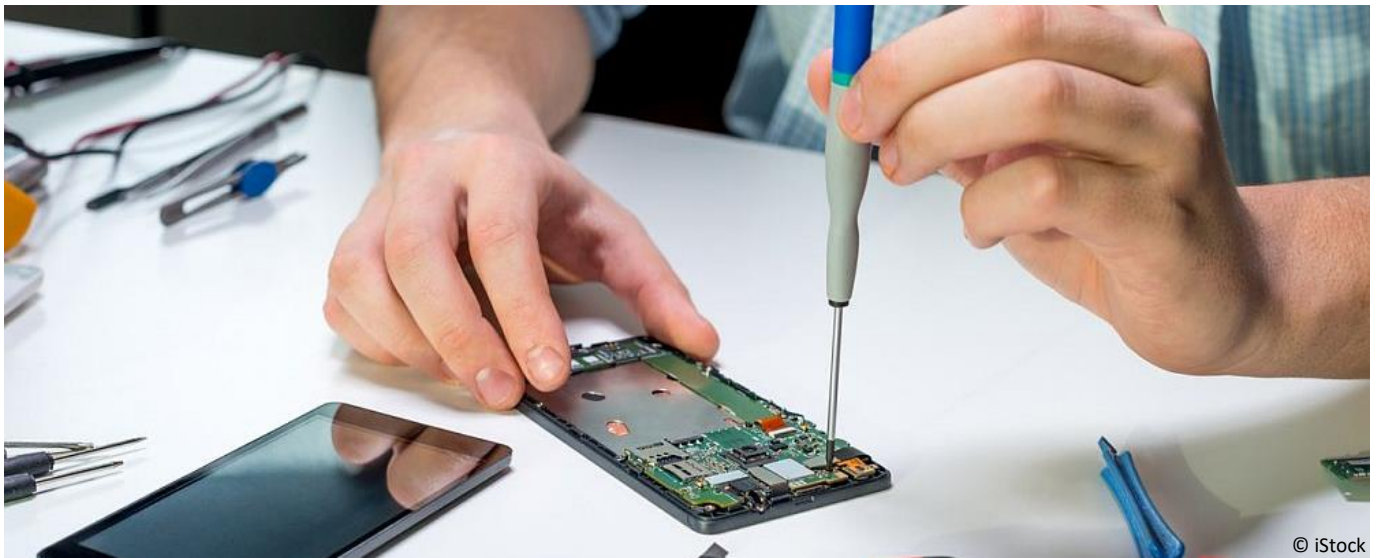


## A European “Right to Repair”

### No Guarantee of Greater Consumer and Environmental Protection

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The “right to repair” is an umbrella term for a bundle of measures that aims to strengthen consumer rights on the one hand and increase the resource efficiency of products on the other. cep has analysed and evaluated the planned measures from a consumer and an environmental perspective. As attractive as a “right to repair” may sound at first, it turns out that there are still many unanswered questions and uncertainties associated with the shift from a “consumption” to a “repair” economy.

#### Key propositions

- ▶ The EU plans will not necessarily result in more consumer rights. A “right to repair” could ultimately – due to the discontinuation of replacement – turn into an “obligation to repair”, if existing consumer rights to choose, under warranty law, are actually abolished.
- ▶ The Commission's consumer policy proposals to amend warranty law will give rise to unnecessary conflict between consumer protection and environmental protection.
- ▶ Extending the useful life of products can also be achieved by providing consumers with more information about their reparability, e.g. through a European repair index.
- ▶ Whether a “right to repair” will actually give rise to positive environmental impacts over the entire life cycle of a product depends on the market reactions of producers and consumers. Conflicts of interest between different environmental objectives may arise. In addition, innovation may be held back by a longer product life.
- ▶ The “right to repair” may reduce the consumption of resources as a result of better reparability. However, this is only one aspect of the circular economy. Other market-based incentives should also be created, such as the pricing of primary raw materials.

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## 1 Introduction

The EU Commission sees the “unsustainable consumption of goods”, which leads to excessive use of resources and high levels of waste, as one of the main causes of environmental damage.<sup>1</sup> Both the “New Consumer Agenda”<sup>2</sup> and the “Action Plan for the Circular Economy”<sup>3</sup> clearly indicate that the EU wants to promote more sustainable products and also encourage the repair of products.<sup>4</sup>

In this context, the EU Commission assumes that companies have only a limited economic interest in producing ecologically sustainable goods. Another problem would be that products become waste before the end of their potential useful life. It would be proven that the lifespan of many products has actually decreased in recent years, so consumers have an important role to play in reversing this trend.<sup>5</sup>

A European “right to repair” aims to extend the actual useful life of products. For example, consumers ought to have defective products repaired and should generally buy more second-hand or refurbished products.<sup>6</sup> Both the EU Parliament and the Council, in principle, welcome the idea of a “right to repair”.<sup>7</sup> For a long time, however, it was unclear what specific form this “right” should take. Finally, a bundle of measures may be categorised under the heading “right to repair”, which either relate to the consumer's options for action (“consumer policy dimension”) or apply to the products themselves with the aim of increasing their resource efficiency (“environmental policy dimension”).<sup>8</sup>

This cepInput examines and evaluates measures currently being considered at EU level to implement the right to repair, both in terms of its consumer policy (Section 2) and environmental policy (Section 3) dimensions.

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<sup>1</sup> See EU Commission (2022), Call for Evidence for an Impact Assessment Ares(2022)175084 of 11 January 2022, [Sustainable consumption of goods - promoting repair and reuse](#) [hereinafter: “Commission document”], p. 3. All sources last accessed on 24 March 2022.

<sup>2</sup> On this, Stockebrandt, P. (2021), New Consumer Agenda, [cepPolicyBrief 10/2021](#).

<sup>3</sup> On this, Schwind, S. / Reichert, G. (2020), Action Plan for the Circular Economy, [cepPolicyBrief 05/2020](#).

<sup>4</sup> Commission document, p. 3. The initial work on a “social taxonomy” also picks up these points; see Platform on Sustainable Finance/Subgroup 4: Social Taxonomy (2022), [Final Report](#), p. 37.

<sup>5</sup> See Commission document, p. 2.

<sup>6</sup> Ibid., p. 3.

<sup>7</sup> European Parliament (2020), Resolution of 25 November 2020, [Towards a more sustainable single market for business and consumers](#), in particular No. 11; Council of the European Union (2021), [Council Conclusions of 22 February 2021 on the New Consumer Agenda](#), in particular N.o 11.

<sup>8</sup> In this respect, see also Schlacke, S. / Tonner, K. / Gawel, E. (2015), [Stärkung eines nachhaltigen Konsums im Bereich Produktnutzung durch Anpassungen im Zivil- und öffentlichen Recht](#), study commissioned by the Federal Environment Agency of Germany [hereinafter: Schlacke et al. (2015)], p. 39.

## 2 Consumer Policy Dimension of the Right to Repair

The “Call for evidence for an Impact Assessment” (hereinafter “Commission document”)<sup>9</sup> envisages that a European “right to repair” should be created via an amendment to the Sale of Goods Directive<sup>10</sup> or by adopting a separate law.<sup>11</sup> Thus, the approach is to make a European “right to repair” part of consumer contract law – or more specifically warranty law. The Commission believes there are various possibilities for implementation, so the Commission document contains various options<sup>12</sup> which will be presented and evaluated here.

