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IMPACT ASSESSMENT REPORT

Accompanying the document

Proposal for a Directive of the European Parliament and of the Council

on common rules promoting the repair of goods and amending Regulation (EU) 2017/2394,
Directives (EU) 2019/771 and (EU) 2020/1828

{COM(2023) 155 final} - {SEC(2023) 137 final} - {SWD(2023) 60 final}

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1. Introduction: Political and legal context

Political context

The European Green Deal[1] is one of the Commission main priorities and its contribution to the UN 2030 Agenda for Sustainable Development[2]. It aims to transform the EU into a climate-neutral, resource-efficient, clean and circular economy. One key element of a circular economy is improving the sustainable consumption of goods, thus reducing waste as well as avoiding the use of unnecessary resources and the production of CO2 emissions. Extending the lifespan of products can also decrease the dependency on global supply chains for crucial raw materials as well as foster European resilience and strategic autonomy.

Promoting repair is vital to achieve more sustainable consumption and consumers have an essential role in accomplishing this objective. Increasing repair of consumer products instead of replacing them figures prominently in Commission policy. The Green Deal already envisaged to encourage businesses to offer, and to allow consumers to choose reusable, durable and repairable products, as well as to analyse the need for a 'right to repair'. Looking at the sustainable consumption of consumer goods, the New Circular Economy Action Plan (CEAP) and the New Consumer Agenda[3] announced that the Commission will promote repair and work towards a new 'right to repair'. Both policy documents indicated as a possible legislative tool changes to the Sale of Goods Directive (SGD), confirming the focus on consumer goods. Such focus complements horizontal initiatives to promote sustainable consumption in general, like the Ecodesign for Sustainable Products Regulation (ESPR) proposal.

To deliver on the European Green Deal, the Letter of Intent of President von der Leyen announced a legislative proposal[4], which is included in the Commission Work Programmes for 2022[5] and 2023.[6] The aim of promoting more sustainable consumption by consumers is supported also in four resolutions of the European Parliament (EP)[7] and in conclusions of the Council[8].

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[1] COM(2019)640 final, 11.12.2019.

[2] Transforming our world: the 2030 Agenda for Sustainable Development.

[3] COM(2020) 696 final Strengthening consumer resilience for sustainable recovery, 13.11.2020, pp. 7-8.

[4] State of the Union 2021 by President von der Leyen, Letter of Intent of 15.9.2021, p. 4.

[5] COM(2021) 645 final, 19.10.2021, p. 3. It was also included in the Joint Declaration of the EU institutions' 2022 Legislative Priorities, p. 2.

[6] COM(2022) 548 final, 18.10.2022, p. 6.

[7] EP Resolutions of 4.7.2017 on a longer lifetime for products: benefits for consumers and companies, 4.7.2017 (2016/2272(INI)), 25.11.2020: Towards a more sustainable single market for business and consumers, 2020/2021(INI), 10.2.2021 on the New Circular Economy Action Plan, 2020/2077(INI) and 7.4.2022 on the right to repair (2022/2515(RSP)).

[8] Making the Recovery Circular and Green of 11.12.2020.

Related policy initiatives and legal context

***Production Phase**: Ecodesign Directive and ESPR*

On the **supply side**, tackling the production phase, the **Ecodesign Directive** sets the framework for product reparability, in particular as regards product design requirements and availability of spare parts. It has led so far to the adoption of ecodesign requirements for 31 individual energy-related product groups of which 8 are currently covered by reparability requirements (such as TVs and electronic displays, washing machines, dishwashers, refrigerators). The **ESPR** will replace the Ecodesign Directive. It extends its product scope enabling the setting of minimum performance and information requirements to be set for almost all categories of physical goods. Specific requirements on elements such as product durability, reusability, upgradability and reparability will be introduced in delegated acts. While the ecodesign framework requires producers to make spare parts available, the Commission proposal for a Design Directive (recast)[9] will allow the reproduction of spare parts of complex products for the purpose of repair, contributing to opening up the spare parts aftermarket for competition.

***Point of sale**: Consumer Rights Directive (CRD) and Empowering Consumers in the Green Transition initiative (ECGT)*

On the **demand side**, the **CRD** sets information requirements at the point of sale. The **ECGT**, adopted on the same day as the ESPR, amends the CRD, providing pre-contractual information requirements on the existence and length of a producer's commercial guarantee of durability, on the availability of free software updates for goods with digital elements and on the reparability of products. Furthermore, the ECGT addresses greenwashing and early obsolescence practices. Thus, it enables consumers to take informed purchase decisions and thereby contribute to more sustainable consumption.

***After-sales/use phase**: Sale of Goods Directive (SGD)*

In the event that a product becomes defective in the after-sales phase, the **SGD** provides consumers with remedies against sellers. Consumers have remedies for those defects that exist at the time when the goods were delivered and which become apparent within two years[10]. Other defects which are e.g. due to wear and tear or consumer's mishandling of the product, or which appear after the liability period, fall outside the SGD scope and do not enable consumers to request remedies.

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[9] Proposal for a Directive on the legal protection of designs (recast), 28.11.22, COM(2022) 667 final.

[10] MS are free to introduce longer liability or limitation periods for the exercise of consumers' remedies.

The SGD foresees a two-stage approach: Firstly, the SGD gives consumers the right to choose between repair and replacement. This choice is however restricted: The consumer cannot request a specific remedy, if it is impossible or disproportionately costly compared to the other remedy.[11] In addition, the seller may refuse repair and replacement if they are impossible or would impose disproportionate costs on the seller. In this and other cases, the consumer can move to the second stage of remedies: price reduction and contract termination.[12]

As regards second-hand goods, the SGD allows Member States (MS) to provide that the seller and consumer can agree on a shorter liability (or limitation) period of at least one year. This means that the rules for new goods also apply to second-hand goods, while in those MS that allow it, a shorter period for second-hand goods can be agreed by sellers and consumers.

Conclusions for the scope of this initiative

The SGD precursor, the 1999 Consumer Sales and Guarantees Directive (CSD), sought mainly to increase consumer protection by achieving a high level of consumer remedies in case of the purchase of defective goods. Therefore, the CSD granted the consumer the choice between repair and replacement. The SGD maintained this choice and gave at the same time more emphasis to the internal market objective by achieving full harmonisation, i.e. a single set of rules that businesses could use for selling goods in the internal market.

Sustainability was not the main political concern when the CSD and the SGD were discussed and adopted. This has changed, however. The Commission, supported by the EU institutions, is now pursuing the Green Deal objective of sustainable consumption. The Commission is following this objective **in a holistic manner**, by tackling different aspects on both the supply and demand side in various initiatives. A 'right to repair' will be the result of the combined effect of these measures.

The combined effect of the ESPR and the ECGT will improve products' sustainability and promote sustainable purchases. However, a gap remains in the after-sales phase when consumers facing defects discard their products prematurely, because they are not provided with incentives to repair or repair is not convenient for them. Here this initiative adds a necessary third dimension to the package of Commission proposals. It will promote the use of repair as a remedy within the legal guarantee scope and provide new tools promoting repair

[11] Example: A consumer has bought a refrigerator (price EUR 400) and after 6 months the door handle breaks (repair costs EUR 50). The consumer cannot request the seller to replace the whole refrigerator, as the costs of the refrigerator replacement would be disproportionately higher than the repair of the door handle.

[12] Example: The cooling system of the refrigerator breaks down after 6 months. The seller cannot replace the refrigerator due to a production stop. Repairing the cooling system would cost EUR 800. As replacement is impossible and repair causes absolute disproportionate costs, the seller can refuse both remedies. The consumer can e.g. request the termination of the contract with reimbursement of the price.

outside the legal guarantee, thereby taking advantage of improved reparability of products through ecodesign requirements. All these initiatives provide synergies to each other and together form a comprehensive approach towards the common overall objective of more sustainable consumption.

The demand side for products includes consumers and business. This initiative has a clear political mandate (derived from the CEAP and the New Consumer Agenda) to focus on business-to-consumer (B2C) relations and the sustainable consumption of **consumer goods** by encouraging consumers to make sustainable choices.

The consumer demand for the use of products is influenced, in addition to economic considerations, by specific-drivers (see section on problem drivers further down). Companies' demand for products and the duration of their use, on the other hand, is likely to be driven by economic considerations which depend on the sector, the business model, production needs, type of market situation, taxation and accounting rules and are therefore very diverse and multi-layered.

Furthermore, B2B contract law rules, especially in cross-border contracts, are largely characterised by freedom of contract which translates into the freedom to choose the applicable law and the use by national laws of dispositive rules from which contractual parties can deviate. Consumer contract law is however characterised by a determined choice of the applicable law through EU law and by national mandatory rules, which aim to redress the imbalance of a contractual relationship in which consumers are the party in a structural imbalance compared to businesses. Differences between such existing or future national mandatory rules in the B2C area can constitute actual or potential obstacles to the functioning of the internal market (see Section 3 on the legal base). It was not possible to ascertain the existence of or differences between national B2B contract law rules constituting such obstacles.

While by consequence B2B relations have been excluded from the scope of this initiative, they are however tackled to a certain extent by other recent Commission initiatives. The ESPR first and foremost will improve sustainability of all products, irrespective by whom they would be purchased or used. The Corporate Sustainability Due Diligence proposal[13], adopted by the Commission shortly before the ESPR and the ECGT, will help companies to better manage sustainability-related matters in their own operations and value chains as regards among others climate change and the environment. The proposal takes a broad approach and covers inter alia adverse environmental impacts that occur in companies' own operations, subsidiaries, products and in their value chains, in particular at the level of raw material sourcing, manufacturing or product use, dismantling, disposal or recycling. The proposal requires companies to prevent or mitigate among others such adverse environmental

[13] Proposal for a Directive on Corporate Sustainability Due Diligence, 23.2.2022, COM(2022) 71 final.

impacts in their established business relationships. Covering the use and end-of-life phases, albeit not including specific requirements on this, can incentivise reuse and reparation of products in the B2B context.

EU consumer law is the appropriate tool to address sustainable consumption aspects in the after-sales phase of consumer use, as the question whether a defective and reparable product is repaired or not depends to a great extent on consumers' behaviour and decision-making. This is valid both for defects covered by the legal guarantee, where the remedies to repair or replace are granted at the choice of the consumer, and for defects falling outside the legal guarantee, where consumers do not have rights against the seller and are left with the decision whether to bear the costs for having a product repaired or for buying a new product. While the reparability of a product is regulated by the ESPR, the decision to carry out repair still lays in the consumer's hands. Regulatory tools used in consumer contract law, like pre-contractual information, and improved ways to pass such information to the consumer are needed to encourage more sustainable consumer decisions.

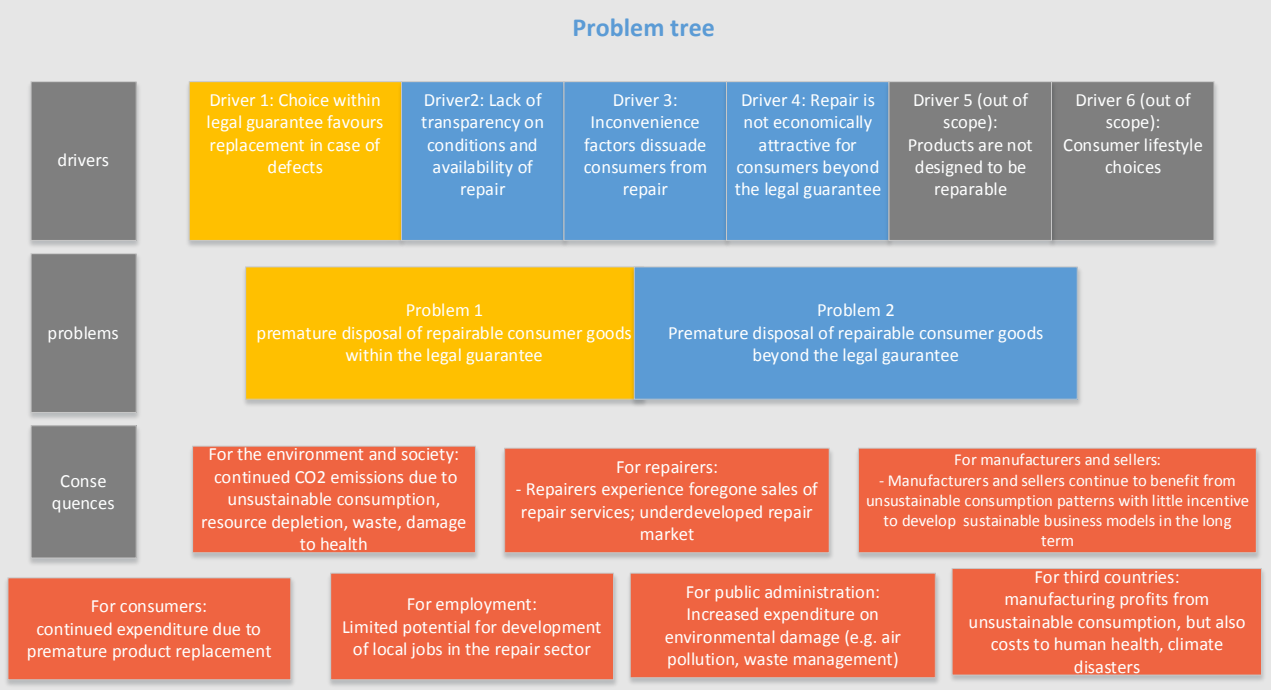
2. Problem definition

If products become defective, consumers often do not seek to repair them, but discard them prematurely even though they could be repaired and used much longer. Premature disposal of repairable consumer goods in the after-sales context happens:

(1) where consumers have the right of free repair under the SGD but rather choose replacement with a new product and

(2) where the legal guarantee does not apply/expired and consumers face sub-optimal repair choices so they rather buy a new product.

