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# eBay and the Circular Economy

A continued look at advancing  
sustainability through Recommerce

ebay



# Introduction

**The “circular economy” is an economic system that aims to keep products and materials in use for longer, increasing the lifespan of things that are manufactured, and reducing waste. Circular economy thinking is being creatively applied to all levels of the economy and product life cycle. This includes resource extraction, product manufacturing, consumption of those goods, and on through the end-of-life stages of goods, as well as widely across economic and resource sectors, including water, food, consumer goods, and energy and resources.**

Recommerce is one action within the full circular economy and is the process of selling (or re-selling) pre-owned goods<sup>1</sup>, which helps extend the life of a product. Additionally, selling new or used parts that help to repair an item that would otherwise be at its end-of-life, also helps to contribute to recommerce. For over 25 years, eBay has enabled millions of consumers to give a second life to goods and enabled individuals and businesses to earn valuable income by doing so. Whether through individuals selling items online they had around the house that were no longer wanted or needed, or small businesses facilitating online access to spare parts for repair, or refurbished devices that have years of useful service left, eBay is at the forefront of recommerce and a key player in the circular economy.

On a marketplace like eBay that brings together sellers and buyers to find success, the interests and values of both need to be aligned, and this is equally true regarding recommerce. Evidence of greater consumer interest in products that are helping address the wide range of environmental challenges is a positive sign. For example, according to eBay marketplace data from Germany, the number of search queries for “sustainable” and “environmentally friendly” offers increased by almost 100 percent from 2018 to 2019.<sup>2</sup> Between 2016 and 2020, consumer-to-consumer sale of pre-owned electronics and apparel on eBay’s platforms in the US, Canada, and UK alone avoided a total of 3.1 million metric tons of new product carbon emissions by putting existing goods in the hands of consumers that want to use them, while contributing \$3.8 billion in positive

economic impact.<sup>3</sup> eBay also recently launched a new program dedicated to offering products classified as “Certified Refurbished” which are professionally checked, cleaned, and refurbished by the manufacturer or by an authorized provider.

In 2020, eBay conserved **over 900,000 metric tons of carbon emissions** through people\* selling their pre-owned electronics and apparel on eBay in the **US, UK, Canada, Germany, France, and Italy.**

\*C2C Sellers

This report will focus on how eBay helps expand circular consumption through product reuse, refurbishment, repair, and related strategies to extend the useful life of consumer goods. The first part of this report will provide a backdrop of the state of the circular economy, with a particular focus on the consumer electronics and fashion apparel sectors, which are two of the most impactful due to the overall high volume of consumption, relatively short product lifespans, and negative environmental impacts. Topics include the potential for increasing product reuse, refurbishment and repair, barriers holding back the wider resale of pre-owned and refurbished items, and policymaker interest in Europe. The second part of this report uses the results of surveys of eBay sellers in the European Union<sup>4</sup> and Australia<sup>5</sup> to provide insights into the interest and capabilities of small businesses and individuals in those markets to advance recommerce more broadly by meeting consumer demands for sustainable commerce and helping extend the useful life of a wide range of consumer products to great environmental and economic benefit. This section includes a focus on the key circular economy sectors of consumer electronics, fashion and apparel, and, for the EU, motor parts.

## Advancing the circular economy for consumer goods

The circular economy is an economic model that aims to keep products and materials in use far longer than is generally the case today by reusing, repairing, and refurbishing consumer goods. It is generally seen as an alternative to prevailing linear economy models, where materials flow from extraction of natural resources, to production via manufacturing, to consumption by a growing number of increasingly affluent consumers globally, to relatively quick discardment through a combination of breakage, rapid obsolescence, and changing trends.

A more circular economy is expected to bring a range of environmental and economic benefits. Environmental benefits include reducing resource depletion by reducing demand for the same volume of new products, as well as reducing carbon emissions along the extraction, manufacturing, and transportation phases, both of the natural resources and manufactured goods themselves. Natural resource extraction, for example, is often a very emissions intensive activity.<sup>6</sup> From a carbon emissions perspective, it has been estimated that smartphones produce 85-95 percent of their emissions in the production phase.<sup>7</sup> Finally, there are considerable environmental impacts from the disposal and destruction of products at the end of their useful lives, which is often relatively short due to planned obsolescence for electronics and changing fashions in apparel.