The EU Parliament will address the issue in April in the form of a non-binding resolution.<sup>13</sup> The new EU strategy “Empowering consumers to make informed choices and play an active role in the green transition”, which is about to be published, is also likely to deal with this issue.<sup>14</sup> The EU Commission then plans to present concrete legal proposal for the European “right to repair” in the third quarter of 2022.<sup>15</sup>

To give a better understanding of the options contained in the Commission document and their implications, the main contents of the Sale of Goods Directive is reviewed below (Section 2.1). The consumer rights set out in that Directive are crucial for understanding the rest of the assessment as this is where most of the options envisaged in the Commission document originate. In addition, the difference between warranty and guarantee will also have to be highlighted for the purposes of the assessment. The options in the Commission document will then be presented (Section 2.2) and assessed (Section 2.3).

### 2.1 The Sale of Goods Directive

The Sale of Goods Directive contains rules for sales contracts between commercial sellers<sup>16</sup> and consumers.<sup>17</sup> It was adopted in 2019 and had to be implemented by Member States by January 2022.<sup>18</sup> At the same time, Member States are not permitted to keep in place or introduce any national provisions in this area that deviate from the provisions of the Directive.<sup>19</sup> In other words: this area is “fully harmonised”.<sup>20</sup>

<sup>9</sup> See EU Commission (2022), Call for Evidence for an Impact Assessment Ares(2022)175084 of 11 January 2022, [Sustainable consumption of goods - promoting repair and reuse](#).

<sup>10</sup> [Directive \(EU\) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods](#) [hereinafter: “Sale of Goods Directive”].

<sup>11</sup> Commission document, p. 2 et seq.

<sup>12</sup> Ibid., p. 3. It is possible that the EU Commission will put forward other or additional options in the actual proposal, which is scheduled for the third quarter of 2022.

<sup>13</sup> On this, see also the press release of the IMCO Committee of the EU Parliament of 16 March 2022: [Right to repair: MEPs set out their demands ahead of Commission's proposal](#).

<sup>14</sup> “Empowering consumers for the green transition”; publication announced for 30 March 2022. On this, Stockebrandt, P. (2021), New Consumer Agenda, [cepPolicyBrief 10/2021](#).

<sup>15</sup> Commission document, p. 1; EU Commission (2022), [Commission Work Programme for 2022](#), No. 3.

<sup>16</sup> The Directive covers activities in the course of trade, business, craft or profession; Sale of Goods Directive, Art. 2 No. 3. Here referred to as “commercial” for linguistic simplification.

<sup>17</sup> Sale of Goods Directive, Art. 1 and Art. 3 (1)

<sup>18</sup> Ibid., Art. 23, Art. 24 and Art. 26.

<sup>19</sup> Ibid., Art. 4. Unless such deviation is explicitly provided for in the Directive, such as in the case of the warranty period – meaning the liability period – under Art. 10 (1) and (3) Sale of Goods Directive.

<sup>20</sup> See on “full harmonisation” in general e.g. Eur-Lex (2019), [Directives of the European Union](#).

The relevant provisions of the Directive in this case include the warranty rights set out therein.<sup>21</sup> Thus, the Directive establishes a two-step system in the event that a product<sup>22</sup> is defective at the time of delivery<sup>23</sup>: first, consumers are only entitled to claim repair or replacement of the product<sup>24</sup> (step 1). Only thereafter is a reduction in the purchase price or withdrawal from the contract possible (step 2).<sup>25</sup>

In concrete terms, the step 1 provisions mean that consumers – during the warranty period<sup>26</sup> – can in principle decide for themselves whether a defective product should be repaired or replaced.<sup>27</sup>

The situation is different in the case of a guarantee<sup>28</sup>. This is any undertaking given to the consumer by the seller or producer (guarantor), in addition to the seller's legal obligation relating to the warranty, to refund the purchase price or to replace, repair or service goods in any way if they do not meet the specifications or any other requirements not related to conformity set out in the guarantee statement or in the relevant advertising available at the time of, or before the conclusion of the contract.<sup>29</sup> During the period of such a guarantee, the consumer may claim repair or replacement of the product from the guarantor.<sup>30</sup>

## 2.2 Options in the Commission Document

The Commission's main concern is to encourage consumers to use products for longer. Thus, consumers should have defective products repaired and generally buy more second-hand or refurbished products.<sup>31</sup> The Commission document offers six<sup>32</sup> possible options.<sup>33</sup>

In this regard, the Commission discusses “low intervention” (Option 1), “moderate intervention” (Options 2 + 3) and “high intervention” (Options 4-6).<sup>34</sup> What is important in this context is the explicit indication that the options are cumulative.<sup>35</sup> In other words: The Commission reserves the right to propose several of these options in combination with each other. It is also worth noting at this point

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<sup>21</sup> Sale of Goods Directive, Art. 1, Art. 5 and Art. 10-16.

<sup>22</sup> This always means “goods” within the meaning of Art. 2 No. 5 Sale of Goods Directive – herein always referred to as “products” for linguistic simplification.

<sup>23</sup> This refers to the “lack of conformity which exists at the time when the goods were delivered”; see Art. 10 (1) Sale of Goods Directive.

<sup>24</sup> This refers to “repair” and “replacement”, both of which must be free of charge; see notably Art. 13 (1) and (2) and Art. 14 (1) (a) Sale of Goods Directive.

<sup>25</sup> This refers to “reduction of the price” and “termination of the sales contract”; see Art. 13 (1), (2) and (4) Sale of Goods Directive. For the exact conditions and cases, see Art. 13 (4) (a)-(d) Sale of Goods Directive.

<sup>26</sup> This means the liability period of two years under Art. 10 (1) and (3) Sale of Goods Directive.

<sup>27</sup> See notably Art. 13 (2) Sale of Goods Directive. For its part, the EU Commission assumes that consumers usually choose replacement (see Commission document, p. 2.) whilst not providing any data or similar evidence to support this assumption. Elsewhere too, however, there is also a tendency to assume this; see e.g. Schlacke et al. (2015), p. 152, with further references.

<sup>28</sup> This refers to the “commercial guarantee” pursuant to Art. 17 Sale of Goods Directive.

<sup>29</sup> See accordingly Art. 2 No. 12 and Art. 17 Sale of Goods Directive.

<sup>30</sup> This means “repair” and “replacement” pursuant to Art. 14 Sale of Goods Directive; see Art. 17 (1) Sale of Goods Directive.

<sup>31</sup> Commission document, p. 3.

<sup>32</sup> The EU Commission also considers not proposing any changes (so-called “baseline scenario”); see Commission document, p. 2. That option will not be considered further in this context, however, since, in view of the basic agreement to a “right to repair” already signalled by the EU Parliament and the Council (see above Section 1), it seems unlikely to be of relevance.

<sup>33</sup> Commission document, p. 3.

<sup>34</sup> For definitions: see Commission document, p. 3. Thus, the options are referred to in the Commission document as “1”, “2A+B” and “3A-C”.

