



STEPS
towards a
REPAIR CULTURE
in
CORNWALL

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The eco-design and labelling requirement for specified electrical products sold in the UK are now determined by the "**Ecodesign for Energy-Related Products and Energy Information Regulations 2021**", and mirrors the equivalent EU regulations. In this sense, durability and repairability are seen as requirements of eco-design.

Specifically addressing the "right to repair", current legislation requires that manufacturers and retailers of electrical appliances comply with requirements of availability of spare parts and access to repair and maintenance information, both related to professional repairers, and software update. Most of the provisions came into force on 1st July 2021, but manufacturers had a two-years grace period to make spare parts available, being mandatory from 1st July 2023.

This regulation is already criticised for not being comprehensive and specific. For instance, it covers only dishwashers, washing machines, washer-dryers, refrigeration appliances, televisions and "electronic displays" (which does

not include smartphones and laptops), as well as non-consumer products, such as, electric motors, refrigerators, and light sources. However, the "right to repair" movement refers to a wider range of products: from clothes to tractors. There is also no guarantee that spare parts will be affordable, and accessible to independent repairers and consumers, nor be granular enough to make repair practical.

If you would like to be involved and support the "right to repair" in the UK, the Restart Project has a petition, in which the group asks for a regulation that: i) includes everyone (i.e., independent repairers, DIY-repairers, and community repair); ii) commits also to smartphones, tablets, laptops, and other products; and iii) lowers the cost of repair. Please read more on: therestartproject.org/petition-right-to-repair/

REVIEW *your products' information* *about durability and reparability.*

The first step on your journey towards embedding a repair culture in your business model is to think about your products' design, e.g., what the modular parts may be, how are they accessed, and what is the implication of post-sale repair.

Repair is a creative challenge – but so is product design for reparability. Modular design is a great example of how to further accommodate repair into your product and business model. Modularity can be defined as a design principle to facilitate the replacement or upgrade of broken pieces throughout products' lifecycle (Sonego et al., 2018), through

independent parts with standards interfaces. Thus, modular products are, in principle, easier, safer, and cheaper to repair, even for DIY-repairers, which then makes repair a more accessible option.

One example is Fairphone, who claims to build a more sustainable and fairer smartphone, by making them easier to disassemble and reassemble and selling their spare parts online – consequently, their products are easier to repair. If you would like to learn about their social and environmental impacts, read more on: www.fairphone.com/en/impact-report

In Cornwall, Circular&Co. is another example of modular design. They use waste material to create new products, and design them to be as repairable and last as long as possible. They also provide setup and care instructions, and sell the spare parts, which allow the customers to do DIY-repair. Hear more about their mission on: vimeo.com/794462321



COMMUNICATE

the benefits of repair to your customers.

Data shows that only a limited percentage of products and materials are recycled, let alone reused, refurbished, repaired (Eurostat, 2022), or upcycled into other products. Meanwhile, volumes of annual industrial and household e-waste are rising (World Bank, 2022).

The industry sector is the main emitter of greenhouse gases in the world, further contributing to climate change. On the other hand, maintenance and repair are the circular strategies that would emit less greenhouse gases, being the preferred method in the waste hierarchy. Research has estimated that, for example, a durable (and repairable) washing machine will generate 1.1 tonnes less carbon over two decades than a short-lived model. Disposal creates a double socio-environmental impact, that is easily forgotten: it requires the extraction of more raw materials to manufacture new products, and more energy to manage the end-of-life product thrown away. If you want to hear more about it, iFixit has developed this video in defence of more repair, and less disposal:

www.youtube.com/watch?v=dMwLUnd_ydl

Beyond the environmental benefits, the engagement in circular activities, such as repair, is also said to contribute to fundamental human needs, particularly the need for belonging, build-up identity, and creativity, as well as to improve well-being (Korsunova et al., 2021). Other research has also shown that, through a "right to repair", consumers attain a sense of achievement, engage in mindful consumption (Diddi & Yan, 2019), and create an emotional attachment with the products they own (Terzioğlu, 2021).

Businesses can also play a role in social and environmental awareness, by communicating better with their customers about these benefits. If you are a products' manufacturer or an independent repairer, you can use a lifecycle assessment (LCA) to compare the social and environmental impacts of the processes of manufacture or repair of your products, both for your business and your customers.

ATTEND

training events and build knowledge.

Building your knowledge is the window into sustainable business practices. You have attended our "The Repair Business: Fixing our Throwaway Culture" - did it spark your interest and you want to know what else you can do now?

Documentaries are another great source of knowledge on the "right to repair" debate. A good starting point is "The Light Bulb Conspiracy", written and directed by Cosima Dannoritzer. This 2010 documentary film explores the planned obsolescence of industrial products and unsustainable practices.