Figure 1: Problem tree



Problem 1: Premature disposal of repairable consumer goods within the legal guarantee

The first time consumers may need to repair a purchased product is when a defect appears during the liability period (in most MS during the first two years after delivery). In practice, the majority of consumers – on average 64%[14] – currently chooses replacement, when the purchased goods are defective and they exercise their remedies given by the SGD. By the same token, sellers are incentivised to offer replacement because of the consumer demand for it and because they want to provide a satisfactory solution and keep them as customers. The main reasons for businesses to offer replacement are thus consumer demand and lower costs, if replacement is cheaper than repair.[15]

If these reasons are not prevalent, e.g. when the consumer does not expressly ask for a replacement, but simply presents the seller with a defective product, sellers usually offer

[14] IA Study, Section 3.3. Number of consumers choosing replacement varies among product groups, e.g. 78% (shoes and clothes), 68% (smartphones), 60% (refrigerators), 56% (wooden furniture) and 45% (cars), Table 3-3. On average, only 32% request repair, whereas an average of 4% replied 'I don't know'.

[15] IA Study, Annex 1.3, Business Survey, Section 4, p. 95: Consumer demand (53%) followed by lower costs (37%).

repair instead of replacement.[16] However, despite the seller's preference for repair, the consumer's choice for replacement generally prevails.

As a consequence of the consumers' choice of replacement, defective products are returned and often discarded. This undesirable result originates in the free choice between repair and replacement in the context of the legal guarantee.

Problem 2: Premature disposal of repairable consumer goods beyond the legal guarantee

Beyond the legal guarantee the costs and difficulties in arranging repair fully shift to consumers. Attempting repair in the first place mainly depends on consumer decisions. As the majority of defects occurs beyond the legal guarantee, a larger share of the overall repair opportunities depends on consumer choices.[17]

In practice, a large number of consumers tends to replace defective goods with new ones,[18] even though these products could potentially be used twice as long.[19] Of the consumers who actually repair their products, the majority does so reluctantly. Repair beyond the legal guarantee happens only if there is consumer willingness to repair and to pay the price and if the consumer can overcome difficulties in the repair process. In practice, some effort and inconvenience accompanies nearly every repair situation. Repair requires finding a competent repair shop, bringing the product to the repair shop or arranging a visit at home, and waiting for the product to be repaired, which is particularly inconvenient for goods needed on a daily basis. There is also uncertainty about the final price and a concern about paying more than expected if the defect proves more complex and costly upon inspection, as well as concerns that the defect may reappear. Thus, even where repair is technically feasible and economically affordable, it will only materialise if consumers decide and take action to repair in a specific case.

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[16] E.g. 74% of retailers selling refrigerators and phones and 67% selling shoes proposed repair, IA Study, Section 4.2.3, Figure 5.15. Regarding e.g. phones, sellers offered repair on average 7 times more often than replacement, IA Study, Section 4.2.1, Figure 5.7.

[17] IA Study, Section 5.3.2: an analysis of the consumer survey data on defects suggests that the majority of defects consumers experienced within a year fall beyond the legal guarantee; Annex 3.4. For instance, for smartphone and mobile phones 5.50% of consumers experienced a defect within a year, of which 1.90% were covered by the legal guarantee; This ratio was respectively for TVs 4.41%/2%; for refrigerators 4.41%/1.60%; for laptops 6.26%/1.60%; for jackets 6.67/2.40%; for shoes 4.92%/2; for cars 10.36%/1/90%; for furniture 2.46%/0.90%.

[18] IA Study, Section 3.2.3.

[19] IA Study, Section 3.1, Table 3-1: For a sample of 8 popular consumer goods there is a discrepancy between the average consumption lifetime in practice and the absolute lifetime of products as designed: e.g. for phones it is 1.7 years, while the absolute one is 7; for TVs this ratio is 7/22 years, refrigerators 10/20 years, laptops 4/7 years, jackets 1/4 years, shoes 3/5 years, cars 11.5/18 years; wooden furniture 10/22 years.

Consumers are willing to invest different amounts of effort and money in repair. Four consumer segments[20] can be identified based on consumer willingness to repair: 1) Enthusiastic repairers, who had a product repaired and show a high level of affinity to repair (13.4%); 2) Reluctant repairers, who had a product repaired, but show low affinity to repair (37.8%); 3) Reluctant replacers (9.2%), who had a defective product replaced, but show a high level of affinity to repair; 4) Enthusiastic replacers (39.5%), who had a defective product replaced and show a low affinity to repair.[21] These segments help to specify the nature and scale of the problem.

While the problem concerns all consumers, it affects particularly the three consumer segments that consider repair as an option: reluctant replacers, reluctant repairers and enthusiastic repairers. The segment of 'reluctant replacers' represents most clearly the market failure, because these consumers not only considered repair, but tried it, were prevented from doing so and ended up replacing goods, despite their preference. The problem is however broader and includes the obstacles and frictions that make repair difficult and unattractive for many others. Drivers 2, 3 and 4 are the reasons why the majority of consumers who repair do so reluctantly. Such obstacles are particularly likely to dissuade the large segment of 'reluctant repairers'. 'Reluctant repairers' comprise consumers who repaired at least once in the past year, but may not be willing to put up with much hassle or inconvenience to repair on other occasions. For instance, they may have repaired a fridge or a laptop, but not shoes or lower value items like kettles, because for some goods repair is not worth the hassle for those who are reluctant to repair in general. Even 'enthusiastic repairers' may be dissuaded, for instance where the price of repair is too high or the repair causes excessive effort or inconvenience.[22]

Some consumers (the segment of 'enthusiastic replacers') do not repair for other reasons, notably due to their personal lifestyle choices (driver 6). The problem analysis focuses on the market failure and obstacles that make repair an unattractive option rather than on lifestyle choices.

Limited use of refurbished goods within and beyond the legal guarantee

An aspect relevant to both problems is the limited reuse of products. If products, which are currently discarded prematurely, would be refurbished, they could be reused for years, for instance by less affluent consumers who cannot afford more expensive or innovative products, instead of ending up in waste early on. Reuse by refurbishment is a way, along with repair, to prolong the consumption lifetime of goods, but currently its potential is not

[20] IA Study, Annex 1.4.

[21] IA Study, Annex 1.4.

[22] 'Behavioural Study on Consumers' Engagement in the Circular Economy', 2018, p. 10 et seq., 60 et seq., 70 et seq., https://ec.europa.eu/info/sites/default/files/ec_circular_economy_final_report_0.pdf.

sufficiently exploited. The refurbishment of defective goods can be beneficial for the waste reduction both in the context of the legal guarantee, where returned or defective products are relatively new, as well as beyond the legal guarantee, because they are usually discarded years before reaching their absolute lifetime.

Most EU consumers are unlikely to buy second hand or refurbished goods.[23] Many more businesses discard defective products right away compared to those businesses that refurbish and resell them.[24] The extent to which defective products are discarded depends on the product groups.[25] From a consumer perspective, the main reason for buying second-hand and refurbished products is their price.[26] The reasons for not buying them include quality concerns about refurbished products in general, or about reduced functionalities of such products. Furthermore, lifestyle choices, driven by a preference for new and fashionable goods.[27] Quality concerns are affected by the length and scope of the liability period for refurbished goods.[28] From a business perspective, the limited consumer demand and limited access to refurbished goods are reasons that hold back sales of refurbished products.

SGD insufficient to tackle premature disposal

The current SGD is insufficient to tackle both problems leading to premature disposal of defective consumer goods. Because of its design focussing on consumer protection, the SGD offers the choice between repair and replacement in the event of a lack of conformity and most consumers choose replacement. Because of its scope limitation to non-conformity of products sold with the contract of sale, the majority of defects (notably defects that are due to wear and tear, mishandling by the consumer or appear after the lapse of the liability period) fall outside the SGD scope and the remedies given to the consumer. As a result, there is a large number of defective products that could be repaired but are instead discarded and replaced by new products.

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[23] Almost 70% hardly ever consider buying products that are second-hand/refurbished, IA Study, Section 3.2.3. with reference to further research. For most product categories (with the exception of clothes) around 85% or more have not bought a second-hand/ refurbished product recently.

[24] IA Study, Annex 1.3, Business Survey, Section 4, pp. 97-98. 58% of producers and 40% of retailers discard while only 33% of producers and 40% of retailers refurbish and resell.

[25] E.g. electronic goods and cars are refurbished more than clothing, shoes and furniture. IA Study, Sections 4.5 and 3.3.

[26] IA Study, Section 4.4: price ranks first followed by a better price/quality ratio.

[27] At least 3 in 4 refrain from using refurbished goods due to negative perceptions about quality or hygiene. IA Study, Annex 1.4, Consumer Survey, Section 5, QE1. Between 75% concerning clothing and 90% as regards refrigerators had not purchased a product that had been refurbished/used before in the past year.

[28] Not being protected/having limited protection through a legal or commercial guarantee is a reason for between 7% and 14% depending on the product not to purchase a used product). IA Study, Annex 1.4, Consumer survey, Section 5, p. 142, QE4.

The scale of the problem

The problem of premature disposal of repairable consumer goods is present across the EU.[29] It applies to a wide range of consumer goods.[30] Considering only consumers who made an attempt to repair, but failed ('reluctant replacers'), the scale of the market failure already amounts to EUR 5.1 billion per year[31], which translates into a market failure of minimum EUR 62 billion over 15 years. This is a conservative estimate. It does not reflect the consumer detriment that 'reluctant repairers' and even 'enthusiastic repairers' may experience when they repair, but do not get their preferred choice in the market, because they could not find a repair service that suits their needs due to market obstacles and frictions. It does not reflect either forgone repair in cases where consumers did not even consider or attempt it for a specific product because of the same obstacles and frictions in the market,[32] nor the forgone consumer savings from limited use of refurbished goods. The overall scale of the problem could therefore be considerably higher.[33]

These figures do not reflect the costs of other negative consequences of the problem, notably for the environment (see "consequences of the problem"). When consumers do not repair their goods, they limit the time during which a product could potentially be used and dispose of a significant number of products that could still be functional for years.[34] The scale of the problem also varies among MS, as in some MS consumers are more open to repair than in

[29] IA Study, Section 3.3, Table 3-4.

[30] IA Study, Section 5.1 (with cars and high-quality wooden furniture as the exceptions which confirm the rule).

[31] The estimate is based on the value of repairable consumer durables of EUR 792 billion at consumer prices in a year, discounted by the average % of defects beyond the legal guarantee which consumers have to repair at their own cost. This estimate is based on a narrow definition of the market failure excluding cars (as an "outlier", i.e. the product consumers are most likely to repair instead of replace in case of defects (52%), cars are excluded from the analysis to avoid overestimates.) and only considers failed repair attempts within a year by the consumer segment of reluctant replacers (9.2% of consumers).

[32] The scale of the problem as regards the detriment for 'reluctant repairers' cannot be estimated in a robust manner, because data on their preferred repair choice is not available. Likewise, data is not available on the number of occasions an average EU consumer did not repair a product due to obstacles and frictions in the market.

[33] The estimate is the low bound of the market failure. A more realistic assumption for the consumer products covered (without cars) could be several times higher. Assuming that the market failure is indeed several times higher, i.e. within the range of EUR 5-25 billion per year, the net present value for a period of 15 years would be between EUR 62 billion and 307 billion.

[34] PROMPT, Product Lifestyle & Product Replacement reasons, Online Survey, https://prompt-project.eu/wp-content/uploads/2021/07/2021_PROMPT-lifecycle-and-replacement-reasons-report.pdf: Washing machines 26.3% (p. 67), smartphones 63,4% (p. 76), TVs 64,2% (p. 83), vacuum cleaners 36,5 (p. 90).

others.[35] This means in particular that consumers in one MS may be less likely to repair a given product, such as their smartphone, compared to consumers in another MS.[36]

Product coverage: Both problems are relevant for consumer goods in general, except for products irreparable by nature.[37] The problems concern all product groups, but the problem scale is likely to be bigger for product groups that consumers are less willing to repair. Such goods are discarded without even attempting repair, even though repair is feasible in most cases. Not to attempt repair is particularly likely for products with a relatively low cost, modularity and consumption life-time. In general, consumers are less inclined to repair lower value items that are easily replaced[38] than higher value goods. Less modular products are less suitable for repair, as defective parts cannot be easily replaced. [39] Consumer likelihood to repair products with a short consumption life-time is low, while for others, such as furniture, it is relatively high.

Consumers are less interested in repairing non-energy related/ non-electr(on)ic products[40]. For instance, there is a relatively low likelihood to repair clothes (16%) and shoes (18%). Despite a comparably higher consumer interest in repair of electr(on)ic products for various reasons[41], many consumers still did not repair their electronic goods due to obstacles in the repair process.[42] Only up to one in four consumers consider it more likely to repair electronic goods more in the future if the repair market remains the same.[43]

Consequences of the problems

The current consumption pattern marked by frequent replacements generates negative economic consequences. First, consumers spend money on replacing products they could potentially use for years. Thus, consumers lose savings they could spend to acquire goods and services, which they do not have. Repair businesses miss out on potential demand, which

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[35] IA Study, Section 3.3, Table 3-4: E.g. across three selected product categories (mobile/smartphone, refrigerator, car) the share of consumers who would always or probably have a product repaired is lower in Italy, Spain and Greece than in Hungary, the Netherlands and France.

[36] This may be due to different conditions in the respective repair markets or consumption trends.

[37] Food, non-alcoholic beverages, water, gas and other fuels, routine household maintenance products, medical products, personal care products, print media products were excluded from the analysis to avoid overestimates.

[38] E.g. kettles, hand mixers and toasters (IA Study, Section 3.3). If consumers decide against repair, 84% of broken electronic and electrical devices are disposed of (Wertgarantie, 2021).