<sup>35</sup> Commission document, p. 2.

that some of the details regarding the individual options in the Commission document are still very sketchy.<sup>36</sup>

### 2.2.1 Option 1: Voluntary Commitments

This option is defined by the Commission as “low intervention”. It would not introduce any legislative provisions. Instead, incentives would be created for companies to commit voluntarily to repairing products with a “significant negative impact on the environment”. In addition, the purchase of second-hand and refurbished products will be promoted.<sup>37</sup> Thus, an amendment of the Sale of Goods Directive would not be necessary.

### 2.2.2 Option 2: Longer Warranty Period & Free Choice for Consumers

This option is defined by the EU Commission as “moderate intervention”. It states that the statutory warranty period<sup>38</sup> would be extended. Furthermore, in the event of a defect, consumers would be free to choose whether the product should be repaired or replaced. The same would apply, where applicable (“and/or”), to second-hand “and/or” refurbished products.<sup>39</sup> Amendments to the Sale of Goods Directive, in particular Art. 10 (1), would therefore be necessary.

### 2.2.3 Option 3: Conditional Preference for Repair & Obligation to Offer Repair

This option is defined by the Commission as “moderate intervention”. It states that, in the event of a defect, repair will basically have priority over replacement if the repair is less expensive than replacement of the product. The same applies if the cost is similar. Amendments to the Sale of Goods Directive, in particular Art. 13 (2), would therefore be necessary. In addition, producers or sellers will be obliged to repair products at a “reasonable price” even after the warranty period has already expired.<sup>40</sup> This would require the introduction of a new “right to repair” in the Sale of Goods Directive or in a separate law.

### 2.2.4 Option 4: No Free Choice for Consumers & Obligation to Repair Free of Charge

This option is defined by the Commission as “high intervention”. This provides that the consumer's free choice will be abolished and the repair of a product will always have priority over replacement. Amendments to the Sale of Goods Directive, in particular Art. 13 (2), would therefore be necessary. In addition, in “some cases”, producers or sellers will be obliged to carry out a repair free of charge for the consumer – even after the warranty period has expired.<sup>41</sup> This would require the introduction of a new “right to repair” in the Sale of Goods Directive or in a separate law.

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<sup>36</sup> To begin with, for example: It is not clear from the details in the Commission document which products are defined as having a “significant negative impact on the environment” or how exactly the purchase of second-hand and refurbished products is to be promoted (Option 1). There is also no indication of the precise period by which the warranty would be extended (Options 2 and 5). Nor are there any details of the cases in which a repair – even after expiry of the warranty period – must be carried out free of charge (Option 4).

<sup>37</sup> Commission document, p. 3. There: “Option 1”.

<sup>38</sup> This means the liability period of two years under Art. 10 (1) and (3) Sale of Goods Directive.

<sup>39</sup> Commission document, p. 3. There: “Option 2A”.

<sup>40</sup> Ibid., p. 3. There: “Option 2B”.

<sup>41</sup> Ibid., p. 3. There: “Option 3A”.

### 2.2.5 Option 5: Extension of the Warranty Period

This option is defined by the Commission as “high intervention”. This states that the statutory warranty period will be extended beyond the current minimum period of two years.<sup>42</sup> Amendments to the Sale of Goods Directive, in particular Art. 10 (1), would therefore be necessary.

### 2.2.6 Option 6: Replacement with Non-new Products Also Possible

This option is defined by the Commission as “high intervention”. It states that, in the event of a defect, the seller will have the right to comply with its obligation to replace products by delivery of refurbished and non-new products.<sup>43</sup> Amendments to the Sale of Goods Directive, in particular Art. 14, would therefore be necessary.

## 2.3 Consumer Policy Assessment

Firstly, it is clear that a European “right to repair” could in principle be beneficial to the “responsible consumer”<sup>44</sup>. When it comes to the proposed options, however, it also becomes apparent that the details of such a “right” will be crucial. This section will set out three steps which demonstrate that a “right to repair” – as envisaged in the Commission document – does not necessarily mean more consumer rights; that such an intervention in warranty law is inappropriate and that the Commission has failed to consider other more suitable approaches in its proposal.

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<sup>42</sup> Ibid., p. 3. There: “Option 3B”.

<sup>43</sup> Ibid., p. 3. There: “Option 3C”.

<sup>44</sup> This is the consumer model developed by the ECJ (and often adopted by the EU legislator), which must also be applied here. It presumes an “average consumer who is reasonably well-informed and reasonably observant and circumspect”. An expression of this is, for example, the fact that the legislator refrains from prohibitions and enhances consumer information thereby enabling the well-informed consumer to make a “correct” decision and removing the need for any further protection in this respect. On this see Schlacke et al. (2015), p. 84 and on the aforementioned consumer model: ECJ, Judgement of 16 July 1998, Gut Springenheide and Tusky, C-210/96, para. 37 and Recital 18 Unfair Commercial Practices Directive [[2005/29/EC](#)].

## A “Right to Repair” Does Not Necessarily Mean More Consumer Rights

In an initial assessment of the options announced in the Commission document it is clear that this kind of European “right to repair” will not necessarily give rise to more consumer rights. A look at the consumer’s current statutory warranty rights<sup>45</sup> confirms that three out of the six options will result in the curtailment of existing consumer rights. Thus, the consumer’s free choice in case of a defect<sup>46</sup> would be limited or abolished by options 3 and 4. The result is no different in the case of Option 6 which, in the event of a defect, allows sellers to deliver used or refurbished products to meet their contractual obligation to provide a replacement. Thus, instead of a “right to repair”, these options would in fact give rise to a “duty to repair”.

### This Interference in the System of Statutory Warranty Rights is Inappropriate

Irrespective of the details of the options – some of which are yet to be settled – set out in the Commission document,<sup>47</sup> interference with statutory warranty rights in pursuit of the – in itself legitimate – objective of extending the useful life of products, does not seem to be appropriate.

Thus, the statutory warranty under a contract for the sale of goods is based conceptually on a product's freedom from defects at the time of the transfer of risk.<sup>48</sup> The right to a defect-free product is not equivalent to the right to a specific lifespan of the product.<sup>49</sup>

It is true that, e.g. due to longer warranty obligations (Options 2 and 5)<sup>50</sup>, pressure on manufacturers to develop longer-lasting products would grow because it would naturally become increasingly difficult for them to prove that the product was free of defects at the time of the transfer of risk. This is not, however, the aim and purpose of the warranty.<sup>51</sup>

Warranty law aims to ensure a solution for dealing with defects that minimises the overall cost in every single case. For the consumer, therefore, the recommended choice is the one which gives rise to the benefit of the warranty at the lowest possible cost – i.e. expense and waiting time.<sup>52</sup>

Thus, the situation for consumers – if there were an “obligation” to repair (e.g. Option 4) – will be completely different in each case, depending on the product involved. The consumer costs arising from

<sup>45</sup> See above Section 2.1.

<sup>46</sup> This refers to the consumer’s current right to choose between repair and replacement in the event of a defect; see Art. 13 (2) Sale of Goods Directive and Section 2.1 above.

<sup>47</sup> Thus, it is not clear from the details in the Commission document, for example, which products are defined as having a “significant negative impact on the environment” or how exactly the purchase of used and refurbished products is to be promoted (Option 1). There is also no indication of the precise period by which the warranty would be extended (Options 2 and 5). Nor are there any details of the cases in which a repair – even after expiry of the warranty period – must be carried out free of charge (Option 4).