Polymakers and consumer advocates also highlight a range of economic benefits of circular economy policies that increase the lifespan of consumer goods. The World Economic Forum has projected that overall economic benefits could reach \$4.5 trillion (€3.8 trillion) by 2030<sup>8</sup>, and a leading US-based consumer advocacy organization projected that US consumers waste \$40 billion each year from not being able to repair electronic products, resulting in \$330 in lost savings per household every year.<sup>9</sup> Consumers would benefit as relatively low-cost repairs extend the life of many more goods, delaying the need to purchase full-price new products. In addition, expanding the availability of lower-priced but high-quality used, repaired, and fully refurbished products will offer consumers lower-priced shopping alternatives. Finally, consumers would be able to more regularly sell goods they no longer wish to use to help fund the purchase of new types or models. Many circular economy advocates also argue that eliminating policies that burden, discourage and hamper repair and refurbishment by skilled local service providers will promote more resilient and sustainable local economies more effectively than ever-increasing new product manufacturing and importing.<sup>10</sup>



## Personal electronics and e-waste

One focus of circular economy policies related to consumer goods is small electronics and digital devices. This is due to the rapid growth in the number of the devices being manufactured and sold globally, the range of rare metals involved in their production, which has significant impacts at the extraction and disposal stage, and the limited reparability of some of these items that have made extending the life of personal electronics, such as smartphones, difficult to achieve.

Smartphones accounted for approximately 10 percent of global e-waste in 2019<sup>11</sup>, and the number of smartphone subscriptions globally has been growing quickly, expanding from 3.67 billion in 2016 to 6.05 billion in 2020, and expected to exceed 7 billion by 2025.<sup>12</sup> Smartphone lifespans are relatively short, just 3.7 years per device across the EU, for example.<sup>13</sup> With policies collectively described as “planned obsolescence”, where products are designed to become unusable after a certain length of time with no effective method of repair<sup>14</sup>, or simply due to designs that deliver attractive features at lower cost but have the same effect, the ability to repair phones will be key to conserving resources, tackling e-waste and climate mitigation, and building a circular economy for electronics.<sup>15</sup>

Extending the lifespan of smartphones and other digital devices will not be an easy task.<sup>16</sup> Design and manufacturing trends, including much greater use of glues, solder and proprietary screws to connect component parts and batteries, limiting repairs to a limited number of authorized repair service providers, and restricting access to parts and service manuals, have contributed to making repairs of smartphones and other consumer electronics harder to undertake.<sup>17</sup> In the meantime, the European Commission’s Joint Research Centre’s study “Material Efficiency of smartphones” concluded that enabling broad access to repair information (e.g. to independent repair service providers), “could contribute to create a level-playing field in the repair sector and to reduce repair costs and the effort to find suitable repair centres.”<sup>18</sup>



## Evolving consumer views on circular economy strategies

It is widely recognized that consumer demand for sustainable goods and business practices is increasing globally, but the concept means different things to different people and continues to shift as a priority over time. Top concerns include climate impact, water conservation, recycling, waste reduction, raw materials usage, production processes, labor practices, and the treatment of animals, with views varying across product categories and market segments, including differences by age and nationality.<sup>24</sup> Consumer research firm GlobeScan reported in 2020 that 74 percent of global consumers surveyed said they agree that they need to consume less to preserve the environment for future generations, up from 66 percent in just a year, but views were widely mixed on specific circular economy strategies including shopping secondhand, renting or leasing items.<sup>25</sup>

One challenge is that consumers live in the context of the current throwaway culture, which is fueled by consumer perceptions of product obsolescence fed by fast product cycles, emphasis on rapid technological advancements, and pressures to feel “up to date”, all of which can disfavor repair in favor of replacement with a new product.<sup>26</sup> At the same time, across most product types, the top consumer concern when considering repair or replacement is price<sup>27</sup>, with consumers willing to pay for repairs of small electronics that are up to 20 percent of the replacement cost.<sup>28</sup>

Public policy efforts to promote circular economy strategies, including expanding reparability and refurbishment in order to extend the useful life of products, could improve the perception of consumers by pushing back on the wide range of policies and practices that undermine reparability and draw unnecessary distinctions with durability. The European Commission’s Circular Economy Action Plan specifically calls for designing products to be both more durable and easier to repair, as well as increasing access to spare parts and repair information.<sup>29</sup> Additional strategies for policymakers to consider to build consumer trust in sustainable models include harmonizing the legal framework around refurbished products, ending limitations on independent product repair, and promoting local small and medium-sized enterprises (SME) service providers.