[39] Electronic products that are in principle characterised by higher modularity are therefore more popular repair items for consumers. Repair Monitor, Analysis results 2019, p. 14.

[40] They may include products that have long or short consumption lifetime (furniture vs shoes); relatively higher or lower modularity (e.g. bicycles, knives, scissors, clocks, necklaces) and varying value.

[41] Repair Monitor, Analysis results 2019, pp. 14-15.

[42] IA Study, Annex 1.4, Consumer Survey, Section 3: Experience with defects and product repair, QC6.

[43] IA Study, Annex 1.4, Consumer Survey, QB6, Perception of the repair market with respect to smartphones, TVs, refrigerators and laptops.

holds back the development of the repair market and local jobs. This in turn prevents some consumers from finding the repair service they need. The manufacturing and trade sectors meet the constant demand for new replacement goods by increased production and supply. While manufacturers both in the EU and worldwide, as well as EU importers and sellers, currently profit from this demand, they invest in business models which are unsustainable in the long-term. The manufacturing of billions of new goods to replace repairable goods puts also a massive strain on the environment. The global population of 8 billion is projected to grow to 9 billion by 2030, including 3 billion new middle-class consumer, increasing demand for some raw materials by factor 20 by 2030.[44] This strain on natural resources is unsustainable long-term, unless more sustainable production and consumption models are adopted.

The consequences for the environment and society include unnecessary CO2 emissions for the production and shipment of new goods, and increasing volumes of waste.[45] The consumer goods lifecycle starts with raw material extraction, which can cause loss of biodiversity, contamination of groundwater and soil acidification.[46] Premature disposal of repairable consumer goods leads to the use of around 10.5 million tons per year of valuable resources in the EU.[47] This includes for instance 0.3 million tons of aluminium, an amount equal to 15.5% of aluminium produced in the EU + the UK in 2020[48], 4.8 million tons of steel and iron or 2.7% of the EU steel output[49] and 2 million tons of wood or 12.63% of the EU28 wood pellets production in 2015.[50] The manufacturing phase involves the use of fossil fuels, water, chemicals etc. and generates GHG-emissions linked to the use of fossil fuels.[51] For eight product groups assessed[52], the premature disposal of viable consumer goods leads to around 57 million tons of unnecessary CO2-eq emissions yearly,[53] Negative environmental impacts occur also in the use phase, with most significant impacts for energy using products. While for a few products with high energy consumption replacement at a certain age with a more energy-efficient model can offer potential environmental gains,[54] for other products the

[44] VERAM, Vision of Raw materials in Europe and for Europe, Part I, p.5 and 9.
[45] In the EU and in partner countries (notably in Asia) where a large part of consumer production has been shifted to in the last decades.
[46] IA Study, Section 3.5.1.
[47] IA Study, Section 3.5.5, Table 3-9.
[48] In 2020, around 2 million tons of aluminium, IA Study, Section 3.5.5.
[49] The EU output is over 177 million tons of steel a year: IA Study, Section 3.5.5
[50] IA Study, Section 3.5.5, Table 3-9.
[51] IA Study, Section 3.5.2: Textiles produce the most GHG emissions per unit of material and cause 10% of the global GHG emissions.
[52] Mobile/smartphones, televisions, refrigerators, laptops, clothing, shoes, cars and wooden furniture, IA Study, Section 2.1.
[53] IA Study, Section 3.5.5., Table 3-9.
[54] IA Study, Section 3.5.3, e.g. refrigerators.

negative environmental impacts in the production phase can hardly be compensated.[55] Finally, the premature disposal of viable consumer goods leads to the production of unnecessary waste of 7.4 million tons per year in the EU.[56] This corresponds to the municipal waste generation of around 14.5 million EU citizens. When extrapolated to the whole EU economy, these figures show that for all products premature disposal of viable consumer goods leads to the production of 261 million tons of unnecessary CO2-eq/product, the use of 30 million tons of unnecessary resources and the production of 35 million tons of unnecessary waste in the EU every year.[57]

Finally, public administration and budgets need to deal with the negative environmental consequences and costs. For instance, the costs for waste management are directly linked to the amount of discarded consumer goods in each EU MS. The overall costs including indirect impacts on human health and the climate that sometimes materialise in the long term are not quantifiable, but are likely to exceed direct costs of environmental impacts. For instance, there is a proven link between soil and water contamination (linked to resource extraction) [58] and air pollution through CO2 and damage to human health. This puts extra costs on health systems. CO2 emissions are also of global relevance for the climate and entail costs for managing climate disasters. The overall costs for the public are therefore not limited to the EU, but also affect third countries (e.g. where resources are extracted or climate disasters occur).

What are the problem drivers?

Driver 1: Choice within the legal guarantee favours replacement with new goods in case of defect

The current legal guarantee framework gives consumers a choice to have the goods repaired or replaced for free. This choice leads 65% of consumers to choose replacement as a remedy.[59] When asked about the reason for choosing replacement instead of repair, consumers explained that they prefer to have new goods instead of repaired ones. This preference may be driven by life-style choices,[60] but also because getting a new placement good is often more convenient than waiting for the purchased one to be repaired. A lack of trust in repaired products adds to this consumers' preference.[61]

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[55] IA Study, Annex 2, Section 2.4 with reference to further research. .
[56] IA Study, Section 3.5.5.
[57] IA Study, Section 3.5.5 Table 3-10.
[58] The 'Ecological potential of repair, impacts of mining', presentation by Alberto Vázquez Ruiz, CATAPA, Fixfest 2022.
[59] IA Study, Section 3.3.
[60] See driver 6 and IA Study, Annex 2, Sections 3.1.2, 3.2.2 and 3.4.2.
[61] IA Study, Section 3.2.3.

The regulatory framework allows consumers to implement this preference for new goods, which, combined with a lack of trust in repaired products, encourages the replacement with new goods instead of repair. Hence, the current provisions of the SGD are insufficient to encourage sustainable choices and rather enable the premature disposal of repairable consumer goods.

Driver 2: Lack of transparency on availability and conditions of repair

In situations outside the legal guarantee regime, a lack of transparency regarding availability and the conditions of repair can be a dissuasive factor for the decision to repair a product.[62] While under the legal guarantee consumers can turn to the seller and claim the remedies they are entitled to under EU law (including repair), in situations outside the legal guarantee, it is not obvious where and under what conditions a product can be repaired. For some products, for example dishwashers, EU sectorial rules ensure that consumers receive information on the website of the manufacturer about how to access professional repair services for those specific products.[63] While such information requirements facilitate the search of repair services, in their absence, consumers bear the search costs themselves.

When the defect occurs, the availability of information on the repair process (including time for repairs, possibility of getting a replacement product for the duration of repair and the repair process), availability of repair services and the party responsible for repair are very important factors for consumers' decisions to repair.[64] Furthermore, information on the price of repair is essential, as price is a top factor for the decision of repair. Finding out how much repair will cost can be difficult as it often requires the repairer to carry out a diagnostic of the problem. As a result, consumers need to first pay the diagnostic in order to find out whether repair is possible at all and how much it will cost. Evidence shows that the costs for diagnosis can vary.[65] Due to uncertainty about these upfront costs many consumers abandon the option of repair.

Finding information on all these elements and identifying an available repair service meeting the conditions that suit the consumer's needs can be difficult. The lack of transparency on

[62] IA Study, Section 3.2.1 with reference to further research.

[63] Commission Regulation (EU) 2019/2022 of 1 October 2019 laying down ecodesign requirements for household dishwashers, Annex II, point 6 (14).

[64] IA Study, Annex 1.4, Consumer Survey, Section 2, p. 8, QB4 (Scale 0-10): information available regarding price of repair, and the repair process: 8.1; availability of repair service: 8; information available regarding the responsible party: 7.8.

[65] Between 7% (shoes) to 22% (cars) for most common defects, IA Study, Annex 1.3, Business Survey, Section 2, p. 38.

these aspects contributes to the search costs, increases the efforts necessary to repair and can ultimately lead the consumer to abandon repair.[66]

Driver 3: Inconvenience factors dissuade consumers from repair

In situations outside the legal guarantee, a range of inconvenience factors linked to the repair process may dissuade consumers from repair. Even in case consumers find a suitable service and the price is acceptable, the repair process itself may require too much hassle. Repair takes time and that time is even longer where spare parts need to be ordered. Time matters to consumers because during repair they are deprived of the product.[67] Where consumers need the product on a daily basis (e.g. refrigerators, phones) and they do not get a replacement product, they feel impaired.[68] Moreover, arranging repair costs efforts. For instance, for large items (e.g. TVs, stoves) it can be difficult to arrange their transportation if they cannot be repaired at the consumer's place,[69] or alternatively to find a repair service that would repair it at the consumer's place. An unsuccessful repair not only causes extra costs, but also more effort compared to immediately buying a new product, as the repair infrastructure is not always convenient compared to retail shops.[70]

Surveyed consumers consider all the above 'hassle' factors as very important for the decision to repair and any of these factors can, on its own, dissuade consumers from repair.[71] Where these factors apply cumulatively, the hassle is even more dissuasive.

Furthermore, all the above factors influence consumer trust in the repair service as a whole. Trust in the quality of repair is a key factor for the decision to repair, comparable to the top factor price.[72] This trust is intrinsically linked to the key repair service characteristics, which ultimately determine if the service suits the consumer's needs. As evidenced by a behavioural

[66] IA Study, Annex 1.4, Consumer Survey, Section 3, p. 21: e.g. 19% of consumers did not repair their smartphone because they could not find information how to get it repaired or there was no available service that could carry out repair.
[67] IA Study, Annex 1.4, Consumer Survey, Section 2, QB4: 7.7 on a scale of 10.
[68] IA Study, Annex 1.4, Consumer Survey, Section 2, QB4: 7.5 on a scale of 10.
[69] IA Study, Annex 1.4, Consumer Survey, Section 2, QB4: 7.5 on a scale of 10.
[70] 'Behavioural Study on Consumers' Engagement in the Circular Economy', European Commission, 2018, p. 11, 181.
[71] IA Study, Annex 1.4, Consumer Survey, Section 3, QC6: E.g. among mobile phone/smartphone owners that experienced a defect and did not have the product repaired, 9% said that too much effort was required to deliver the product to the shop or have it shipped; repair would take too long according to 14%; it was not possible to get the replacement product for the duration of the repair for 10%. There are variations among products: While 9% of responding consumers did not repair their mobile phone because it took them too much effort to take the product to repair, a greater share (14%) did not repair their refrigerators and TVs for this reason.
[72] IA Study, Section 3.2.3: 8.2 on a scale of 10.

experiment[73], the more consumers know about the key characteristics of a repair service, the more they are likely to take it up and therefore trust it.

Driver 4: Repair is not economically attractive for consumers outside the legal guarantee

When products become defective outside the scope of the legal guarantee, the costs of both repair and replacement with a new product will play a significant role. Amongst the aspects that influence the consumers' decision on whether to repair a product, the price of repair[74] as such and in relation to the cost of a new product is a top factor.[75] Repair may be the less attractive option, as it can be relatively expensive compared to buying an affordable new product. The limit of an acceptable repair price is on average around 20% of the purchase price.[76] Consumers are more willing to repair goods if they consider that the benefits of repair[77] outweigh the costs of repair. However, many consumers believe that it is cheaper to buy a new product instead of repairing the existing one.[78] Especially as regards low value products, consumers are more inclined to buy new than repair.[79]

The price of repair depends on a number of factors, including labour costs, technical complexity and need to constantly keep up to date with new product models, access to spare parts, availability of repair services and competition in the market. It is not in the realm of this initiative to influence factors that have an effect on prices; the resulting prices will largely be determined by the market. However, bringing more transparency to the price and to the content of repair services can help consumers identify economically attractive repair offers.

Other drivers beyond the scope of this initiative

The drivers set out below contribute to the problems but are outside the scope of this initiative (driver 5) or are addressed only indirectly (driver 6).

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[73] IA Study, Annex 1.2, Right to Repair experiments.

[74] IA Study, Section 3.2.1, with further references to relevant research.

[75] IA Study, Annex 1.4, Consumer survey, Section 2, p. 8: 8.2 on a scale of 0 to 10.

[76] IA Study, Section 3.2.1, Figure 3.8: Acceptable price ranged between 17% and 27% depending on the product.

[77] Possibility to use the already purchased product longer, avoiding spending additional money on buying a replacement.

[78] 'Behavioural Study on Consumers' Engagement in the Circular Economy', October 2018, p. 115. Between 50% of (dishwashers) and 25% (clothing) reported that they did not choose to repair their goods because it would have been too expensive, p. 85. See also references to further research in the IA Study on p. 38.

[79] IA Study, Annex 1.4, Consumer survey, Section 2, p. 9: Between 17% of the original price for a car up to 27% of the original price for a smartphone. Televisions, refrigerators, laptops, clothing, shoes and wooden furniture scored within this range.

Driver 5: Products are not designed to be reparable

The problems are also driven by supply-related issues and technical constraints[80], notably that some products are not designed to be reparable.[81] While some business models focus on durable goods and a high sales price in exchange for a long lifetime and reparability of the product, not all consumers are able or willing to purchase such products. Other business models rely on profits from sales of new goods and depend on consumers replacing their products more frequently. This encourages producers to produce less durable but cheaper products and make profit from a high turnover.[82] In order to keep prices affordable, companies often make savings on the manufacturing process.[83]An additional effect of the lack of reparability is that even consumers who are in general willing to repair their goods are often discouraged when they learn that certain products cannot be repaired.[84] Supply-related factors that could make repair technically unfeasible are beyond the scope and are tackled by related EU initiatives, notably ESPR (reparability rules) and ECGT (tackling early obsolescence) as well as the Design Directive (liberalisation of the spare parts market).

