implemented at their full capacity at the EU level by:

- covering all non-perishable products put in the market;

- promoting reuse and preparation for reuse within EPR schemes, such as by establishing minimum requirements and targets for reuse;

- making individual producers bear the full net costs of waste collection, treatment, management, and clean up (littering); and

- Implementing eco-modulated fees.

<u>Tax virgin materials</u>

A second economic incentive to move Europe towards a circular economy is the taxing of virgin materials. In particular cases, such as for plastic, where the price of virgin feedstock is low, and also lower than the price of recycled plastic, taxing virgin resins would make recycled plastic more competitive, and enable a level playing field for secondary raw materials, as explained in the latest OECD report on plastic[12].

A recent study carried out by the New Economic Foundation for Zero Waste Europe and partner organisations within the Rethink Plastic alliance also highlights that taxes can be a key tool to help solve the plastic pollution problem, if they are designed to influence producer and consumer behaviour, rather than raising revenue[13].

Promoting research and investment on new technologies and new business models

A circular economy requires full transparency and traceability of products and materials. New ways of creating and keeping high valued material within the economy are being made possible thanks to new technologies. ZWE believes that new technology working side by side with waste prevention and management can bring huge improvements for society.

The European Commission's roadmap towards a EU Product Policy Framework[14] within the Circular Economy Package has highlighted the potential of digitalisation tools for more circular products and business models, e.g. through shared usage, planned maintenance, and better traceability of products and their components throughout the value chain.

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[12] OECD (2018) Improving markets for recycled products http://www.oecd.org/environment/improving-markets-for-recycled-plastics9789264301016-en.htm
[13] Plastic crisis: taxes are vital to cut pollution, but EU plans fall short, new study finds. Available at: https://zerowasteeurope.eu/2018/09/plastic-crisis-taxes-are-vital-to-cut-pollution-but-eu-plans-fall-short-new-study-finds/
[14] European Commission - Towards an EU Product Policy Framework contributing to the Circular Economy. Available at: https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-2409307_en

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Also, the European Committee of the Regions has recently emphasised in a Communication on the European Strategy for Plastics in a Circular Economy[15] the key role of innovation and investment in circular solutions in promoting the needed social and behavioral changes to transition to a circular economy, as a crucial step towards implementing the UN Sustainable Development Goals at European, national, regional and local level.

ZWE welcomes and supports the EU Commission's initiative, and believes that connecting digitalisation and waste management can contribute to a circular economy.

As an opportunity, ZWE's recent case study on the innovative Electronic Reuse system eReuse[16] shows how blockchain technology can be used to allow full transparency and traceability, ensure that the devices will be recycled when no further reuse is possible, and work as an audit against premature recycling.

ZWE advocates for the inclusion within EU's product policy goals the promoting of research and investment on new technologies to see emergence of businesses alike in Europe. Best practices such as the experience of eReuse could be replicated in many municipalities across Europe, while transforming costs from waste management into revenues for local communities.

Conclusion

ZWE encourages the EU Commission to expand and improve its product policies, in order to achieve a clean and safe circular economy and to contribute to a non-toxic environment, as referred to in the 7th EAP[17] and to the *2030 Agenda for Sustainable Development Goals (SDGs)*[18].

In the light of all the elements mentioned above, ZWE recommends that the future of EU product policy should be developed while taking several factors in mind, and notably:

- Focusing on the designing stage, and thinking circular;

- Enabling and promoting repair, for instance by making spare parts and information more easily available, to bring old products back to life;

- Following the waste hierarchy, and prioritising reuse and repair;

- Ensuring full transparency and traceability of products and materials; and

- Promoting research, new technologies and new business models for a true circular economy.

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[15] Opinion of the European Committee of the Regions - Communication on a European Strategy for Plastics in a circular economy. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018AR0925&from=EN
[16] The Story of eReuse, Case Study, Zero Waste Europe. Available at: https://zerowasteeurope.eu/downloads/case-study-3-the-story-of-ereuse/
[17] The 7th Environmental Action Plan, titled Living Well within the Limits of the Planet, is in place to guide European environment policy until 2020. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013D1386&from=EN
[18] United Nations, Transforming our world: the 2030 Agenda for Sustainable Development. Available at https://sustainabledevelopment.un.org/post2015/transformingourworld

Zero Waste Europe is the European network of communities, local leaders, businesses, experts, and change agents working towards the same vision: phasing out waste from our society. We empower communities to redesign their relationship with resources, to adopt smarter lifestyles and sustainable consumption patterns, and to think circular.