## Fashion and apparel

Fashion and apparel is another sector of consumer goods that is central to many circular economy discussions. Like consumer electronics, the sheer volume of goods manufactured is an important starting point, with the global apparel industry producing an estimated 80 billion garments every year.<sup>19</sup> With this immense level of production, globally, the fashion industry is responsible for 10 percent of all greenhouse gas emissions, 20 percent of global wastewater, and 92 million tons of solid textiles waste that is created each year.<sup>20</sup>

Compared to electronics, with apparel it is more often the case that pieces are oftentimes simply not used as much before being discarded. The emergence of “fast fashion” has been widely criticized for accelerating negative environmental trends. A 2015 study in the UK found that garments were worn on average seven times before being discarded, while in China that figure is reported to be closer to three.<sup>21</sup> Overall, the average consumer buys 60 percent more pieces of clothing than 15 years ago, and each item is only kept for half as long.<sup>22</sup>

A study<sup>23</sup> of the carbon emissions impact of four circular economy models of apparel ownership and end-of-product-life strategies using jeans as the template determined that extending the use of each item by the original owner had the least negative environmental impact, while re-use, such as by re-selling on to another user, was the second most beneficial circular economy strategy for apparel. Recycling jeans’ textiles through industrial processing into new raw materials led to relatively high overall emissions because the replaced emissions from cotton production are relatively low. Finally, the strategy of apparel rental services turned out to be the least effective of the four models at reducing carbon emissions due to increases in customer mobility involved in the model.

# The perspective of eBay sellers in the EU on circular economy sales



Selling second-hand, refurbished, and repurposed items is a vibrant and important part of the eBay seller ecosystem in the EU. eBay's survey of European small business sellers indicated that 78 percent of respondents had sold non-new items. The sellers reported that second-hand and refurbished items represented 52 percent of their sales, a figure that was highest, at 57 percent, for sellers that sold goods in the electronics category. "Refurbished" electronics account for 9 percent of electronics sales, the highest level of all product categories surveyed, illustrating the more evolved nature of the refurbished electronics industry. Over half of the sellers, 53 percent, responded that second-hand and used goods are important to their business. Second-hand goods were most often cited as important by sellers of goods in the motors category<sup>30</sup>, at a 68 percent clip, followed by 62 percent of fashion and apparel sellers.



of EU sellers surveyed said they sold non-new items.



of EU surveyed sellers' sales were reported to be from second-hand and refurbished items.

The seller survey points to sustainability and impacts on the environment as the top motivation for eBay sellers in the EU to participate in the sale of used, non-new goods. Among all sellers, sustainability was the most mentioned motivation for selling used goods, at 34 percent, while consumer demand was second most mentioned at 26 percent and the profitability of selling non-new goods was third at 22 percent. In particular, this was true of EU sellers in both the fashion and electronics categories of goods, two segments of consumer products that are especially critical to developing a more circular economy. Among eBay fashion sellers, 55 percent cited sustainability as a motivation. Among electronics goods sellers, sustainability is driving 51 percent of the sellers, and in motor parts, it is the top motivation for second-hand selling at 48 percent.

**34%**

of EU sellers surveyed said **sustainability** was the **reason they sold used goods** – the **most mentioned motivation**.

eBay sellers in the EU are optimistic about the prospects for their future sales of more sustainable product types such as refurbished goods and replacement or repair parts. Eighty-four percent of sellers of refurbished items expect their five-year sales to stay the same or grow, a number that jumps to 87 percent for sellers of refurbished motors accessories and 85 percent of refurbished electronics and refurbished fashion and apparel.

**84%**

of EU sellers surveyed that **sell refurbished items** expect their **five-year sales to stay the same or grow**.

Many sellers do not sell refurbished goods, and among those who do not, over 20 percent of respondents see market or regulatory barriers standing in the way of selling refurbished items. Among electronics sellers, a segment with one of the potentially most valuable refurbished goods markets from both environmental and economic impact perspectives, those barriers are mentioned by nearly a third of sellers who are not participating in selling refurbished goods. Legal uncertainty, for example, was cited by nearly twice as many electronics sellers as a barrier compared to fashion or motors sellers.

**>20%**

of EU sellers surveyed reported they **do not sell refurbished goods** because of **market or regulatory barriers**.