Driver 6: Consumer life-style choices

A significant reason for premature disposal of reparable consumer goods is linked to lifestyle choices.[85] They are driven by behavioural and psychological considerations relating to image and are particularly relevant for the consumer segment of 'enthusiastic replacers', who may not even consider repair, as a result of their preference for new goods. The preference for new goods may be driven by the desire to keep up with fashion trends as a status symbol[86] and

[80] There is a lack of spare parts, difficult or no access to the necessary software updates, repair tools or repair information or a lack of access to data (IA Study, Section 3.2.1).

[81] IA Study, Annex 1.3, Business survey, Section 2, p. 39: some business respondents indicated that one of the causes of irreparability of products was irreparability by design; a share of respondents to the consumer survey also indicated that their products could not be repaired, IA Study, Annex 1.4, Consumer survey, Section 3, p. 117. Key technical barriers to repair identified by the repair community include product design related causes and spare parts, notably "no spare parts available", "irreparable", "unable to open", Repair cafe international Foundation 2020, Top ten barriers in 2019, based on 1582 observations.

[82] Cooper, Kaner, Furmston & Cutts, *Furniture lifetimes in a circular economy: a state of the art review. May*, 2021, https://hdl.handle.net/10344/10203.

[83] E.g. gluing of components, which makes it in turn difficult to disassemble and repair such products. Hernandez, Miranda & Goni, *Empowering Sustainable Consumption by Giving Back to Consumers the 'Right to Repair'*, 2020, 1–15.

[84] IA Study, Annex 2, Section 2.2. E.g. 25% reported that they had to replace their TV as it was irreparable. Similar or higher numbers apply to other product categories, such as refrigerators (37%), IA Study, Annex 2, Section 2.3) or clothing. Around 60% of discarded items are due to a product not being durable and not designed to be repaired, ECOS 2021; IA Study, Annex 2, Section 2.5.

[85] IA Study, Section 3.2.3, with reference to further research.

[86] IA Study, Annex 2, Sections 3.1.2, 3.2.2 and 3.4.2.

sign of wealth.[87] Some consumers associate new products with better performance, even if this is not the case[88] or value new technological developments/models, even if older products are still functional[89].These preferences are fuelled by producers constantly developing and promoting new models,[90] as the dominant business model relies on higher sales of new goods.[91] Consumers' preference for new goods is relevant in most product groups.[92] Life-style choices also largely influence consumer attitudes to reuse of goods in the form of second-hand or refurbished goods. This driver may be tackled by Member States' policies on consumer education and to some extent, indirectly, by EU initiatives encouraging more sustainable consumer choices at the point of sale. This initiative may contribute to tackling this driver indirectly, as 'enthusiastic replacers' may be influenced by options facilitating repair, albeit to a small extent.[93]

How likely are the problems to persist?

The problems are likely to decrease in scale due to the positive impacts of related initiatives, but they will not disappear. Consumers will continue to dispose of repairable consumer goods due to drivers that are not tackled or only partially tackled and which influence consumer behaviour with respect to repair (see figure 2). In addition, premature disposal will also continue because of limited reuse of consumer goods.

The problem of premature disposal of goods within the legal guarantee will persist, as the key driver behind it (driver 1 choice within the legal guarantee) will remain unaddressed in the absence of EU legal action. Consumer preferences for new goods as a lifestyle choice (driver 6) will continue to favour replacement, as most consumers are unlikely to change their attitude on the choice between repair and a new good in the next 15 years.

The problem of premature disposal of goods beyond the legal guarantee should decrease in scale, because the ESPR and the ECGT will tackle some drivers that hinder repair beyond the legal guarantee at least partially.

The one driver tackled comprehensively concerns products that are irreparable by design (driver 5). Ecodesign legislation will tackle it for the product groups for which it introduces ecodesign requirements to increase their reparability and the ECGT will tackle early

[87] IA Study, Section 3.2.3, (Singh & Giacosa, 2019).
[88] IA Study, Section 3.2.3, with references to further research.
[89] IA Study, Section 3.2.3. e.g. 27% did not repair their mobile phone, because they wanted a new model.
[90] Recent research (IA Study, Section 3.2.3: Bayus, 1988) revealed a significant negative correlation between the amount of yearly advertising and employment levels for TV service technicians, indicating a decline in demand for repair services.
[91] IA Study, Section 3.2.3.
[92] IA Study, Section 3.4. E.g. smartphones and televisions. It is less relevant only for a few products like refrigerators.
[93] IA Study, Annex 1.4.

obsolescence practices. Products will gradually become more repairable over time as reparability requirements under the Ecodesign framework continue to be introduced on a product-by-product basis. This positive trend will reduce the scale of the problem particularly as regards energy related product categories, notably electric and electronic devices, which are in focus of ecodesign reparability requirements and that consumers are more inclined to repair in any case.[94] Furthermore, as ecodesign requirements encourage the production of goods fit for reuse and refurbishment, they will improve the business case and thus the availability of refurbished products.[95] The scale of the problem may persist to a larger extent for non-energy related/non-ecodesign goods, for which consumers are less inclined to attempt repair.

The Ecodesign legislation may contribute to a decrease in repair prices (driver 4 on price) as a result of more repairable designs, better availability of spare parts, repair and product specific information. The ECGT may encourage demand for repairable products by helping consumers identify them at the point of sale, to which the introduction of reparability scoring under the Ecodesign and Energy Labelling framework also contributes. Availability of repair services may improve as a result of more interest in repair (driver 2 lack of transparency). Consumers may also find it easier to repair products on their own based on product specific repair information under Ecodesign legislation (driver 2 lack of transparency).

However, even where ecodesign rules facilitate reparability and refurbishment, five more drivers influencing consumer behaviour will continue to trigger unsustainable consumption choices and premature disposal of repairable consumer goods. Even if repair becomes technically feasible for many more products, in most cases it will depend on consumer decisions to repair their goods.

Important aspects of the drivers 4 (on price) and 2 (lack of transparency) will persist. In particular, when it comes to price, consumers will not have transparency on the price of the repair service and will continue to worry about the maximum price they may have to pay. They will have difficulties to compare offers in terms of price and content. As to availability of repair services (driver 2 lack of transparency), consumers will still have to find a conveniently located repair shop they trust. Furthermore, they will have to identify key repair conditions, e.g. duration of repair, replacement goods, quality guarantees. Transparency on these conditions (driver 2) will not be ensured by the ESPR and the ECGT. These conditions matter also, because they largely influence the inconvenience of the repair process (driver 3 on inconvenience). This aspect is not tackled at all and is an essential factor for consumer reluctance to repair. While each aspect that will not be tackled can influence consumer decisions against repair, the cumulative impact is even higher. The emerging consumption

[94] IA Study, Section 3.4

[95] For example, growth of refurbished smartphones. Counterpoint Research's Global Refurbished Smartphone Tracker (available at counterpointresearch.com).

trends do not suggest that market developments will resolve the outstanding drivers on their own.

On the one hand, there are trends of increased environmental consciousness[96], as well as increased openness to refurbished goods by consumers.[97] Fashion and status trends that underpin consumers' choices are more likely to evolve towards more sustainable behaviour, as already seen in the growing second-hand market for clothes. This is all the more relevant in the current context of inflation and the cost-of-living crisis which is expected to trigger more repair and purchase of refurbished goods. These trends are likely to encourage more consumers to repair or buy refurbished goods for economic reasons and for a more sustainable lifestyle choice.[98]

On the other hand, there are trends pointing to increased interest in new models with new features. Overall, an increase in consumption of consumer goods is expected. For instance, the use of smartphones is supposed to increase up to 7.5 billion by 2026.[99] Sale of TVs in the EU has constantly increased over the last decade and is expected to continue growing.[100] The replacement rate for defective refrigerators increased from 3.5% in 2004 to 8.3% in 2013 with many appliances discarded before their end of life.[101] In addition, more and more household appliances are equipped with 'smart' features that can incentivise consumers to replace their goods in order to have these new functionalities.[102] Therefore, when an appliance breaks down, consumers may be tempted to replace it with a newer model instead of repairing it. The more difficult and unattractive repair looks, the more consumers will prefer to replace, as the majority of consumers repairing products do so reluctantly in any case.

This replacement trend affects the majority of consumers, i.e. the biggest consumer segments of enthusiastic replacers and reluctant repairers, and is therefore likely to be stronger than the positive developments. Thus, the problem will largely persist in the absence of specific measures targeting consumer repair behaviour.

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[96] IA Study, Section 3.2.4 with reference to further research, Section 3.4.

[97] IA Study, Section 3.1, Figure 3.7: E.g. 48% of consumers declared their interest in buying a second-hand/refurbished laptops, 46% wooden furniture, 44% smartphones, 41% refrigerators and 38% televisions.

[98] IA Study, Section 3.2.3.

[99] The figures refer to smartphones worldwide. IA Study, Annex 2, Section 3.1.3 with reference to further research.

[100] IA Study, Annex 2, Sections 2.2 and 3.2.1 with reference to further research.

[101] European Commission, 'Sustainable Products in a Circular Economy - Towards an EU Product Policy Framework contributing to the Circular Economy', 2019, p. 28.

[102] IA Study, Section 3.2.1.

3. Why should the EU act?

Legal basis

This initiative contributes to the better functioning of the internal market by amending and adding to the harmonised remedies system for the sale of consumer goods, thereby supporting also the EU's overall approach to promoting sustainable consumption under the European Green Deal. The appropriate legal basis is Article 114 TFEU; according to Art. 114 (3) TFEU, the Commission takes as a base a high level of environmental and consumer protection.

The SGD was adopted on the basis of Article 114 TFEU. It aims to contribute to the functioning of the internal market by tackling contract law-related obstacles for the cross-border sales of consumer goods in the EU. Problem 1 of this IA is driven by the free consumer choice between repair and replacement in the SGD. As several options promoting repair entail amendments to the fully harmonised remedies system of the SGD, it is necessary to amend the SGD.

Outside the scope of the SGD, individual MS can adopt measures promoting sustainable consumption. Some MS have indeed already adopted rules promoting repair. For example, Spain has introduced an obligation on the producer to guarantee an adequate technical service and the availability of spare parts related to any defect of a product during a period of 10 years from the manufacturing of the good.[103] Other MS have introduced measures related to the extension of the liability period or explore measures aiming at more sustainable consumption.[104] For example, a recent French law[105] provides a six-month extension period of the guarantee for consumers who choose to have their products repaired instead of replaced. In addition, in France the seller is incentivised to accept the repair requested by the consumer, since if the repair is refused by the seller, the replaced product is given an additional two-year guarantee period.

Such differing national rules are likely to constitute actual or potential obstacles to the functioning of the internal market. National measures outside the scope of the SGD are, or would likely be, because of their consumer protection nature, mandatory rules. For instance, the French or Spanish rules mentioned above are mandatory rules. Such differing mandatory

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[103] General Law for the Protection of Consumers and Users and other complementary laws (Ley General para la Defensa de los Consumidores y Usuarios), approved by Royal Legislative Decree 1/2007 of 16.11. 2007, Article 127a(1).

[104] In the workshop with the MS, several MS informed that they could consider regulating consumer contract law to better fit sustainability requirements, but they are first waiting for possible Commission initiatives on this matter.

[105] 'Loi n° 2020-105 du 10 février 2020 relative à la lutte contre le gaspillage et à l'économie circulaire', amending article L. 217-9 du code de la consommation of the 'code de la consommation'.

rules are likely to create economic burdens on the economic operators acting in the internal market.

The regime of the Rome I Regulation[106] leads for most cross-border consumer contracts either to the application of the law of the consumer in its entirety or to the application of the mandatory rules of the consumer's law where their level of protection is higher than the law chosen by the parties. This would have the result in the example of the French rules explained above that sellers from other MS exporting to consumers residing in France would need to apply the French law entirely, or at least these specific mandatory rules would apply. Traders selling to French consumers would in this case need first of all to find out about the applicable national law. Subsequently, they would need to adapt their contract terms and conditions to the requirements of French law. Obtaining the necessary legal advice for this means information and transaction costs, which they would not face in their own national market, according to the law of which their standard contract terms have been designed. Similar scenarios would emerge also in the context of other comparable national measures, such as the Spanish rule mentioned above. Against the same background, possible measures of other MS promoting sustainability in the contractual context could create potential obstacles for the smooth functioning of the internal market.

Furthermore, differing national rules and resulting differences in market practices result in low transparency on repair conditions, dissuading consumers from accessing repair services across borders as in the absence of harmonised rules complexity in cross-border transactions is even higher than in a national context. The resulting limited consumer demand hinders the development of repair services across borders. As digital technologies evolve and more goods include digital features that could be accessed remotely, repair services at a distance, and respectively cross-border are likely to develop even more in the future. It indirectly also discourages the cross-border movement of goods, such as spare parts and repair equipment that are necessary for repair services.

Subsidiarity: Necessity and added value of EU action

The problems analysed in this IA are of a cross-border nature and of European, if not global scale; they have the same drivers and effects across the EU.

The SGD has already fully harmonised certain rules on the sale of consumer goods, in order to promote cross-border trade and the functioning of the internal market. As legislative action at national level to tackle the problems within the scope of the SGD, for instance prioritising repair over replacement, would be excluded by its harmonisation effect, the described problem could be remedied only through legislative action at EU level. In the absence of EU-

[106] Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations (Rome I), OJ L 177, 4.7.2008.

level action, national initiatives outside the scope of the SGD would follow, as the above-mentioned examples already show, in all likelihood with different approaches and different design, in order to promote the goal of more sustainable consumption. While they could bring certain benefits to consumers and the environment at national level, they would at the same time create or increase fragmentation in the Single Market.