Professional institutions often hold seminars on sustainable design and similar concepts. Also, you can look to different industries for inspiration, even if they are not in your sector. Attending a Repair Café meeting will also give an insight into what drivers and barriers end-users face and the perceived skills required to engage in repair practices.

iFixit is a platform for DIY-repairers. It also provides solutions for manufacturers, including repairability assessments and compliance guidance, and workshops tailored for your business and staff. If you are interested, please contact them directly on: www.ifixit.com.

You can also explore other elements related to repair and the circular economy, e.g., the carbon emissions and impacts of everyday activities, with The Carbon Literacy Project. Please find out more on: carbonliteracy.com.



REVIEW *your products to accommodate repair in your business model.*

Research shows that lack of repair information (e.g., product manual, online resources) is generally seen as a barrier to repair. In the surveys conducted by The Big Repair Project, 61% of the customer respondents mention that as a very or somewhat influential factor when choosing to buy or rent a product (The Big Repair Project, 2022).

Other studies mention that customers “were discouraged from the repair activities when they did not have the required knowledge about repairing the product or could not find someone to repair it” (Terzioğlu, 2021, p. 6).

Even though current regulation on eco-design and labelling is not comprehensive in terms of products, you can still provide this information to your customers. Online platforms like iFixit work with both manufacturers and a community of repairers to create free and easy-to-follow repair manuals for a wide range of products. If you are interested in collaborating, please read more on: www.ifixit.com.

The Big Repair Project also proposes a Repairability Index for the UK (The Big Repair Project, 2022). Similar to an energy efficiency rating, this index would support customers to make informed decisions, and provide a level playing field to drive manufacturers design and innovation towards more repairable products (Dangal et al., 2021). This has been adopted and/or considered in other countries around the world, such as, France and Spain. Although this is not a legal requirement in the UK, your business could review your products' information to achieve the criteria in which comprehensive repairability indexes are based, e.g., ease of disassembly and reassembly, availability of information, availability and affordability of spare parts, failure diagnostic, health and safety risk, interchangeability, etc.

The Repair Monitor is also an interesting platform for repair and repairability data for you to access. Please read more on: dashboard.repairmonitor.org.

EMBRACE

the concept of "visible repair."

There are also emotional values embedded in the customers' decision whether to repair or not an object. Studies evidence that a negative stigma attached to repair is a barrier towards a repair culture, i.e., people might feel ashamed of repaired products because they are associated with economic hardship (Terzioğlu, 2021, p. 8).

On the other hand, there is also a functional value, either aesthetic or symbolic, in which repair is seen as a way of activism, and the repaired object would be the starting point of a conversation that might disseminate social and environmental awareness (ibid.).

This approach involves embracing the concept of "visible repair".

Via better communication of social and environmental benefits of repair to your customers, your business can also involve them in a dialogue about these values, and connect repair with design, art, and fashion. For example, have you ever heard of Kintsugi – the Japanese artistic

method of repairing broken pottery with lacquer and gold? If you want to know more about this approach, please watch: www.youtube.com/watch?v=r9LMKGte0UU

Finisterre, a clothing company based in Cornwall, is a great example of how to apply this concept in practice. Check out their "jacket infographic" to celebrate repair on: finisterre.com/blogs/broadcast/every-stitch-tells-a-story



PROMOTE *the community-based repair movement.*

Research shows that repair practices are also known to be conducted informally and through a range of different stakeholders (Moalem & Mosgaard, 2021).

Repair Cafés, for example, are defined as a “citizen-driven, locally organised public event, in which volunteer repairers and people with an object in need of repair are matched”, offering people a way to realise their “right to repair” in a local, social, and non-commercial environment (van der Velden, 2021, p. 1). They focus on both reducing waste and “building social relations, empowering people, and creating space for non-consumerist forms of citizenship to develop” (Bradley & Persson, 2022, p. 1334). In this sense, Repair Cafés are not just about repairing the broken products that would otherwise be thrown away, but also go through a cultural transformation - i.e., fight a “culture of waste”, and a change in the way people relate to one another and share knowledge and skills in the community (Spekkink et al., 2022, p. 3).

This is a relevant approach to include social justice within repair, as the events are free of charge to attend, promoting a “circular economy” that is accessible for all. Even though Repair Cafés happen in a non-commercial setting, businesses can also organise events to engage with the community in which they are embedded, as well as access repair data. If you would like to know more about this initiative, please read: www.repaircafe.org/en/

There is also a platform of support for Repair Cafés within the Cornwall Council. If you would like to learn more about the Cornwall Repair Café Network, please contact: www.cornwall.gov.uk/rubbish-recycling-and-waste/recycling/repair-cafes/

ADD revenue streams to your business and build "brand loyalty."