Among replacement and repair parts sellers on eBay in the EU, over half sell used or refurbished parts. Almost two-thirds, 62 percent of parts sellers, extract parts from owned or pre-owned items, including 69 percent of electronics sellers who sell parts. In the motors category, 57 percent of sellers extract parts for re-use.

**Among replacement and repair parts sellers on eBay in the EU, over half surveyed said they sell used or refurbished parts.**

Expanded access to both parts and refurbished items, as well as increased buyer demand for the products, would most impact sellers' decisions to sell more refurbished products and parts in the future. This was most pronounced in the electronics and motors categories. Among electronics sellers, improved access to refurbished goods was cited by approximately 40 percent of sellers, the same for increased consumer demand. Among sellers in the motors category, increased consumer demand for refurbished goods was the top potential motivator, cited by 37 percent, while increased access to refurbished goods was mentioned by 36 percent. And with parts, improved consumer demand was most mentioned, at 40 percent, with better seller access to parts just behind at 39 percent.



Sellers also reacted to other potential tools to increase sales of refurbished goods and parts, with 35 percent of electronic sellers believing that commercial guarantees from manufacturers would improve sales of refurbished goods, and government incentives drew support from 32 percent. Beyond access to more supply, and greater consumer interest, 33 percent of sellers believed their parts sales would be most boosted by electronics being more easy to repair, and 31 percent indicated that legal guarantees for buyers would help. Among motors parts sellers, legal guarantees for buyers were mentioned by even more sellers, at 34 percent.

The value of expanding sales of non-new items in the future is seen by sellers first and foremost as a business opportunity, with reaching more customers and new markets as the most often cited benefits. Again, in the key recommerce segments of electronics and motors, this was most pronounced, with 41 percent and 39 percent of sellers highlighting the economic growth potential. This is not to say that creating economic value where there would otherwise be waste is not valued, with one-third of electronics sellers and 29 percent of motors sellers noting that sustainability benefit.

Disposal of items that do not sell in the context of the retail industry, both online and offline, is gaining increasing attention. Among EU-based eBay sellers, 96 percent do not discard unsold items. Discounting is the top seller strategy by far, accounting for 75 percent of responses, with 9 percent being donated to charity. It is noteworthy that the level of charitable donations after attempts at discounting is less than half that of US-based eBay sellers. The complexity of the application of VAT to charitable contributions of goods, including the potential tax liabilities that accrue to sellers who donate unsold goods, may be a cause.

# 96%

of EU sellers surveyed said they do not discard unsold items.

## Policy recommendations

During the economic recovery from COVID-19, European SMEs will have a great interest and opportunity in responding to the ever-growing demand for second-hand, refurbished, repurposed, eco-designed or repairable goods. The ability for them to count on a stable, protective, and clear legal framework in this context will be crucial. Certain policy measures may help foster a larger supply in sustainable options for consumers, as well as more consumer trust in these options:

- **Create a flexible EU standard for product sustainability information:** To support their exporting activity, SMEs should be able to rely on a harmonized European standard for providing consumers with information on product durability, reparability, energy consumption, and other eco-design characteristics. This new information should also be made to fit on all channels and devices that consumers regularly use, including mobiles.
- **Ensure legal protection of the retail chain:** As consumers increasingly expect to be comprehensively informed on a product's environmental qualities, legislation should remain clearly aimed at the operator in control of these elements, namely, the product's manufacturer. In the event of a consumer dispute, a seller should therefore be protected against a manufacturer's failure to provide accurate or complete information, such as with the help of specialized B2B mediators.
- **Safeguard the inclusiveness of ecommerce:** The growth of ecommerce over the past two decades has provided consumers located in remote or otherwise underserved areas with access to a greater variety of products at more affordable prices. Legal limitation of return policies or delivery options should therefore be avoided, as they could turn sustainable online shopping into a privilege for urban and upper-class populations. Examples such as penalizing the use of home delivery in favor of pick-up points are not guaranteed to work in rural areas. More evidence-based research is needed to compare the environmental footprint of online versus in-store shopping, taking into account all types of consumers, shopping areas and available means of transport.
- **Increase waste management options for SMEs and consumers:** Extended Producer Responsibility rules and obligations are currently made very complex for Internet-enabled SMEs. Maximum harmonization, digitization, and simplification should be applied to the European EPR framework as a priority. A larger number of compliant SMEs will eventually lead to better access to waste management options for consumers, such as take-back in accessible collection points.