The EU action is therefore necessary in order to achieve the overall objective of a functioning internal market with more sustainable consumption of consumer goods. It is only through EU action that the desired effect of promoting repair and reuse in the context of cross-border sales can be achieved consistently across the internal market.

The preferred policy options (POs) of this initiative, while aiming at more sustainable consumption, will be tailored to the needs it must address and be of a targeted nature, carefully designed in terms of scope and intensity. Administrative burden and costs are commensurate with the specific and general objectives to be achieved. None of the options analysed in this IA goes beyond what is necessary to achieve the objectives. The principle of proportionality will therefore be complied with.

The SGD has since 1 January 2022 started to apply in MS and the review of the Directive is due by 12 June 2024. Considering this timeline, a Commission proposal following the review could be submitted to the co-legislators earliest in 2025, more likely 2026, the adoption by the co-legislator would not be before 2028 and the implementation by MS not before 2030. The European Green Deal and its objectives of promoting the green transition and more sustainable consumption tackle challenges and goals of the current decade. To deliver on these objectives, the reduction of harmful environmental impacts concerning consumer remedies cannot wait for the review of the SGD.

4. Objectives: What is to be achieved?

General objective

The general objective of the POs flows from the Treaties and the commitments taken by the EU to tackle climate change. In this context, the initiative delivers on the general objective included in the European Green Deal, i.e. sustainable consumption by promoting the repair and reuse of viable consumer goods in the Single Market in the area of consumer remedies.

Aligning the harmonised consumer remedies to the objective of promoting repair of viable consumer goods is conducive to more environment-friendly actions of consumers and sellers at the moment when products become defective. Therefore, it contributes to the longer use of consumer goods and prevention of viable products ending up as waste.

The ESPR creating more sustainable product design at the production phase and the ECGT promoting more sustainable consumer decisions at the point of sale, also contribute to the

general objective of promoting sustainable consumption. They leave it from the outset to this initiative to tackle consumer remedies in the after-sales phase.

By measures promoting repair and reuse of goods, this initiative also supports several targets of the Sustainable Development Goals, namely Goal 12 on responsible consumption and production and Goal 13 on climate action.

Specific objectives

Increasing repair and reuse of viable consumer goods within the legal guarantee (Addressing problem 1)

This objective aims at an increase in repair and reuse of viable consumer goods within the legal guarantee. The rationale is to promote repair as a remedy and to facilitate the reuse of viable products during the legal guarantee. Achieving the objective will contribute to more sustainable consumption, as there will be less waste stemming from discarded products and less demand for resources, including energy, used in manufacturing and sale of new products replacing the ones not being repaired.

Increasing repair and reuse of viable consumer goods beyond the legal guarantee (Addressing problem 2)

This objective aims at increasing repair and reuse of viable consumer goods beyond the legal guarantee. The rationale is to encourage consumers towards repairing their defective products and to incentivise demand of refurbished products, instead of buying new products. Achieving this objective entails a higher percentage of consumers who repair their own products after the legal guarantee has expired or is not applicable (e.g. because of wear and tear), as well as a higher use of refurbished products, thus prolonging the lifespan of products. Consequently, this will contribute to more sustainable consumption, as there will be less waste stemming from discarded products and less demand for resources, including energy, used in manufacturing and sale of new products replacing the ones not being repaired.

5. What are the available policy options?

What is the baseline from which options are assessed (Option 0)?

The baseline below is the benchmark for assessing the POs (option 0) over a period of 15 years.

As regards problem 1 (Premature disposal of repairable consumer goods within the legal guarantee): The **SGD** will continue to allow the choice between repair and replacement within the two-year minimum liability period. Consumers in those MS with longer periods

will be able to benefit from the choice for even longer periods.[107] The majority of EU consumers are likely to continue to choose replacement due to their preference for new products.

As regards problem 2 (Premature disposal of repairable consumer goods beyond the legal guarantee): Beyond the SGD remedies system, the current legal framework will not effectively address the drivers which dissuade consumers from repair due to inconvenience and will only partially address the drivers related to price and lack of transparency on availability and conditions of repair services.

The **Ecodesign Directive** has led so far to the adoption of ecodesign requirements for 31 individual energy-related product groups. The work on the ecodesign framework will cover more product groups.[108] For a number of the ecodesign product groups covered reparability requirements exist. Such requirements will be introduced for new product groups (e.g. smartphones and tablets) or products under review (i.e. tumble dryers and computers). The European Committee for Standardisation and the European Committee for Electrical Standardisation finalised standards for energy-related products, including on durability, ability to repair and reuse.[109]

The **ESPR** will replace the Ecodesign Directive once adopted and will extend the product scope of the ecodesign framework beyond energy-related products to cover almost all categories of physical goods on the EU market (except food, feed and medicine). The ESPR establishes rules on product durability, reusability and reparability, which will be put into practice by delegated acts for product groups. Reparability rules, where relevant, will be further specified in delegated acts and may include requirements on spare parts, repair instructions, information on disassembly and reparability scoring. Product-specific reparability rules under the ESPR are likely to have a positive impact on problem 2, and to a lesser extent on problem 1, for the product groups they cover. They will make repair easier by tackling the technical obstacles to reparability (driver 5), which should also positively affect the repair price (driver 4). However, the ESPR will not address the transparency and comparability of prices for repair services (driver 4) nor obstacles relating to the repair process itself, which dissuades many consumers from repair (drivers 2 and 3). Furthermore, the extent of the ESPR impact is uncertain, because its effects will depend on the product-specific delegated acts to be included in future Commission working plans from 2025.

The proposal for a Design Directive (recast) will, similarly as under the ESPR, make repair easier by tackling technical obstacles to reparability (driver 5), which would positively affect repair prices (driver 4). However, it does not address the other relevant drivers that keep

[107] E.g. ES, SE 3-year liability period; IE 6-year limitation period.
[108] Based on the Ecodesign and Energy Labelling Working Plan 2022-2024, 30 March 2022.
[109] CEN - CEN/CLC/JTC 10 (cencenelec.eu).

consumers from repairing defective products relating to lack of transparency (driver 2) and the inconvenience factors (driver 3).

Product-specific initiatives: The Circular Economy Action Plan includes other initiatives promoting longer product lifetimes for priority product groups.[110]

The **ECGT proposal** will provide consumers with better information on reparability and durability of products before they buy a product. Consumer will be able to choose more sustainable products that last longer and can be repaired more easily. However, this proposal will not remedy the situation once the product is defective and the consumer needs to decide to repair.

The **Directive on the Common System of Value Added Tax** extends the possibilities for MS to apply reduced VAT rates to certain repair services, which could affect the price of repairs in those national markets where MS decide to apply a reduced rate.

The **Data Act** will facilitate a broader offer of repair and maintenance services around connected products as repairers could access data generated by these products.

The above-mentioned initiatives have a positive effect on repair. However, as they do not make repair more acceptable and accessible for consumers in the after-sales context, they do not solve the problems handled by this initiative. Firstly, the consumer choice of a remedy within the legal guarantee period (problem 1) is not affected by the ESPR or the ECGT, as the majority of EU consumers, who currently prefers replacement, is likely to continue to choose replacement due to their preference for new products. The related initiatives are therefore not likely to diminish the scale of problem 1. As goods will be designed to be more reparable, and consumers become more aware of sustainability characteristics of goods at the point of sale and therefore more likely end up buying these products, it is assumed that repairs outside the scope of the SGD will increase in the next 15 years as a combined result of the ESPR and ECGT. Problem 2 should therefore diminish to a certain extent in scale, as the related initiatives tackle some problem drivers, including some beyond the scope of this initiative. However, with the impact of the ESPR delegated acts being uncertain at present, reaching the overall sustainability objective and promoting repair and reuse in the after-sales context should not wait for all the product-specific delegated acts to be adopted and applied. In any case, regardless of the positive impacts of the related initiatives on the repair rates, the

[110] For instance, the Communication on an EU Strategy for Sustainable and Circular Textiles of 30.3.2022, COM(2022) 141 final announces support for circular business models such as reuse, renting and repair, take-back services and second-hand retail. The proposal for a Regulation concerning batteries and waste batteries, 10.12.2020, COM(2020) 798 final, and the work of the Batteries Alliance should result in a new regulatory framework for batteries. The proposal on the review of the End-of-Life Vehicles (ELV) Directive, scheduled for 2023, will contribute to car durability.

ESPR will not address obstacles relating to the repair process itself, which dissuades many consumers from repair (drivers 2 and 3). Similarly, the ECGT proposal will not remedy the situation once the product is defective and the consumer needs to decide to repair. As the drivers tackled with this initiative are outside the scopes of the ESPR and ECGT, the problem of premature disposal of viable goods by consumers within and outside the legal guarantee will not be solved without the policy intervention by this initiative.

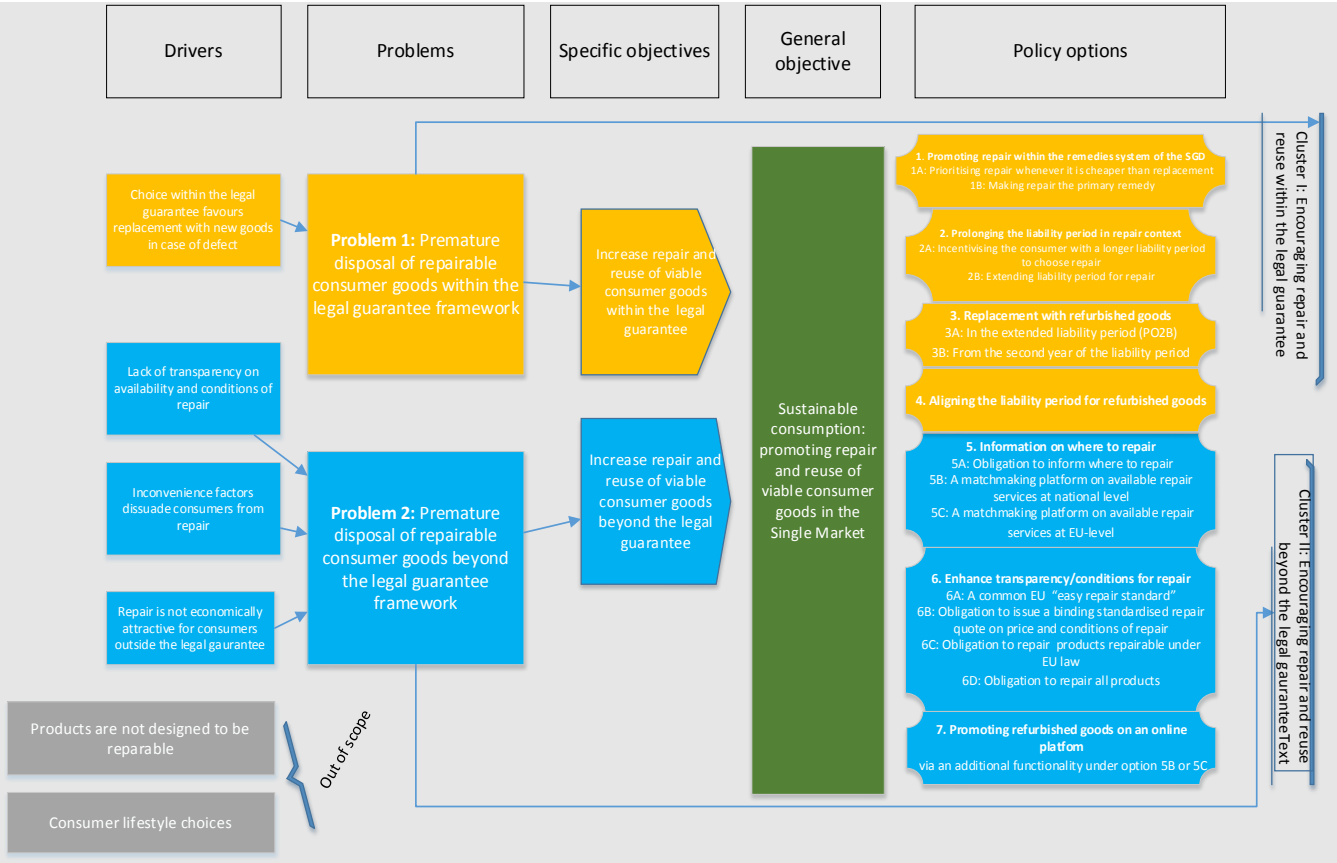
Description of the policy options

Each cluster of POs has a different objective and scope:

Cluster I promotes repair and reuse of goods within the legal guarantee;
Cluster II facilitates and encourages repair and reuse outside the legal guarantee;

The POs within and between the clusters are complementary; the sub-options within each option are alternatives. Annex 5 contains detailed explanations on the POs and on the discarded options. The problems, specific objectives and respective clusters of options addressing them are marked in the same colour on Figure 2 (yellow for Cluster I and blue for Cluster II).

Figure 2: Intervention logic



CLUSTER I: Options to promote repair and reuse of goods within the legal guarantee

The Cluster I measures to promote repair and reuse within the SGD scope necessitate changes of the SGD, because they entail changes to the current remedies system which is largely fully harmonised. Its provisions are insufficient to tackle the premature disposal of repairable consumer goods. They should incentivise repair and reuse of goods under the legal guarantee. The measures only cover defects that are present at delivery and become apparent within the liability period.

i. Option 1: Prioritising repair within the remedies system of the SGD

Sub-option 1A: Prioritising repair whenever it is cheaper than replacement

PO1A means that consumers can only request the seller to repair and not to replace the product in all cases where repair is cheaper than or as costly as replacement. The consumer will be able to request replacement only if repair is more expensive than replacement. This is different from the current SGD where the consumer can request replacement even if repair is cheaper, as long as the difference between the costs for the remedies is not disproportionately high.