<sup>48</sup> Schlacke et al. (2015), p. 218. On the transfer of risk, see for example IHK Köln (2022), [Gewährleistung, Umtausch und Garantie beim Kaufvertrag](#).

<sup>49</sup> Schlacke et al. (2015), p. 218.

<sup>50</sup> Whilst also, in some cases, maintaining the free choice of consumers in case of defects as provided for in Option 2. The “free choice of consumers in case of defects” refers to the consumer’s current right to choose between repair and replacement in the event of a defect; see Art. 13 (2) Sale of Goods Directive and Section 2.1 above.

<sup>51</sup> Schlacke et al. (2015), p. 218. The result of the study on this on p. 219: “Overall, instrumentalisation in order to exert blanket pressure on the supplier/manufacturer-side towards achieving longer lifespans is structurally unsuitable, inefficient and involves serious issues around fairness and sustainability ...” (own translation).

<sup>52</sup> *Ibid.*, p. 210.



the waiting time in the case of e.g. a defective mobile phone, washing machine or refrigerator are likely to be completely different to those arising in the case of e.g. a designer light.<sup>53</sup>

The former provide functions that are essential for consumers: telephoning, washing, cooling. The (obligatory) repair would involve a great deal of effort for consumers: from the initial notification of the seller or manufacturer, to agreeing an on-site inspection or, if necessary, sending the product back, then waiting for the repair to be actually carried out and/or subsequently, where a product still has to be returned to the consumer.<sup>54</sup>

The law should be able to reflect different situations and still come to reasonable solutions in the different cases. The consumer’s existing rights to choose are suitable for this purpose because only consumers know what the alternative cost will be to them of doing without the product for a period of time.<sup>55</sup>

A “right to repair” that restricts the consumer's free choice and thus his or her options for action is likely to encounter acceptance problems. By excluding those private-individual options for action, the legitimate goal of products having a longer useful lifespan will have to be enforced, at least in part, against the consumer’s interests, thus causing a conflict between consumer and environmental protection.<sup>56</sup> Interfering with warranty law with the aim of restricting existing consumer rights to choose is not expedient in this respect and is therefore inappropriate.

### **The Commission Fails to Consider Better Approaches**

Instead, the Commission should pursue better approaches that actually already exist but are completely ignored in the Commission document. This includes, on the one hand, the idea of a binding statement of the manufacturer on the guarantee, which has already been developed in a study for the Federal Environment Agency of Germany carried out in 2015,<sup>57</sup> as well as the idea of a European repair index for products,<sup>58</sup> similar to the French model.<sup>59</sup>

The idea of a binding statement on the guarantee basically functions as a product label and can be summarised as follows: Manufacturers must provide a more or less standardised statement regarding the minimum service life of their product and regarding the guaranteed period of availability of spare parts. What they say is up to them. For example, they can also say “zero years”.<sup>60</sup> In essence, manufacturers would only have to give a standardised signal to the market – an “insurance obligation” with regard to their product would remain voluntary in nature, so that such a guarantee would continue to act as a competitive advantage, and in particular as an indicator for high-quality products.<sup>61</sup>

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<sup>53</sup> Ibid., p. 211.

<sup>54</sup> Ibid., p. 211.

<sup>55</sup> Ibid., p. 211.

<sup>56</sup> Ibid., p. 210 and p. 211 et seq.

<sup>57</sup> Ibid., p. 159.

<sup>58</sup> See, among others, preliminary work in Cordella et al. (2019), [JRC Technical Reports – Analysis and development of a scoring system for repair and upgrade of products](#).

<sup>59</sup> See e.g. heise (2021), [Ein Reparaturindex soll in Frankreich leicht zu reparierende Elektronik fördern](#).

<sup>60</sup> Schlacke et al. (2015), p. 213.

<sup>61</sup> Ibid., p. 159 and p. 213.

A European repair index could also assume the function of a product label. This type of index, which has already been implemented in France<sup>62</sup>, could in principle also be deployed at EU level.<sup>63</sup> Using a rating (between 0 and 10), the French repair index aims to indicate how easily smartphones, televisions, laptops, washing machines and lawnmowers can be repaired. The index will be extended to other products in the future. Such an index enables the consumer to obtain the relevant information in advance and, when buying, choose a product that is correspondingly easy to repair.<sup>64</sup> Preliminary work on a points system to this effect has also been carried out at European level<sup>65</sup> but has not been included in the Commission document.

## 2.4 Conclusion

Extending the useful life of products can also be achieved most notably by providing consumers with more information about their reparability. The existing methods of a binding statement on the guarantee or a European repair index provide a more proportionate way to achieve this objective under consumer law.<sup>66</sup> They promote competition and improve the availability of information for the benefit of consumers.<sup>67</sup> Furthermore, consumers should be better informed about their (existing) rights, especially with regard to warranties and guarantees, so that they can consciously choose environmentally sound options when exercising their consumer rights.<sup>68</sup> Alongside the two alternative approaches described above, consumer awareness regarding rights and basic environmental information must be increased as an additional contribution to extending the useful life of products.<sup>69</sup> This will then ensure that consumers are actually empowered “to make informed choices and play an active role in the green transition”.

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<sup>62</sup> See Runder Tisch Reparatur (2021), [Der französische Reparaturindex](#).

<sup>63</sup> Though, in particular, questions regarding the concrete criteria and their weighting would still have to be clarified; see also Runder Tisch Reparatur (2021), [Der französische Reparaturindex](#).

<sup>64</sup> See Runder Tisch Reparatur (2021), [Der französische Reparaturindex](#).

<sup>65</sup> See, among others, Cordella et al. (2019), [JRC Technical Reports - Analysis and development of a scoring system for repair and upgrade of products](#).

<sup>66</sup> Regarding the binding statement on the guarantee see also Schlacke et al. (2015), [Stärkung eines nachhaltigen Konsums im Bereich Produktnutzung durch Anpassungen im Zivil- und öffentlichen Recht](#), p. 216. Regarding the repair index see also heise (2021), [Ein Reparaturindex soll in Frankreich leicht zu reparierende Elektronik fördern](#), which includes this comment by Katrin Meyer from the association “Runder Tisch Reparatur”: “The index can help strengthen consumer rights and save resources” (own translation).

<sup>67</sup> In summary see Schlacke et al. (2015), p. 159 and p. 213.

<sup>68</sup> See also Abel, G. et al. (2019), [Verlängerung des Produktnutzungs- und -lebensdauer mittels Durchsetzung von Verbraucherrechten](#), study commissioned by the Federal Environment Agency of Germany, p. 14.

<sup>69</sup> Ibid.

### 3 Environmental Policy Dimension of the Right to Repair

EU consumer policy legislation, which is intended to define the details of a right to repair, can be supplemented by various EU measures that are aimed at products themselves as part of a “sustainable product policy”<sup>70</sup>. At the core of this environmental dimension of the right to repair is the principle of the circular economy, which plays a central role in EU environmental policy.<sup>71</sup> A key element when it comes to realising the right to repair from an environmental perspective is to use products for as long as possible in order to bring down consumption of resources and the level of waste.<sup>72</sup> Thus, their reparability is a crucial starting point. This can already be achieved through the product design itself as well as through additional accompanying measures – such as the provision of spare parts and information on reparability. In its Communication on the European Green Deal (2019)<sup>73</sup> and its Circular Economy Action Plan (2020)<sup>74</sup>, among other things, the EU Commission has announced that it will develop corresponding environmental policy measures to realise the right to repair.