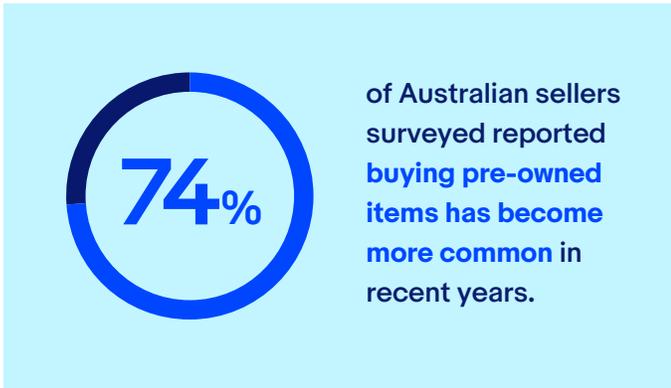
# The perspective of Australian eBay sellers on circular economy sales



Australians look to eBay to sell second-hand, refurbished, and repurposed items. eBay’s survey of Australian sellers found that they perceive clear shifts toward eco-friendly and sustainable consumer practices, with 74 percent of surveyed sellers indicating that buying pre-owned has become more common in Australia in recent years. A strong majority of 64 percent also agree that selling pre-owned goods has become easier over recent years. For those selling pre-owned goods on eBay for more than a year, top motivating factors included making extra cash (59 percent), cleaning out their house or wardrobe (54 percent) and reducing waste (41 percent). Nineteen percent of these sellers also cited sustainability and environmental benefits.

A third of eBay sellers who have sold pre-owned goods are new to the platform in the past two years. Among those who took up selling in the past 12 months, making extra cash was the top motivator, mentioned by 51 percent, cleaning out their house or wardrobe was next at 48 percent, and environmental benefits including not liking waste was motivating 35 percent of sellers. COVID-19 and lockdowns provided new sellers with extra time and incentive, with 19 percent indicating that they have had more time in the past year to resell items, while 14 percent cited lost income as a result of the pandemic as the reason they started selling pre-owned items online.

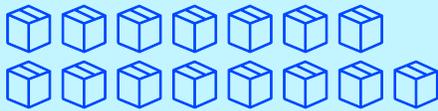
Sellers of pre-owned goods on eBay largely find items to sell from their own household. Eighty-three percent primarily sell items “they no longer need.” The sellers expressed confidence in the volume of unneeded items that could be sold to someone who wanted them more. When asked to estimate the total number of items and the estimated value of things they would consider selling, the sellers projected 15 items worth approximately \$1575 AUD. Female sellers identified more items, 20 on average, but projected a lower selling price at \$1140 AUD total. Male sellers identified just 11 items, but anticipated a higher total value at \$1848 AUD.



# 83%

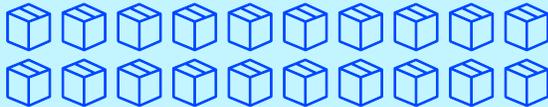
of Australian sellers of pre-owned goods surveyed said they sell items from their household they no longer need.

Australian sellers of pre-owned goods were asked the total # and estimated value of items sitting around their home that they would consider selling:



### All sellers:

15 items worth \$1575 AUD



### Female sellers:

20 items worth \$1140 AUD



### Male sellers:

11 items worth \$1848 AUD

When asked what they would do with their used goods if they didn't resell them, 62 percent of sellers indicated that they would donate them while 13 percent would re-use the item. Only 12 percent of surveyed sellers would throw the products away.

Finally, when asked about potential motivators to sell more pre-owned goods online, the change that drew the most support was simplifying postage, mentioned by 26 percent of surveyed Australian sellers. eBay Australia is working to make it easier to sell used items through new initiatives like printer free postage and pick up.

## Policy recommendations

The rapid shift to online retail driven by COVID-19 and mobility restrictions has heightened the focus on ecommerce by policymakers. eBay believes that when considering sustainability and environmental issues the following should be front of mind for policymakers.

- **Developing regulation that is simple, fit for purpose and minimises costs:** While regulation is necessary, making rules easy to follow and consistent is critical for both encouraging compliance and supporting a healthy business community. It's a difficult balance, but before proposing new regulation, governments need to ensure they consider all alternative options and engage all stakeholders to help build workable solutions at least cost.
- **Recognising the positive role online consumer marketplaces play in the circular economy:** Through our ecosystem of consumer and business sellers, eBay is proud of the role it plays in supporting the circular economy. Our platform is where products can continuously find renewed life and value. We provide the framework for businesses to re-sell refurbished items and consumers to sell items they no longer use. Recognition of this positive contribution should form part of any policy discussion on the circular economy.