You can add new (and sustainable) revenue streams to your business through repair practices, e.g., transforming your business model into product-service system (PSS), or offering repair services for your products.

Servitisation, or PSS, is a circular strategy in which the product ownership – and the responsibility for repair – remain with the business. The business then provides use-oriented or results-oriented services instead of the products themselves. However, the sustainability and acceptance by customers of these strategies depend on other factors (Cherry & Pidgeon, 2018) – so your business will have to look out for the customers' interests as well, such as, waiting time and price.

Repair can be a tool to build a brand loyalty between customers and your business. Brand loyalty is a profitable long-term marketing strategy, based on a predictor of customer retention. Research shows that it "grows revenues

roughly 2.5 times as fast as their industry peers and deliver two to five times the shareholder returns over the next 10 years" (Markey, 2020). Brand-loyal customers are not only influenced by the price of products, but also by service and quality, and providing repair services for your products can be a pathway to achieve that. In other words: successful repairs make loyal customers. In Cornwall, we have the examples of Finisterre and Celtic & Co., both working on textiles and embedding repair as part of the customers' experience with them. For a great explanation on offer of repair services as a sustainable business practice, please watch: www.youtube.com/watch?v=LuuBmtPuod4

Even though such approaches rely on different understandings of ownership, and might involve different relationships with the customers, both make "business" sense and represent an opportunity for profit with purpose.

INTERACT *with other stakeholders and build a repair ecosystem.*

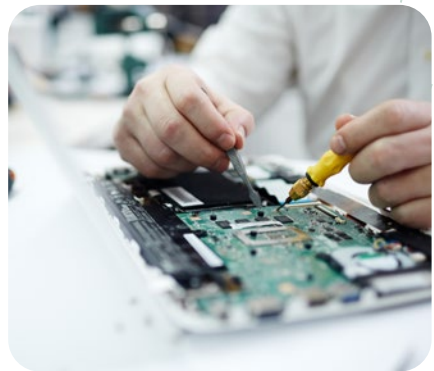
A sustainable and circular ecosystem – of which an enhanced repair ecosystem is part – can be defined as a “complex constellation of actors, technologies, and institutions that are bound together via loosely coupled interdependencies and co-evolutionary patterns” (Arrikka-Stenroos et al., 2021, p. 260).

Ecosystems also have a system-level outcome – that is, they produce an outcome that is greater than what any stakeholder could deliver alone (Thomas & Autio, 2020). In the case of a more sustainable repair ecosystem, it implies a collaboration between manufacturers, retailers, professional refurbishers, professional and independent repairers, and the community.

Even if you decide to follow the previous step, and transform your business model into product-service system, or offer repair services for your products, you can look into engaging with a third-party service provider, or thinking about local repair options to provide solutions that benefit not only you, but your customers as well. This can also

include the collection of broken products that customers don't want anymore, if you partner with local refurbishers, and re-sell the products at a lower price.

Repair is a skilled labour-intensive practice (Llorente-González & Vence, 2020). Repair is also inherently local. Therefore, building a more sustainable repair ecosystem, focussed not only on business model, but up-skilling and re-skilling people, improve employment in skilled jobs and, ultimately, promote local growth in Cornwall (RREUSE, 2023) - turning it into a better environment for businesses to operate. This also contributes to corporate social responsibility (CSR) from the business.



RETHINK *the costs and actively promote (affordable) access to repair.*

From the customers' perspective, cost is the main barrier to repair. People make a cost and benefit calculation (Terzioğlu, 2021, p. 8) to compare the price of repair vs replacement. In surveys conducted by The Big Repair Project, 89% of the customer respondents also mention that as a very or somewhat influential factor when choosing to buy or rent a product (The Big Repair Project, 2022).

Your business can rethink the costs and actively promote (affordable) access to repair. That does not mean sacrificing your bottom line – it is all about chasing a profit with purpose. Some of the previous steps naturally reduce the costs of repair, for example, when reparability is considered since the conception and design

phases, when your business provides clearer information about reparability and enable DIY-repair, or when you enhance a local and more sustainable repair ecosystem. If your business is already economically sustainable, you can go further and design your business model to give back to the community – that is, free and long-term (even lifetime) warranties of products, affordable repair services, or re-sale of refurbished products at a much lower price.

Ultimately, your business will play a role in delivering social justice.



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ACTION PLAN

1. What product / service does your business offer?



2. What does that product / service offer to society?



3. What can you change to embed repair culture in your business model?





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