The following sections present (section 3.1) and then generally assess (section 3.2) EU plans to define the details of the environmental policy of the right to repair by making products repairable in line with the principle of the circular economy, waste hierarchy and ecodesign requirements.

#### 3.1 Reparability of Products

##### 3.1.1 Circular Economy and Waste Hierarchy

The principle of the “circular economy” is based on an holistic life-cycle approach characterised by the “cascading use of resources and residual waste of almost zero”.<sup>75</sup> It generally aims to conserve resources and return materials to the economic cycle during the various stages of a product’s entire life-cycle – design, manufacture, use and disposal – thereby ensuring that “the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised”.<sup>76</sup> Thus, the raw materials obtained directly from nature (primary raw materials) are replaced by raw materials recovered from waste (secondary raw materials) and thus remain as resources in the material cycle. Currently, the prevailing system is still predominantly characterised by a linear pattern of “take-make-use-dispose”: In production processes, primary raw materials are used for product manufacture and disposed of as waste after use.<sup>77</sup>

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<sup>70</sup> EU Commission (2020), Inception Impact Assessment Ares(2020)4754440 of 11 September 2020, Sustainable Products Initiative.

<sup>71</sup> Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 “Living well within the limits of our planet” [7. EU Environment Action Programme (2013– 2020)], para. 1.

<sup>72</sup> EU Commission (2019), Staff Working Document SWD(2019) 91 of 4 March 2019, Sustainable Products in a Circular Economy – Towards an EU Product Policy Framework contributing to the Circular Economy, p. 17 et seq.

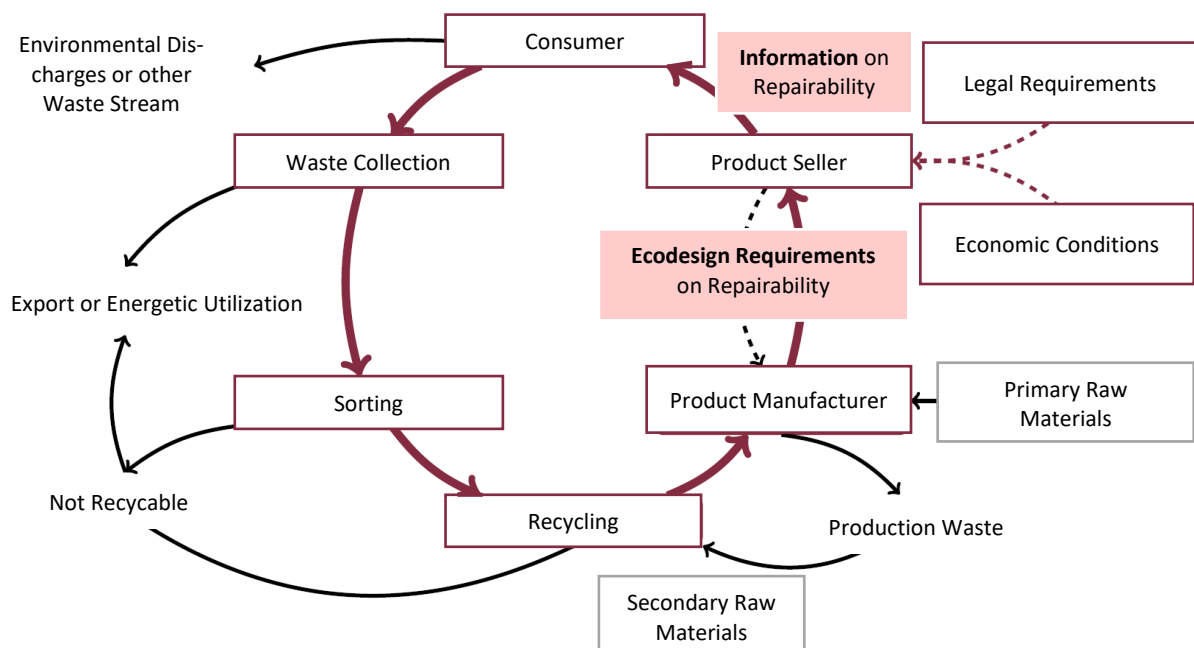
<sup>73</sup> EU Commission (2019), Communication COM(2019) 640 of 11 December 2019, The European Green Deal, p. 9.

<sup>74</sup> EU Commission (2020), Communication COM(2020) 98 of 11 March 2020, A new Circular Economy Action Plan for a cleaner and more competitive Europe [EU Circular Economy Action Plan (2020)], pp. 4 and 8; on this Schwind, S. / Reichert, G. (2020), Circular Economy Action Plan, [cepPolicyBrief 05/2020](#).

<sup>75</sup> EU-Circular Economy Action Plan (2020), Rn. 40.

<sup>76</sup> EU Commission (2015), Communication COM(2015) 614 of 2 December 2015, Closing the loop – An EU action plan for the circular economy, pp. 2 and 4; on this Bonn, M. / Reichert, G. (2015), Action Plan on the Circular Economy, [cepPolicyBrief 06/2016](#).

<sup>77</sup> EU Circular Economy Action Plan (2020), p. 2 et seq.

**Fig. 1: Reparability in the Context of the Circular Economy**

Source: Own illustration based on Milios et al. (2018)<sup>78</sup>

Following on from the final phases of the circular economy, the Waste Framework Directive 2008/98/EC lays down general principles and regulations for “waste management” at EU level<sup>79</sup>, which includes in particular “the collection, transport, recovery (including sorting) and disposal of waste”. The central guiding principle is the “waste hierarchy”<sup>80</sup>, which establishes a five-step order of priorities for deciding between the different waste policy measures of the EU Member States, which ultimately encompasses all phases of the circular economy. Accordingly, waste must be (1) primarily avoided<sup>81</sup>, or (2) prepared for reuse, or (3) recycled, or (4) recovered in some other way, or finally (5) disposed of<sup>82</sup>. “Preparation for re-use”<sup>83</sup> includes any recovery operation involving “checking, cleaning or repairing by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing”.

However, the EU's environmental policy plans, to define the details of the right to repair, come into play at an earlier stage, in the first phase of the circular economy. In future, for example, product

<sup>78</sup> Milios, L. / Holm Christensen, L. / McKinnon, D. / Christensen, C. / Rasch, M. K. / Hallstøm Eriksen, M. (2018), Plastic recycling in the Nordics: A value chain market analysis, *Waste Management*, Vol. 76, 180-189, p. 181.

<sup>79</sup> Waste Framework Directive 2008/98/EC, Art. 3 No. 9.

<sup>80</sup> *Ibid.*, Art. 4. In this regard, Epiney, A. (2019), *Umweltrecht der Europäischen Union*, § 9 para. 107 et seq. and p. 610 et seq. with further references.