- <sup>1</sup> In this report, also referred to as second-hand, non-new, used, refurbished and repaired goods.
- <sup>2</sup> eBay (04/22/2021) “Earth Day: eBay Advertising bietet über Targeting den direkten Zugang in die begehrte LOHAS-Zielgruppe.” Available at: <https://www.ebayinc.com/stories/press-room/de/earth-day-ebay-advertising-bietet-%C3%BCber-targeting-den-direkten-zugang-in-die-begehrte-lohas-zielgruppe/>.
- <sup>3</sup> eBay (2021) “eBay Impact 2020 Report.” [page 38] Available at: <https://static.ebayinc.com/assets/Uploads/Documents/eBay-Impact-2020-Report.pdf>.
- <sup>4</sup> Survey conducted in June/July 2021 of 3,981 Business-to-Consumers eBay sellers (identified as a business when registering an account on the eBay marketplace) in the European Union with at least \$5,000 USD (approx. 4.200 EUR) in annual sales on eBay.
- <sup>5</sup> Survey conducted in June/July 2021 of 452 Consumer-to-Consumer eBay sellers in Australia.
- <sup>6</sup> European Commission (09/13/2021) “Environmental Impacts Along the Supply Chain.” Raw Materials Information System. EU Science Hub. Available at: <https://rmis.jrc.ec.europa.eu/?page=environmental-impacts-along-the-supply-chain-3dfccf>.
- <sup>7</sup> Patel, Prachi (05/15/2018) “Smartphones are Warming the Planet Far More Than You Think.” Anthropocene Magazine. Available at: <https://www.anthropocenemagazine.org/2018/04/the-energy-hogging-dark-side-of-smartphones/>.
- <sup>8</sup> World Economic Forum (09/13/2021) “Circular Economy and Material Value Chains.” Available at: <https://www.weforum.org/projects/circular-economy>.
- <sup>9</sup> DeBellis, A, and N. Proctor (January 2021) “Repair Saves Families Big.” U.S. PIRG. Available at: <https://uspig.org/feature/usp/repair-saves-families-big>.
- <sup>10</sup> United Nations Environment Programme (09/13/2021) “Resilient and Inclusive Circular Economy to Build Back Better and Greener.” Available at: [https://wedocs.unep.org/bitstream/handle/20.500.11822/32922/Circular%20Economy\\_LAC.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/32922/Circular%20Economy_LAC.pdf?sequence=1&isAllowed=y).
- <sup>11</sup> Chatterji, Mo (07/19/2021) “Repairing – Not Recycling – is the First Step to Tackling E-Waste from Smartphones. Here’s Why.” World Economic Forum. Available at: <https://www.weforum.org/agenda/2021/07/repair-not-recycle-tackle-ewaste-circular-economy-smartphones/>.
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- <sup>13</sup> Fraunhofer IZM, Fraunhofer ISI, VITO for the European Commission’s Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (02/2021) “Ecodesign preparatory study on mobile phones, smartphones and tablets”. Available at: <https://op.europa.eu/en/publication-detail/-/publication/a7784be4-853d-11eb-af5d-01aa75ed71a1/language-en>.
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- <sup>23</sup> Jarkko Levänen et al. 2021. Environ. Res. Lett. 16 054069. “Innovative Recycling or Extended Use? Comparing the Global Warming Potential of Different Ownership and End-of-Life Scenarios for Textiles.” Available at: <https://iopscience.iop.org/article/10.1088/1748-9326/abfac3/pdf>. There is also reported to be significant stock of quality, little-worn and ready apparel for re-selling, with \$46.7 billion in unworn clothing estimates to be sitting in UK closets in 2018 alone. See McGroarty, Beth (2019) “Well Fashion – Way Beyond Athleisure.” Global Wellness Summit 2019. Available at: <https://www.globalwellnesssummit.com/2019-global-wellness-trends/wellness-fashion-beyond-athleisure/>.
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- <sup>30</sup> A breakdown of the part and vehicles included in the eBay Motors product category is available at: [https://www.ebay.com/b/Auto-Parts-and-Vehicles/6000/bn\\_1865334](https://www.ebay.com/b/Auto-Parts-and-Vehicles/6000/bn_1865334)

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