Sub-option 1B: Making repair the primary remedy

In PO1B, repair would be the primary remedy. The consumer could request replacement only if repair of the product is not possible at all or causes disproportionately high costs in absolute terms for the seller. As long as the costs for repair are not disproportionate in absolute terms, the seller would be obliged to repair the product. This is different from the current SGD, which allows replacement already when repair is disproportionately more costly compared to replacement.

Both PO1A and 1B take the repair costs as the benchmark. This maintains the approach of the SGD legislator, chosen to balance the interests of consumers and sellers. The sub-options have however different effects on whether the consumer can choose replacement. PO1B has a higher threshold: replacement can only be chosen if repair is excessively costly. PO1A sets the hurdle lower: replacement can be chosen when repair is more costly, including a minor difference in costs.

However for both sub-options a principle of consumer law that the parties may agree on a more favourable remedy for the consumer, i.e. replacement, remains unaffected.

ii. Option 2: Prolonging the liability period in the context of repair

Sub-option 2A: Incentivising the consumer with a longer liability period to choose repair

In PO2A, once a defect (present at the time of delivery) appears and the consumer chooses repair, the liability period for the repaired product would be extended, with the aim to incentivise the consumer to choose repair instead of replacement. The extension of the liability period could be done in different ways.

Variant 1 extends the liability period by 1 year, added to the existing liability period. In the additional liability period, if a defect occurs again, the consumer would be entitled to request only repair (if repair is impossible or too costly in absolute terms, the other remedies would not apply). This does not prevent the parties to agree on replacement, which is likely to happen in cases where repair is more expensive than replacement or businesses want to keep their customers. For the MS that provide for longer liability periods (e.g. 3 instead of the 2 years foreseen by the SGD) one year would be added to that period (e.g. an additional 4th year where the consumer can only request repair).

Variant 2 prolongs the liability period by restarting it again after the consumer has chosen repair. The current liability period would start anew, with all available remedies, counting from the moment the consumer received the repaired product from the seller. Depending on when the lack of conformity appears, restarting the liability period could lead to a significantly longer liability period, which would be even longer in MS that already foresee a longer liability period.

In both variants, the liability period would only be added/restarted once, to avoid continuous prolongations leading to legal uncertainty and being too burdensome for the seller. The first variant leads to a liability period of three years (or more, depending on MS) and is limited to

repair. The second variant can lead to a liability period between 2 and 4 years (or more, depending on MS) allowing the consumer to exercise all remedies.

Sub-option 2B: Extending the liability period for repair

PO2B does not aim at incentivising consumers to choose repair, but extends the liability period, e.g. by one year, in all cases, independent from the consumer choosing repair when a defect occurs. However, the extension applies only to repair as a remedy, i.e. if a lack of conformity becomes apparent in the extended liability period, the consumer can only request repair (if repair is impossible or too costly in absolute terms, the other remedies would not apply). This does not prevent the parties to agree on replacement, which is likely to happen in cases where repair is more expensive than replacement or businesses want to keep their customers.

While both PO2A and 2B extend the liability period, the approach is different: PO2A only applies when the consumer chooses repair, aiming to incentivise consumers to choose repair instead of replacement by rewarding them with an additional liability period. PO2B grants an extension of the liability period to all consumers even if the consumer has chosen replacement in the first two years.

Both PO2A and 2B could be combined with PO3A that allows replacement with refurbished goods in the additional liability period (see iii.).

iii. Option 3: Replacement with refurbished goods

If consumers choose replacement as a remedy under the current SGD, sellers have to replace the defective goods with new goods. To increase the use of refurbished goods, the SGD could be amended to allow sellers to offer replacement with refurbished goods, where available.

Sub-option 3A: Replacement with refurbished goods in the extended liability period

PO3A envisages a combination with the POs prolonging the liability period in context of repair (see ii. PO2A[111] and PO2B). The replacement with refurbished goods would be a remedy offered to consumers in cases where repair is impossible or causes excessive costs. PO3A would only apply in the additional liability period going beyond the minimum liability period of two years (or more depending on MS regime). This option would not apply in the first two years of the liability period as the consumer may expect as fair replacement only the replacement with new goods during that period. After two years, replacement with refurbished goods, where available, could be justified as the defective goods have already been in use for a considerable time.

[111] Replacement with refurbished goods could be an alternative remedy in both variants of PO2A.

Sub-option 3B: Replacement with refurbished goods from the second year of the liability period

To promote the use of refurbished goods more, PO3B would allow sellers to offer refurbished goods as a replacement from the second year of the liability period. When one year has passed, many products are likely to show signs of wear and tear. It is thus considered as fair to grant the seller the additional possibility of replacing the defective product with a refurbished one, if available.

iv. Option 4: Aligning the liability period of refurbished goods with new goods

To encourage consumers to buy refurbished goods, this measure would align the liability period for refurbished goods with the liability period for new goods (i.e. minimum two years). It would remove MS' current possibility to allow sellers and consumers to contractually agree to a shorter liability for refurbished goods. For the MS having used this option this would mean that they could keep their current rule for second-hand goods, but would need to exclude refurbished goods. Aligning the liability period for refurbished goods and new goods could influence consumers' choice to buy more refurbished goods. They would not be discouraged by quality concerns due to the shorter liability period and could rely on similar quality assurances as for new goods.

CLUSTER II: Options to encourage repair and reuse of goods beyond the legal guarantee

The measures under Cluster II would not change the SGD as they are outside the scope of the legal guarantee framework. They encourage and facilitate repair of defects that do not constitute a lack of conformity pursuant to the SGD, i.e. the large majority of defects, either due to wear and tear or mishandling of the consumer that were not present at delivery or defects that appear after the liability period expired.

v. Option 5: Information on where to repair

Sub-option 5A: Obligation to inform where to repair

Producers should inform on their website whether they themselves provide repair services and to what extent, e.g. for which specific products/models. If combined with PO6C and PO6D on the obligation to repair, producers should also inform to what extent the obligation to repair applies for specific goods they produce. This information can be provided when new products are placed on the market and updated only where changes occur[112].

Sub-option 5B: A matchmaking platform on available repair services at national level

[112] E.g. when specific product models are no longer repairable as spare parts are not available anymore.

PO5B entails the creation of an online platform with a search engine, matching consumers with repairers for consumer goods at national level. The purpose is to facilitate the search of suitable repair services and provide more transparency on conditions of repair in order to incentivise consumers to choose repair. This would be an independent comparison tool helping end-users to assess the merits of different repair providers by means of standardised information, facilitating comparison of prices and quality parameters. Where the market has already created such platforms which meet the criteria or a relevant national platform already exists, MS would not need to create a new one.

The national platforms could be interconnected at EU level with relevant websites, such as the European Product Registry for Energy Labelling (EPREL)[113], the Single Digital Gateway or Your Europe Portal.

Sub-option 5C: A matchmaking platform on repair at EU level

This sub-option entails the creation of a single online platform at EU level with a search engine matching consumers with repairers for consumer goods.

It would add new functionalities to the EPREL portal for energy labelled products. The EPREL portal requires producers to include product-related information when placing a product on the market to facilitate market surveillance. The repair information would cover the product categories with an energy label, which can be included in EPREL. Consumers could access the portal by scanning the energy label on their product (e.g. a refrigerator) and identify repairers nearby. The take-up is likely to increase as a result, even among consumers not yet aware of the EPREL portal. A platform at EU level could also enable more cross-border repair, especially in cross-border regions or for items that can be shipped at acceptable cost. This would broaden the choice of repair for consumers and promote competition in the Single Market.

A detailed outline of functionalities for both options 5B and 5C is presented in Annex 5.

vi. Option 6: Enhance transparency/conditions for repair

Sub-option 6A: Voluntary commitments to an EU common 'easy repair standard'

The standard would be applicable to all repairers across the EU (including independent repairers and producers). It would cover key 'convenience' factors for consumer decisions on repair, e.g. reasonable duration of the repair service, availability of a temporary replacement product, availability of pick-up/transportation and additional voluntary guarantees on repair quality. The commitment would set a standardised minimum quality level on each aspect.

[113] EPREL Public website (europa.eu).

This would increase consumer confidence, as they could trust that providers with this label address consumer concerns about repair in an effective manner.

The standard could be either developed by a EU standardisation organisation or through self-regulation. In the latter case, the standard could be negotiated as a code of conduct, agreed by representative business associations at EU level as well as consumer organisations and civil society representatives to take their legitimate interests into account. The Commission would facilitate the development of the standard and help to provide publicity. To ensure visibility and consumer recognition, a standardised 'easy repair' label could be granted to all subscribers.

Sub-option 6B: Obligation to issue a binding repair quote on price and conditions for repair in a standardised form

A binding repair quote in a standardised form should be issued, once the consumer expresses interest in obtaining a repair service. The obligation would apply to producers, sellers and independent repair service providers to stimulate competition. PO6B draws on precedents in sectorial EU law to facilitate consumer choice by standardised comparable pre-contractual information. The repair quote would provide the consumer with the relevant information on costs and key conditions of repair such as the price or maximum price,[114] duration of repair, any additional voluntary guarantees beyond existing legal remedies for repair contracts under national law, availability of a temporary replacement product during the time of repair and transportation. A standardised form on a durable medium would allow the consumer to easily compare offers. The consumer should only be obliged to pay the costs necessary to issue the quote.

Sub-option 6C: Producer's obligation to repair goods that are subject to reparability requirements under EU law (against a price)

Such obligation to repair would cover defects outside the legal guarantee.[115] The obligation to repair would apply to products for which reparability[116] requirements in EU law exist or will be adopted, e.g. in ecodesign implementing regulations. This will make PO6C possible in practice. The obligation to repair would apply to producers as they are also the addressees of existing reparability requirements under EU law. Thus, they have the necessary spare parts, expertise and equipment to repair.[117] Other repair actors, e.g. independent repairers and

[114] The CRD obligation to inform about the price or the manner it is calculated applies also to repair service contracts or a service contract whose object is merely to estimate the cost of repair. The price information of PO6B will be complementary as it will be combined with the content of the service, bringing transparency to what the price includes and is likely to be given following an individual diagnostic of the defect.
[115] Defects not present at delivery or which appeared after the liability period had elapsed.
[116] Except where technically not feasible.
[117] APPLiA, Home Appliance Europe, 'By the Numbers: The Home Appliance Industry in Europe', 2020-2021: 91% requests to repair to manufacturers resulted in successful repair in 2018.

sellers, do not necessarily have access to spare parts or do not possess the necessary know-how, software and equipment to fulfil this obligation.

The product would be repaired for a price. The price could take into account the costs for labour, spare parts, operating the repair facility (e.g. tools, rent) and a profit for the producer. The price would not be regulated, but agreed in the contract between the consumer and the producer, done under the competitive pressure of independent repairers, therefore benefitting consumers and the repair sector.[118] Consumers could seek other repair opportunities in order to be able to compare offers. They would likely approach also local independent repairers or the seller before reaching out to producers which may be located at a greater distance.

Option 6D: Producer's obligation to repair all products (against a price)

PO6D has the same rationale as PO6C, but a broader scope. It envisages a producer's obligation to repair all products which are reparable by nature. This option would cover all defects that are outside the legal guarantee. Unlike goods subject to reparability requirements under EU law, not all products are reparable by design. Therefore, PO6D would include an exception linked to the actual possibility to repair the product. Producers could invoke this exception when repair is not technically feasible, notably when products are not reparable by design. The assessment of the actual reparability would largely depend on the producer. The choice of whether to request repair will remain with the consumer. The price of repair would be determined like in PO6C.

vii. Option 7: Promoting refurbished goods on an online platform via a functionality under PO5B or PO5C

PO7 encourages supply and demand for refurbished goods by match-making consumers with sellers of refurbished consumer goods and purchasers of goods for refurbishment. It facilitates the search for refurbished goods as a sustainable alternative to buying new products or replacing defective products outside the legal guarantee. It also facilitates arrangements between consumers that may wish to dispose of defective repairable goods and service providers that are looking for such goods for refurbishment. PO7 can be implemented as a functionality of the repair platform suggested under PO5B and 5C, as they work on the same matchmaking principle. If combined, they would be more cost efficient and produce synergies. When the repair possibilities identified through the platform are not available or not satisfactory for the consumers' needs, consumers may use the same platform to identify replacement products that are refurbished. The platform would function based on sellers' and purchasers' self-registration.

[118] If the price were to be regulated, all the repair demand would be channelled to the producer and the independent repairers would be foreclosed.

Options for instruments

The options set out above could be delivered via different legal instruments, depending on the nature of the option, including amendments to existing EU legislation, the adoption of new legal instruments or codes of conduct. In particular, the options in cluster I could entail amendments to the SGD or a new directive. The option for a European matchmaking platform (PO5C) would necessitate a regulation, a Commission decision or an amendment to relevant existing legal instruments. The option concerning voluntary commitments (PO6A) can be delivered via a code of conduct or a Commission mandate for a repair standard to standardisation bodies. The concrete choice of instruments will be discussed in the context of the preferred option.

6. What are the impacts of the policy options?

Impact of the baseline scenario

The combined impact of initiatives under the Circular Economy Action Plan will be positive for the environment, reducing the problem scale by promoting the production and sales of more sustainable products. However, despite this positive impact, those initiatives will not achieve the full potential of sustainable consumption if there is no action to tackle drivers behind unsustainable consumer behaviour.

Even if the majority of goods are covered by ecodesign requirements to make them more durable and repairable, defects will still occur, because goods will still break down at some point over their lifetime. Even if defects can be easily fixed at a low cost, this will not happen if consumers do not wish and do not follow through with repair. Therefore, consumer decisions are essential for sustainable consumption. However, problems in the after-sales phase will continue to discourage consumers from repair, thereby preventing the full potential of having more repairable products through ecodesign requirements to materialise, and thereby limiting the impact of those initiatives.