<sup>81</sup> Waste Framework Directive 2008/98/EC, Art. 3 No. 12: “Prevention” includes “measures taken before a substance, material or product has become waste that reduce: (a) the quantity of waste, including through the re-use of products or the extension of the life span of products; (b) the adverse impacts of the generated waste on the environment and human health; or (c) the content of harmful substances in materials and products”.

<sup>82</sup> *Ibid.*, Art. 3 No. 19 in conjunction with Annex I: “Disposal” means “any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy”.

<sup>83</sup> *Ibid.*, Art. 3 No. 16.

design<sup>84</sup> should increasingly promote not only recyclability but also longevity resulting from the reparability and upgradeability of products. The regulatory starting point in this regard is the Ecodesign Directive 2009/125/EC.

### 3.1.2 Ecodesign Requirements on Reparability

#### 3.1.2.1 Ecodesign Directive: Regulatory Approach and Scope

The Ecodesign Directive 2009/125/EC<sup>85</sup> aims, on the one hand, to reduce the consumption of natural resources and energy by setting requirements for the “environmentally sound design” of certain products (“ecodesign”)<sup>86</sup> in order to increase their resource and energy efficiency, as well as to reduce other harmful environmental impacts<sup>87</sup> throughout their life cycle<sup>88</sup> – from the processing of raw materials during product manufacture through to product disposal.<sup>89</sup> On the other hand, uniform EU-wide ecodesign requirements<sup>90</sup> aim to prevent direct disruption to the functioning of the EU internal market arising from trade barriers created by disparities between relevant national requirements of the EU Member States regarding the cross-border movement of goods within the EU.<sup>91</sup>

The Ecodesign Directive 2009/125/EC creates a regulatory “framework” for the gradual establishment of EU-wide ecodesign requirements for certain products. The individual product-specific ecodesign requirements are not defined in detail in the Ecodesign Directive 2009/125/EC itself, but only in subsequent implementing measures<sup>92</sup> by the EU Commission, within the framework of a committee procedure<sup>93</sup>. This has so far been carried out for numerous products – such as light bulbs, dishwashers and vacuum cleaners.<sup>94</sup> These products may only be placed on the EU internal market and/or put into service if they comply with the ecodesign requirements applicable to them.<sup>95</sup>

Initially, under the original Ecodesign Directive 2005/32/EC<sup>96</sup>, the ecodesign requirements expressly only applied to “energy-using products” (EuP)<sup>97</sup>. This includes in particular products such as electrical household appliances that consume energy themselves during use. The recast Ecodesign Directive 2009/125/EC has significantly extended the scope to “energy-related products”. This includes items

<sup>84</sup> Milios, L. / Holm Christensen, L. / McKinnon, D. / Christensen, C. / Rasch, M. K. / Hallstøm Eriksen, M. (2018), Plastic recycling in the Nordics: A value chain market analysis, *Waste Management*, Vol. 76, 180–189, p. 5 et seq.

<sup>85</sup> Directive 2009/125/EC of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products (recast); on this Voßwinkel, J. S. (2008), *Ökodesign: Umweltgerechte Produktgestaltung*, [cepPolicyBrief](#).

<sup>86</sup> Ecodesign Directive 2009/125/EC, Art. 2 No. 23: “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”.

<sup>87</sup> *Ibid.*, Art. 2 No. 12: An “environmental impact” is “any change to the environment wholly or partly resulting from a product “during its life cycle”.

<sup>88</sup> *Ibid.*, Art. 2 No. 13: The “life cycle” of a product comprises “the consecutive and interlinked stages of a product from raw material use to final disposal”.

<sup>89</sup> *Ibid.*, Recital 3.

<sup>90</sup> *Ibid.*, Art. 2 No. 24: An “ecodesign requirement” means “any requirement in relation to a product, or the design of a product, intended to improve its environmental performance, or any requirement for the supply of information with regard to the environmental aspects of a product”.

<sup>91</sup> *Ibid.*, Recital 2 and Art. 1 (1).

<sup>92</sup> *Ibid.*, Art. 15.

<sup>93</sup> *Ibid.*, Art. 15, (1) and Art. 19.

<sup>94</sup> EU Commission, Ecodesign and Energy Labelling, [https://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/ecodesign\\_en](https://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/ecodesign_en).

<sup>95</sup> Ecodesign Directive 2009/125/EC, Art. 1 (2) sentence 1 and Art. 3 (1).

<sup>96</sup> Directive 2005/32/EC of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products.

<sup>97</sup> *Ibid.*, Art. 2 No. 1: An “EuP” means “a product which, once placed on the market and/or put into service, is dependent on energy input (electricity, fossil fuels and renewable energy sources) to work as intended [...]”.

that “have an impact on energy consumption during use [...]”<sup>98</sup>, for example, products “used in construction, such as windows, insulation materials, or some water-using products such as shower heads or taps [...]”.<sup>99</sup> Since ultimately all products indirectly influence energy consumption in one form or another and are thus “energy-related”, the Ecodesign Directive 2009/125/EC covers, at least in theory, “ultimately all products”.<sup>100</sup> The Commission is now proposing a revision of the Ecodesign Directive in which the scope will be extended accordingly.<sup>101</sup>

### 3.1.2.2 Ecodesign Requirements on Reparability in General

The major regulatory potential of the Ecodesign Directive 2009/125/EC is based not only on the virtually unlimited number of products that are theoretically capable of regulation, but also on the diversity of product characteristics for which ecodesign requirements can be set within the framework of implementing measures.<sup>102</sup> These include not only the energy consumption caused directly or indirectly by a product, but can also include other “environmental aspects”<sup>103</sup> of a product.

For example, a “generic ecodesign requirement”<sup>104</sup> aims to improve the environmental performance of the product and is focused on its “significant environmental aspects” without setting limit values. The significant environmental aspects relating to product design must be defined taking account of the different phases of the life cycle of a product. These include the selection and use of raw materials or installation and maintenance.<sup>105</sup> For each of these phases, the environmental aspects of a product must be assessed, where relevant, such as the consumption of materials, energy and other resources, and opportunities for reuse, recycling and recovery of material.<sup>106</sup>

One possible criterion for assessing the improvement of the environmental aspects of a product<sup>107</sup>, which is particularly relevant for defining the details of the right to reparability, is the “lifetime of the product”. Indicators for this are the guaranteed minimum service life, upgradeability and reparability of a product as well as the minimum period for the availability of spare parts.

Implementing measures can be used to impose requirements, not only directly on the product itself, but also regarding the provision of related information. Thus, the manufacturer may be obliged to provide information to consumers on how to install, use and maintain the product with the least possible environmental impact, how to achieve the longest possible lifetime of the product, how to dispose of it, and, where appropriate, information on the period of availability of spare parts and the possibilities of upgrading products.<sup>108</sup>

<sup>98</sup> Ecodesign Directive 2009/125/EC, Art. 2 No. 1.

<sup>99</sup> *Ibid.*, Recital 4.

<sup>100</sup> Epiney, A. (2019), *Umweltrecht der Europäischen Union*, § 9 para. 19, p. 551.

<sup>101</sup> EU Commission (2020), *Inception Impact Assessment Ares(2020)4754440 of 11 September 2020, Sustainable Products Initiative*, p.1.