On the supply side: Based on the initiatives under the Circular Economy Action Plan, mainly the ESPR (and the Ecodesign Directive until ESPR enters into force), more consumer goods will become technically reparable. This should result in a continuous increase in the percentage of products that are fixable and fixed in the next 15 years.[119] Repair rates growth

[119] At least 58% of products consumers brought to repairers were fixed in 2021 and this share may increase by 4.57% by 2037Sharepair Project (Yoko Dams): An average annual growth increase of 0.28% can be assumed based on historic data of increase in products that could be fixed between 2014 and 2021. The 0.28% is the assumed annual average increase rate of repair based on successful repair rates between 2014 (54.74%) and 2021 (57.72%). The data covers 40 popular consumer goods including electr(on)ic and non-electr(on)ic products, It is reasonable to assume that repair rates will continue to grow in the next 15 years given the expanding scope of ecodesign legislation and reparability rules under EU law.

will mainly be driven by more successful repair outcomes, because the technical obstacles to repair will decrease in the next 15 years. More products fixed means longer consumption lifetime, less prematurely discarded products and potentially 1.5 billion avoided new product purchases by 2037. Better reparability is therefore expected to contribute to a decrease in the scale of the problem.

Manufacturers and sellers: EU initiatives encouraging more sustainable consumption on the supply and demand side will lead to manufacturing more sustainable products. European producers, subject to relevant ecodesign requirements, will increasingly invest in more durable and reparable products. The importance of reparability is likely to grow as more product-specific reparability rules will be adopted. Market practices may also evolve towards more reparability, based on standards. This expected shift towards sustainable product design will diminish the importance of supply-related drivers that hinder repair which are beyond the scope of this initiative. This is also likely to encourage businesses to refurbish more goods, which could be beneficial for parts of the repair sector. However, as long as consumers prematurely dispose of their goods and need new replacement goods, manufacturers and sellers will still respond to consumer demand as a result of discarding repairable goods before their lifetime is achieved.

Most repair businesses (mainly SMEs[120]) will depend on consumers' decisions whether to repair their product or replace/buy a new one. Even if more repairable products are placed on the market and more consumers buy them, defects in these products will still occur. These include non-conformity defects existing at delivery (covered by the legal guarantee), as well as defects due to consumer's use or wear and tear (beyond the legal guarantee). As long as consumers replace defective products (falling under the legal guarantee) or dispose of defective products prematurely without repairing them (beyond the legal guarantee), repairers will miss out on forgone repair services (as subcontractors in the scenario of problem 1 and in direct consumer repair service contracts in the scenario of problem 2). Repair actors, such as repair cafés, will not be able to cover consumer demand, despite the fact they are well placed to fix defects, especially for non-electronic products[121], and thus improve competition in the sector.

On the demand side, the ECGT will encourage consumers towards more sustainable consumption by helping them to buy more durable and reparable products. Having bought such products, consumers could subsequently be more willing to repair them. However, most after-sales drivers that influence consumer behaviour and dis-incentivise repair will still

[120] 82% of repair services employees in the EU work for SMEs.

[121] The average success rate of repair of a wide range of electr(on)ic and non-electr(on)ic products in repair cafés was 63%, while the repair rate for non-electronic products was 85%. M. Postma, S. Boer, C. Zeeland: Repair Monitor Analysis 2019, May 2020, p. 17. Available at: RepairMonitor_analysis_2019_05052020_ENGLISH-1.pdf (repaircafe.org).

persist, because they are not tackled by initiatives under the Circular Economy Action Plan. Many consumers are likely still be put off by the hassle or the inconveniences of the repair process or uncertainty about repair price and conditions. These consumers will continue to dispose of repairable goods prematurely, contributing to the problem over the long term.

Consumer attitudes towards repair: As a trend, consumers will still prefer replacement to repair for most consumer goods in the next years.[122] Repair could increase in the future due to a more environmental-conscious attitude and therefore a willingness to repair among younger generations, but the trend to buy new goods to keep in step with fashion or update and upgrade to new technological features is likely to be stronger.

Consumer confidence in the repair market also remains rather low: less than 30% of consumers considers it more likely to repair a defective product rather than replace it. If the market for repair services continues as today, the trend over the next years is unlikely to change significantly.[123] Even with some positive development in the repair market thanks to other related EU initiatives, the consumer-related drivers under this initiative will largely persist.

Consumer attitudes towards refurbished goods: Positive trends are emerging for some product categories such as clothing[124], smartphones[125] and laptops.[126] However, consumers are still likely to be held back by low trust in second-hand and refurbished goods; thus the low willingness[127] of consumers to purchase them is likely to continue.[128] Most consumers are also likely to throw away goods they no longer need, instead of bringing them to refurbishment in the absence of take-back arrangements.

Employment in the repair market in the EU will remain underdeveloped, due to limited consumer demand for repair, thereby limiting the potential for local jobs. Jobs in manufacturing and retail would remain unaffected to the extent that current sales of new goods can be maintained.

Environment: ESPR and ECGT will contribute to an increase in reparability, durability and increased consumption lifetime of a range of consumer goods and thus positively impact the

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[122] IA Study, Section 3.4, Table 3-7: In a representative sample of consumer goods, the majority of consumers are likely to prefer replacing their products to repair in the next 10 years for all sample products, except cars.
[123] IA Study, Section 3.4.
[124] IA Study, Section 3.4, Figures 3.12 Perception of the repair market among consumers.
[125] Counterpoint Research's Global Refurbished Smartphone Tracker (https://www.counterpointresearch.com/global-refurbished-smartphone-market-2021/): Global sales in refurbished smartphones have increased between 2020 and 2021 by 15% globally and by 10% for Europe.
[126] IA Study, Annex 2, Section 2.5 and Section 4.3.
[127] IA Study, Section 3.3: 11-20% do not trust second-hand/refurbished goods (depending on the product category).
[128] IA Study, Section 3.3.

environment. Increased repair will also contribute to the production of spare parts within the EU. Assuming that following the ESPR and ECGT 1.5 billion purchases of new products can be avoided by 2037 based on a continuous increase of repair rates, the CO2 savings by that date will be 47.7 million tons, corresponding to EUR 8 billion. Resource savings will amount to 5 million tons by 2037, corresponding to EUR 2.8 billion. The waste savings are estimated to be 8.7 million tons, which equals EUR 1.4 billion.

Despite these positive developments, the overall problem of premature disposal of repairable consumer goods is tackled only partially by the ESPR and ECGT. Significant amounts of consumer goods will still be discarded prematurely by consumers due to the remaining obstacles influencing the repair decisions and actions in the after-sales context, both within and beyond the legal guarantee. In the current situation, premature disposal of viable consumer goods leads to the use of around 10.5 million tons per year of valuable resources in the EU[129], to around 57 million tons of unnecessary CO2-eq emissions yearly[130] and to the production of unnecessary waste of 7.4 million tons per year in the EU[131]. If these yearly figures are placed in the context of the next 15 years, the environmental savings created by the ESPR and the ECGT due to increased repairs are not enough to take away the negative effects of the overall unsustainable consumption, largely caused by the drivers of this initiative. Negative environmental impacts relating to CO2 emissions, resource depletion and waste will therefore continue as a result of these remaining obstacles.

CLUSTER I: Promoting repair and reuse within the legal guarantee

Impacts of Option 1: Promoting repair within the SGD remedies system

PO1A: Prioritising repair if cheaper than replacement	**PO1B: Making repair the primary remedy**

A. Effectiveness

Both POs will contribute to the specific objective of increasing repairs of viable consumer goods within the legal guarantee by promoting repair over replacement within the remedies system of the SGD. **PO1A** is estimated to lead to an increase in the take-up of repair within the legal guarantee of 74% over 15 years[132]. As more repairs lead to less production of new replacement goods, over 15 years PO1A will have a substantial positive environmental impact compared to the baseline: savings of CO2 emissions of around 5.3 million tons CO2-

[129] IA Study, Section 3.5.5, Table 3-9.
[130] For eight product groups assessed: Mobile/smartphones, televisions, refrigerators, laptops, clothing, shoes, cars and wooden furniture, IA Study, Section 2.1.
[131] IA Study, Section 3.5.5.
[132] The take-up rate results in around 170.1 million avoided new goods over 15 years.

eq (11% increase of CO2 savings), reduced use of new resources by 0.7 million tons (13% increase in resource savings) and waste savings of 1 million tons (12% increase in waste savings).

PO1B is the more restrictive sub-option removing the consumer's choice to request replacement and requires sellers to repair also if it is not the economically reasonable option. However, sellers have the possibility to offer to consumers a replacement product anyway.[133] In practice, this is likely to happen, when replacement is cheaper than repair, especially for low-value goods. In light of the consumer preference for replacement, it is also likely that consumers will agree. Due to this likely practice, the difference between the effectiveness of PO1A and PO1B is expected to be only minimal. It was conservatively assumed that the take-up of PO1B is at least as high as PO1A and that at least as many tons of CO2 emissions, new resources and waste could be saved as under PO1A. In terms of impact on the consumer's decision-making process, both POs do not create incentives but mandate repair by law. By limiting the choice between repair and replacement, the level of consumers' economic rights is moderately reduced in PO1A (which prioritises repair in comparison to replacement) and considerably reduced in PO1B (which makes repair the primary remedy and removes the choice of the consumer). Both POs could entail a potential reduction in consumer trust, if consumers are not able to replace a defective product when a defect becomes apparent early after the product has been bought. However, in the long run both POs are likely to make repair more accepted by consumers as the level of experience with repairs among consumers will increase.

Stakeholder views:[134] A majority of responding stakeholders (54% - 180 out of 331) supported PO1A. While half of responding business stakeholders (50.4% - 53 out of 105) supported it, only a third of responding consumer organisations (30% - 3 out of 10) found the measure to be effective. Three quarters of respondents (75% - 247 out of 311) considered PO1B effective. The measure was overwhelmingly supported by environmental organisations, NGOs and academic/research stakeholders as well as two thirds of business stakeholders (65% - 69 out of 105) and consumer organisations (70% - 7 out of 10). MS that expressed views were overall positive: 7 MS out of 20 supported PO1A and 6 MS supported PO1B. The POs prioritising repair within the remedies system of the SGD were generally considered more effective than the POs providing incentives to consumers to choose repair.

[133] It is a longstanding principle since the CSD of 1999 (Art. 7), which has been taken over by its successor, the SGD (Art. 21), that seller and consumer can agree amicable solutions, once the consumer is aware of the defect and remedies. This principle is an expression of the freedom of contract and is thus maintained.

[134] For this and all sections containing stakeholder views s. Annex 2.

B. Efficiency[135]

Economic impacts: Both POs lead to considerable gains for businesses, in particular producers/traders in the EU due to less replacement products that would be given for free to consumers (total cost savings of EUR 15.6 billion) and for EU repairers due to additional repair activities leading to an increase of EUR 4.9 billion in gross value added (GVA). Traders in the EU will have limited GVA loss of EUR 5.8 billion from missed resales of returned products for refurbishment. Producers and traders in the EU are estimated to have small adjustment costs, with one-off costs of EUR 104.2 million for PO1A and EUR 87.6 million for PO1B and ongoing adjustment costs of EUR 758.1 million (over 15 years) in both POs. Neither of the two POs will influence consumer expenditure.

Social impacts: Both POs could lead to an increase in jobs in the repair sector (~8,000) and to a loss of jobs in EU production and trade (~10,000), which results in a limited net loss (~1,300) over 15 years.

Public administration: Both POs generate moderate implementation and enforcement costs (EUR 28 million for all MS over 15 years). The costs may in practice be lower, as enforcement authorities are familiar with the SGD, will need to adapt to only one change in its rules and there are strong synergies with already ongoing enforcement activities.

C. Coherence

Both POs are coherent with the legal framework in place and would fit in the existing provisions of the SGD. They would adapt consumer remedies for lack of conformity to the needs of the environment. The SGD already limits the consumer's choice if one remedy is impossible or disproportionately costly compared to the other. PO1A as well as PO1B adapt these already existing limitations with a different degree of intensity for achieving the objective of sustainable consumption. Both options will be result in fully harmonised rules ensuring coherence at EU and national level.

Impacts of Option 2: Prolonging the liability period in repair context

PO2A: Incentivising the consumer with a longer liability period to choose repair Variant 1: Additional year for repair only Variant 2: Restarting the liability period for all available remedies	**PO2B: Extending the liability period for repair**

[135] The detailed figures on efficiency for this and subsequent POs are provided in Annex 6. For most of the criteria the figures are the same for both PO1A and PO1B. For PO1B the take up-rate of PO1A has been chosen as the minimum take-up.

A. Effectiveness

Both POs contribute to the specific objective to increase repairs within the legal guarantee by shifting consumer behaviour towards repair.

While **PO2A** increases consumer rights overall, variant 2 increases consumer rights more than variant 1, as it grants consumers both repair and replacement remedies. Variant 2 is the more attractive incentive for consumers compared to variant 1, but – as evidenced by a behavioural experiment – consumers do not seem to act sufficiently on these incentives. Thus, it is estimated to lead to an increase in the take-up of repair of only 12% over 15 years[136]. As PO2A variant 2 would only lead to a limited amount of additional repair, it would have only a limited positive environmental impact over 15 years compared to the baseline, with savings of CO2 emissions, of around 0.9 million tons CO2-eq (1.9% increase of CO2 savings), reduced use of new resources by 0.1 million tons (2% increase in resource savings) and waste savings of 0.2 million tons (2% increase in waste savings). Given that the additional period serving as incentive in variant 1 is limited to repairs only, variant 1 is considered even less effective as an incentive to increase repairs within the legal guarantee than variant 2. In light of this limited impact, it was assumed that this figure is even lower and variant 1 was not even assessed.