<sup>102</sup> Ecodesign Directive 2009/125/EC, Art. 15 (6) in conjunction with Annex I (Method for setting generic ecodesign requirements) and Annex II (Method for setting specific ecodesign requirements).

<sup>103</sup> *Ibid.*, Art. 2 No. 11: An “environmental aspect” means “an element or function of a product that can interact with the environment during its life cycle”.

<sup>104</sup> *Ibid.*, Art. 2 No. 25: A “generic ecodesign requirement” concerns the “the ecological profile as a whole of a product without set limit values for particular environmental aspects”.

<sup>105</sup> *Ibid.*, Annex I Part 1 No. 1.1.

<sup>106</sup> *Ibid.*, Annex I Part 1 No. 1.2.

<sup>107</sup> *Ibid.*, Annex I Part 1 No. 1.3.

<sup>108</sup> *Ibid.*, Annex I Part 2 (c).

### 3.1.2.3 Existing Ecodesign Requirements: Washing Machines Etc.

The EU Commission has already established ecodesign requirements to promote the reparability of certain products as part of several implementing measures for the Ecodesign Directive passed in 2019. These relate to servers and data storage products<sup>109</sup>, household washing machines and dryers<sup>110</sup>, household dishwashers<sup>111</sup>, refrigerators<sup>112</sup>, computer screens<sup>113</sup> and lamps<sup>114</sup>. They include in particular **requirements**

- (1) for the **availability of spare parts**,
- (2) for **maximum delivery times of spare parts**,
- (3) for the **interchangeability of certain components** (“reparability in the narrower sense”) and
- (4) for **access to repair and maintenance information**.

Thus, for example, washing machine manufacturers<sup>115</sup> must at least be able to provide “professional repairers” with certain spare parts (motors, pumps, washing drums, software, etc.), within 15 working days of receiving an order, for a minimum period of ten years after the last unit of the model has been placed on the market. The obligation of manufacturers to ensure that these spare parts can be replaced using commonly available tools and without permanent damage to the appliance is a direct requirement of the product design itself and thus an ecodesign requirement for reparability in the narrower sense. In addition, operating manuals aimed at consumers (“users”) must also contain information on maintenance work that they can carry out themselves and on accessing professional repair (websites, addresses, contact details).

### 3.1.2.4 Future Ecodesign Requirements: Mobile Phones, Computers Etc.

The EU Commission also wants to lay down eco-design requirements for mobile phones, tablets, computers and computer servers as part of its sustainable product policy initiative. Thus, the planned ecodesign implementing measure on computers and computer servers aims to update the energy efficiency requirements for these products, increase the reparability of computers and improve the lifetime of computers and batteries.<sup>116</sup> The planned ecodesign implementing measure on mobile phones and tablets aims to address issues such as the limited availability of the most commonly damaged

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<sup>109</sup> Commission Regulation (EU) 2019/424 of 15 March 2019 laying down ecodesign requirements for servers and data storage products pursuant to Directive 2009/125/EC.

<sup>110</sup> Commission Regulation (EU) 2019/2023 of 1 October 2019 laying down ecodesign requirements for household washing machines and household washer-dryers pursuant to Directive 2009/125/EC.

<sup>111</sup> Commission Regulation (EU) 2019/2022 of 1 October 2019 laying down ecodesign requirements for household dishwashers pursuant to Directive 2009/125/EC.

<sup>112</sup> Commission Regulation (EU) 2019/2019 of 01 October 2019 laying down ecodesign requirements for refrigerating appliances pursuant to Directive 2009/125/EC.

<sup>113</sup> Commission Regulation (EU) 2019/2021 of 1 October 2019 laying down ecodesign requirements for electronic displays pursuant to Directive 2009/125/EC.

<sup>114</sup> Commission Regulation (EU) 2019/2020 of 1 October 2019 laying down ecodesign requirements for light sources and separate control gears pursuant to Directive 2009/125/EC.

<sup>115</sup> Commission Regulation (EU) 2019/2023 of 1 October 2019 laying down ecodesign requirements for household washing machines and household washer-dryers pursuant to Directive 2009/125/EC, Annex II: Ecodesign requirements, 8. Resource efficiency requirements.

<sup>116</sup> EU Commission (2018), Inception Impact Assessment Ares(2018)770780 of 9 February 2018, Ecodesign and energy labelling requirements for computers.

spare parts and up-to-date software, the cost and ease of repair, and the decreasing battery life over time.<sup>117</sup>

## 3.2 Environmental Assessment

The answer to the question of whether better reparability is desirable from an environmental perspective is likely to differ for different products or product groups. A blanket assessment is not possible. Nevertheless, the following section provides a general assessment of the advantages and disadvantages of environmental policy measures aimed at defining the details of a right to repair, in the various phases of a circular economy, from an ecological and economic perspective.

### Reparability in the Context of the Circular Economy

The EU's long-term goal is a circular economy that will contribute to decoupling economic growth from resource use and to achieving climate neutrality in the coming years. Implementing a circular economy means that resources will be conserved and materials kept in the economic cycle for as long as possible. Where possible, waste should be avoided or recycled to a high standard.<sup>118</sup> The so-called circular design of products, which also includes increased reparability, in principle allows for products to be used for longer. If longer use also reduces the demand for products, this will lower material use and thus resource consumption. Furthermore, it will reduce greenhouse gas emissions. For example, if a television is used for ten years instead of five, about 600 kilograms of greenhouse gases can be saved.<sup>119</sup> A circular economy can also reduce the emission of pollutants that arise during production and are carried into the soil, air and water.<sup>120</sup>

### Product Design

Product design is one of the most important starting points when it comes to increasing the reparability of products. If, instead of being glued or soldered, components are screwed together, either the product manufacturer or retailer, or even consumers themselves, will be able to carry out repairs more easily (“repair-friendly design”). This reduces both the cost and effort of getting a repair, making it an economically advantageous alternative to making a new purchase.

The immediate consequences of requiring repair-friendly design differ depending on the product. In some circumstances, products may have to be redesigned so that they retain certain properties or functions despite increased reparability – for example, that a mobile phone is still waterproof. Better reparability may also mean that more material has to be used.<sup>121</sup> Under EU waste legislation, however, waste avoidance should take priority.<sup>122</sup> This runs counter to the goal of the circular economy to use fewer resources. The Commission should examine the advantages and disadvantages of repair-friendly

<sup>117</sup> EU Commission (2020), Inception Impact Assessment Ares(2020)7893117 of 23 December 2020, Environmental impact of mobile phones and tablets.

<sup>118</sup> EU Circular Economy Action Plan (2020); see Schwind, S. / Reichert, G. (2020), Action Plan for the Circular Economy [cepPolicyBrief 5/2020](#).

<sup>119</sup> Umweltbundesamt (2016), Einfluss der Nutzungsdauer von Produkten auf ihre Umweltwirkung: Schaffung einer Informationsgrundlage und Entwicklung von Strategien gegen “Obsoleszenz”, Texte 11/2016.

<sup>120</sup> Schwind, S. / Reichert, G. (2021), Zero Pollution Action Plan, [cepPolicyBrief 20/2021](#).

<sup>121</sup> Prendeville, S. M. / O'Connor, F. / Bocken, N. M. / Bakker, C. (2017), Uncovering ecodesign dilemmas: A path to business model innovation. *Journal of cleaner production* 143, p. 6.

<sup>122</sup> Waste Framework Directive 2008/98/EC, Art. 4.



design as part of a “life cycle analysis” of the respective product groups. This will allow the environmental impact of products to be evaluated, thereby indicating which options are more beneficial from an environmental point of view, so that no “environmental trade-offs” arise.

The requirements of the Ecodesign Directive apply to all products traded in the EU, regardless of where they are produced. Since this also applies to imports, there is a level playing field within the EU single market. As exports are not covered by the ecodesign requirements, there is initially no direct disadvantage for the competitiveness of European exports. However, companies do have an increased administrative burden, especially in the form of documentation and reporting obligations. Furthermore, market segmentation occurs when, in general, different products have to be designed for the EU internal market compared to other markets. There is a risk here that, in the long term, the quality of Europe as a business location may suffer.

Better reparability may extend service life and thus reduce the need for new products. However, this is only the case if consumers actually make use of their right to get repairs. Although a “right to repair” may encourage longer use of products, this will not necessarily be the result. Consumers with functional devices may nevertheless prefer a new product due to technical innovations. In such cases, easier reparability will not prevent a new purchase. Apart from product design, various factors influence a product’s lifetime, including consumer use, product maintenance, technical progress, and also trends. In this regard, manufacturers aim for a technical lifespan that corresponds to the duration of the likely benefit. Accordingly, products are designed to last “as long as necessary, not as long as possible”.<sup>123</sup> Thus, product design is only one element in extending a product’s lifespan, which is also influenced by consumer behaviour.

### Use Phase

General statements as to whether making a new purchase is ecologically preferable to the continued use of a still functioning but energy-inefficient product, are virtually impossible and depend, in principle, on the product in question. Relevant factors include the increase in energy efficiency between the old and new product, the manufacture of the new product and the actual use by the consumer.<sup>124</sup> Thus, longer use of washing machines is usually more advantageous from an environmental point of view. Even if technological progress and associated energy efficiency improvements are taken into account, the energy expenditure and associated greenhouse gas emissions of a five-year-old washing machine are around 40% higher than those of a 20-year-old appliance.<sup>125</sup> From an environmental perspective, only with “significantly higher” efficiency gains would it be worth switching to a newer model.<sup>126</sup> In the case of refrigerators and freezers, however, a new purchase may be worthwhile after just five years. The energy consumption incurred during production is amortised – depending on the energy efficiency of the old appliance – after only 0.7 to 2.5 years but only where it is offset against a new product with the highest energy efficiency level. Future energy efficiency improvements, however, are expected to be less pronounced, in which case, the optimal utilisation phase from an environmental point of view will also be longer.<sup>127</sup>

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<sup>123</sup> Öko-Institut (2016), Fragen und Antworten zu Obsoleszenz, p. 3.

<sup>124</sup> Öko-Institut (2016), Fragen und Antworten zu Obsoleszenz, p. 12.

<sup>125</sup> Umweltbundesamt (2016), [Elektrogeräte werden immer kürzer genutzt](#).

<sup>126</sup> European Commission (2018), Durability assessment of products: analysis and testing of washing machines, Joint Research Centre, Publications Office, p. 18.

<sup>127</sup> Öko-Institut (2016), Fragen und Antworten zu Obsoleszenz, p. 12.

However, better reparability and the resulting longer use of products could also inhibit companies' willingness to innovate and thus slow down technological progress. Not only the willingness of companies to innovate, but also the speed with which innovations spread on the market may be slowed down by a longer product life.

Companies have the opportunity to strengthen customer loyalty through more durable products and improve brand image through high quality and ease of repair. Thus, companies can strengthen so-called lock-in effects. This means that repairs would only be possible at the company concerned and, if necessary, at authorised workshops, which would tie customers to the company. However, the development of a repair infrastructure is associated with costs. Spare parts sometimes have to be stored for long periods of time, and transport costs are incurred if the products to be repaired cannot be repaired on site but have to be taken to special workshops. In addition, staff have to be trained to repair not only new but also older products. Thus, there may also be an incentive for companies to design their products in such a way that they can be repaired by independent workshops. This could create a market for repairs in which case there would be no need for companies to create their own additional repair infrastructure.

If products become more durable and the product design therefore has to be changed, for example, or companies have to establish a repair infrastructure, products may become more expensive. Although almost 80% of EU citizens would like to have digital end devices that are easier to repair and, for example, in which the battery can be replaced more easily, only a third of them are willing to pay more for the increased reparability.<sup>128</sup>

### **Waste Phase**

Another positive effect of repair-friendly design extends beyond the service life: the products are also easier to recycle. Waste electrical and electronic equipment contains various metals, such as aluminium and copper, critical raw materials and rare Earth elements.<sup>129</sup> Better reparability makes it easier to separate components and thus simplify material recovery. This supports the goal of a circular economy and ensures that materials can be reused for as long as possible.

However, if products are repaired more often or companies can also fulfil the obligation to provide replacements using refurbished products (Option 6)<sup>130</sup>, they will no longer be available for recycling. This could initially impede the intended circular economy, in which high-quality recycling plays an important role. However, the EU waste hierarchy stipulates that waste should first be (1) primarily avoided, then (2) prepared for reuse, and only then (3) recycled or (4) recovered in some other way, before finally being (5) disposed of.<sup>131</sup> Consequently, before products are recycled as waste, they should first be reused through repair.

However, as a result of repair-friendly design, repairs may also be carried out by consumers themselves. In such cases, proper disposal may not always take place if consumers dispose of electrical waste in their household rubbish.

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<sup>128</sup> Eurobarometer (2020), [Attitudes towards the Impact of Digitalisation on Daily Lives](#).

<sup>129</sup> European Environment Agency (2019), [Reducing loss of resources from waste management is key to strengthening the circular economy in Europe](#).

<sup>130</sup> See above Section 2.2.6.

### 3.3 Conclusion

The answer to the question of whether better reparability is desirable from an environmental perspective varies depending on the product or product group. Better reparability can reduce material use in the long term and break the pattern of the “linear pattern of take-make-use-dispose” by way of longer life cycles. For this to happen, however, the demand for new products would actually have to fall. In addition, the environmental advantage of the longer use of a device depends on the respective product group. Thus, in certain circumstances, it may be environmentally more advantageous to replace an old product with a new, energy-efficient one. The Commission should examine which options are more advantageous from an environmental point of view, by way of a “life cycle analysis” of the respective product groups. This will ensure that “ecological trade-offs” – such as a negative environmental impact where repair-friendly design gives rise to greater use of material – are avoided. “Reparability” is a very vague term and establishing precise specifications for the relevant product groups is very complex. With this approach, it is not possible to define all the potential consequences for companies and there may therefore be unintended negative consequences. The right to repair is only one element in the realisation of a circular economy and should be supported by further – including market-based – incentives. Pricing primary raw materials can also reduce resource consumption. Pricing means that currently still costly high-quality recyclates, for example, will become an economically feasible alternative. This will also make it more attractive for companies to design their products in a more circular way – for example, by way of a more recyclable product design, repair-friendly design or also through the use of fewer materials.

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