PO2B is estimated to lead to an increase in the take-up of repair of 21% over 15 years[137] as consumers would have an extended liability period that allows them to request repair beyond the current two years. However, as the overwhelming majority of defects (96%)[138] dealt with in the SGD (i.e. defects which are present at the time of delivery) appear already during the first two years after delivery, PO2B concerns only a minimal share of defects. Therefore, PO2B would have only a very limited positive environmental impact over 15 years compared to the baseline, with savings of CO2 emissions, of around 0.1 million tons CO2-eq (0.3% increase of CO2 savings), reduced use of new resources by 0.02 million tons and waste savings of 0.03 million ton (<0.01% increase in resource/waste savings).

Stakeholder views: The OPC consulted on PO2A variant 2 (restarting the liability period after repair). 66% (218 out of 331) of all respondents, including in particular responding environmental and consumer organisations, agreed that restarting the liability period after repair would be effective. By contrast, among responding business stakeholders, half of respondents opposed the measure, finding it to be ineffective (50% - 53 out of 105). Only a

[136] The take-up rate results in around 28.7 million avoided new goods.
[137] The take-up rate results in around 5.1 million avoided new goods.
[138] European Commission, Consumer Market Study to support the Fitness Check of EU consumer and marketing law, Final Report, May 2017, Section 1.3.3.2, p. 171, available at https://op.europa.eu/en/publication-detail/-/publication/a8d7ca32-772c-11e7-b2f2-01aa75ed71a1/language-en/format-PDF.

limited number of MS supported PO2A variant 2, while more MS were against or doubtful.[139] As regards PO2B, the OPC also inquired about the measure of providing a longer liability period, but regardless of whether the extension applies only to repair as a remedy (larger scope than in PO2B). Responding consumer organisations strongly supported the measure, while only half of the responding environmental organisations found it effective. By contrast, half of responding business stakeholders (50% - 52 out of 105) did not support the measure.

B. Efficiency

Economic impacts: Over 15 years, PO2A would only have a limited economic impact due to the limited take-up by consumers (i.e. low number of extended liability periods) and limited number of defects becoming apparent after 2 years. Producers and traders in the EU would have total costs savings of EUR 2.6 billion following from less replacement with new goods, because some consumers choose repair instead of replacement within the liability period. However, they will encounter some adjustment costs – EUR 87.6 million one-off costs and EUR 2 billion ongoing costs – mainly for providing additional remedies in the extended liability period. Besides, their GVA would be reduced due to loss of sales of new goods as consumers benefit from a longer liability period (EUR 95.3 million for producers and EUR 727.5 million for traders). Due to an increase of repair activities, EU repairers will be able to grow their business to a certain extent (EUR 835.5 million additional GVA). Some consumers will gain (EUR 5.4 billion) when benefiting from a restarting liability period.

The economic impact of PO2B is even more limited, because it concerns a very small number of cases (only limited number of defects in the third year): Over 15 years, it would lead to reduced GVA of EUR 13.5 million for producers and 54.8 million for traders due to lost consumer sales of new goods in the extended liability period. Producers and traders in the EU will have minimal adjustment costs (EUR 43.8 million one-off costs and EUR 973.6 million ongoing costs over 15 years), among others, due to providing additional free repair in the third year. PO2B would lead to minimal gains for repairers (increase of EUR 137 million in GVA) and minimal gains for consumers (EUR 406.3 million) thanks to a longer liability period for repair.

Social impacts: For both POs employment in the repair sector in the EU (in-house or third party) could increase minimally due to additional repairs (~1,400 jobs for PO2A and ~200 for PO2B) over 15 years. Both POs might lead to negligible loss of jobs in production (~200 for PO2A and ~20 for PO2B) and minimal losses in sales (~1,200 for PO2A and ~100 for PO2B) over 15 years, due to reduced consumer purchases, which reduce companies' turnover and GVA, leading to personnel cuts in some companies.

[139] A limited number of MS (3 out of 19 MS who took the floor) were supportive towards PO2A, variant 2, while twice as many MS (6 out of 19) were against or doubtful about this measure.

Public administration: Both POs will generate moderate enforcement and implementation costs (EUR 28.2 million total average for all EU MS over 15 years). In practice, the costs may be lower, as enforcement authorities are familiar with the SGD, would need to adapt to only one change in the rules and there are strong synergies with ongoing enforcement activities.

C. Coherence

Both POs are coherent with the legal framework in place and would fit in existing provisions of the SGD by extending the liability period in different ways. Both options will result in fully harmonised rules ensuring coherence at EU and national level, while contributing to sustainable consumption.

Impacts of Option 3: Replacement with refurbished goods

Sub-option 3A: only during the extended liability period (under PO2B)	Sub-option 3B: from the second year of the liability period

A. Effectiveness

Both **PO3A and 3B** will contribute to the specific objective of increasing the reuse of goods under the legal guarantee. PO3 gives additional possibilities to the seller to remedy the defects appearing during the liability period under the legal guarantee. Consumers would not have the possibility to refuse replacement by a refurbished product, so the consumers' willingness to take-up is not a decisive factor of this PO. It is difficult to give precise estimates on how many businesses would actually use the opportunity to replace with refurbished products. As this possibility reduces costs for sellers compared to offering new products, they are likely to choose this option when possible, i.e. when refurbished products are available. In the OPC, 42-43% of businesses perceived this measure as having high to very high potential. PO3A would somewhat increase consumer rights because it introduces an additional remedy in the extended liability period. It will have a minimal impact in practice though, as the number of defects appearing in the third year of extended liability is estimated to be minimal[140]. PO3B would reduce consumer rights compared to the current SGD remedies system in the second year of the liability period. It would have a bigger,

[140] Based on the assumed take-up of 42.5% and on the percentage of defects that are likely to occur in the third year of an extended liability period, the option is estimated to lead to avoided purchases of 10.4 million units over 15 years.

though still limited impact, as more non-conformity defects appear in the second year, but their number is still small.[141]

Both POs will produce positive environmental impacts, since the increased use of refurbished goods as replacements reduces the amount of new goods produced and purchased and will lead to an extended average consumption lifetime of consumer goods. Given the rather small share of defects concerned under both POs, the positive impact on CO2 emissions, use of resources and waste production will be minimal over 15 years. In particular, these measures will entail savings of CO2 emissions of around 0.3 (PO3A) and 0.7 (PO3B) million tons CO2-eq (respectively 0.61% and 1.37% increase of CO2 savings), reduced use of new resources by 0.03 (PO3A) and 0.07 (PO3B) million tons (1% increase in resource savings in both cases) and waste savings of 0.05 (PO3A) and 0.1 (PO3B) million tons (1% increase in waste savings in both cases).

Stakeholder views: The OPC did not distinguish between the PO3A and 3B, but inquired about replacement with refurbished goods in general. Half of all responding stakeholders agreed on the effectiveness of the measure (51% - 170 out of 331). 76% (16 out of 21) of responding environmental organisations and NGOs and half of responding business stakeholders (48.4% - 51 out of 105) found the measure effective. However, the majority of consumer organisations did not support this option (60% - 6 out of 10). A few MS (3 out of 20 which expressed views) were supportive, while 6 MS showed some conditional support, e.g. subject to consumers' agreement and putting in place certain safeguards.[142]

B. Efficiency

Economic impacts: PO3A does not result in cost savings for businesses as the liability period will be longer under this option. Businesses will face minimal adjustment costs, one-off costs of EUR 150.6 million and ongoing costs of EUR 78 million over 15 years for providing refurbished goods as replacement. The costs are limited as only a minimal number of defects appears in the third year. Providing additional remedies during the extended liability period causes a minimal decrease in GVA of EUR 27.3 million for producers in the EU and EUR 111 million for traders in the EU, as less new products would be bought. The EU repair and refurbishment sector will have a EUR 277.3 million increase in GVA under PO3A. PO3A would bring consumer savings of EUR 822.2 million over 15 years, because consumers would get free replacement with refurbished goods in the extended liability period under this option.

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[141] Based on this assumed take-up of 42.5% and on the percentage of defects that are likely to occur in the second year of the legal guarantee it is estimated to lead to avoided purchases of 23.4 million units over the same period.

[142] Out of the 20 MS which expressed views on this option in a MS' workshop, 3 MS were reluctant towards the measure; 8 MS did not have a position yet.

PO3B would bring total cost savings of EUR 2 billion for producers/traders in the EU over 15 years, as they would not have to replace defective goods with new products from the second year of the liability period. They would only face minimal adjustment costs (one-off EUR 150.6 million, EUR 175 million ongoing adjustment costs for providing refurbished goods). The EU repair and refurbishment sector would have a EUR 623.8 million increase in GVA under PO3B. Unlike PO3A, PO3B will not have any influence on consumer savings as the replacement with refurbished goods takes place in the second year of the liability period.

Social impacts: PO3 could lead to a small increase in jobs in the repair and refurbishment industry in the next 15 years (~500 for PO3A and ~1,000 for PO3B). Job losses for producers and traders will be negligible (overall ~200 for PO3A) and none for PO3B, as replacement with refurbished goods instead of new ones within the same period is unlikely to affect the number of personnel.

Public administration: Both POs would lead to similar enforcement costs as under PO1 and 2 (EUR 28.2 million total average costs for all MS over 15 years) as they concern the same range of economic operators (sellers of consumer goods). Strong synergies are possible with the enforcement activities relating to the SGD and the costs may be lower in practice, if such synergies are implemented.

C. Coherence

PO3 would be coherent with the existing legal frameworks, especially with the SGD and the ESPR. It would be implemented by amending the SGD. Currently, only replacement with new products is possible under the SGD. Both sub-options of PO3 would add an additional dimension on refurbished goods to the existing remedies system. It will also build on the established definition of refurbishment in the ESPR. By strengthening the legal framework on refurbished goods, these POs are coherent also with the broader objectives of the ESPR and the Circular Economy Action Plan in the context of the European Green Deal. However, consumers may not get coherent outcomes in similar circumstances in all cases, because sellers may not always have refurbished goods to offer as a replacement.

Impacts of Option 4: Aligning the liability period for refurbished goods

A. Effectiveness

PO4 will contribute to the specific objective of increasing the reuse of viable consumer goods in the context of the legal guarantee. PO4 will have a moderate positive impact on consumers' decision-making on refurbished goods at the point of sale and is estimated to lead to an increase of the take-up of refurbished goods of 13.3%[143]. The longer liability period will improve consumer protection and can increase consumer trust in the MS for which this

[143] The take-up rate results in around 30.8 million avoided purchases of new goods over 15 years.

measure is relevant. It may reduce quality concerns related to refurbished goods, thus increasing demand. This in turn could encourage the supply of refurbished products. On the other hand, the effectiveness of PO4 is limited due to the costs for traders, resulting from the longer liability period, as they would have to finance additional remedies for another year. This may discourage some traders from adding refurbished products to their stock, while putting extra cost burdens on existing trader in refurbished goods. The effectiveness of PO4 is also limited because it would extend the liability period for refurbished goods only in the half of the internal market[144] where a shorter liability period is possible.

PO4 will produce a positive environmental impact, as a more active market for refurbished products will lead to reduced production and sales of new products and to an extended average lifetime of consumer goods that are refurbished. Over 15 years, the environmental impact will be limited: savings of CO2 emissions of around 1 million tons CO2-eq (2.02% increase of CO2 savings), reduced use of new resources by EUR 0.1 million tons (2% increase in resource savings) and waste savings of EUR 0.2 million tons (2% increase in waste savings).

Stakeholder views: In the OPC, aligning the liability period of new and refurbished goods was supported by 62% (206 out of 331) of responding stakeholders. Views among stakeholder categories differed. 70% (7 out of 10) of responding consumer organisations found the measure effective, while only 38% (40 out of 105) of business stakeholders did. Only 37% (9 out of 24) of environmental organisations, NGOs and academic/research institutions considered the measure effective. Only a few MS (5 out of 19 who expressed views in the MS workshop) were supportive of the alignment of liability period of second-hand goods and new goods[145].

B. Efficiency

Economic impacts: In the next 15 years producers/traders in the EU would have costs of EUR 776.5 million for financing additional remedies for refurbished goods in the extended liability period. Producers and traders in the EU would have a small decrease in GVA of EUR 102.5 million and EUR 200.2 million, respectively, due to forgone sales of products, which consumers would not buy, while they benefit from free remedies in the extended liability period for refurbished goods. Traders in the EU would sell more refurbished goods, but sales of new goods would decrease, the two effects almost balancing each other out. Producers and traders in the EU would have adjustment costs of EUR 91.3 million (one-off)

[144] 13 MS have used Art. 10(6) SGD allowing the seller and the consumer to agree to a shorter liability period for second-hand goods, while 14 MS already have the same liability period. PO4 has thus an effect only in those 13 MS.

[145] The workshop with the MS did not distinguish between second-hand goods and refurbished goods when discussing about aligning the liability periods.

and EUR 137.2 million (ongoing) over 15 years. These costs for financing extra-remedies for refurbished goods for an additional year are likely to weigh disproportionately high on SME traders in refurbished goods, who already operate at relatively low margins as the purchase price of refurbished goods is significantly lower than of news ones. PO4 would increase GVA of the repair/refurbishment sector by EUR 899 million. Consumers would benefit from PO4, as it would lead to a EUR 1.5 billion consumer savings due to the longer liability period for refurbished goods. All in all, the economic impacts are small as the measure only concerns half the MS.

Social impacts: PO4 would have a medium positive impact on the demand for EU repair services and increase employment in this sector in the next 15 years (~1,500 jobs). Meanwhile PO4 will lead to minimal losses of jobs for producers (~200) and traders (~300).

Public administration: Enforcement and implementation costs will be minimal (EUR 0.8 million total average for the whole of the EU over 15 years) as they concern only a small number of economic operators and changes in the legal framework only for some MS. Furthermore, the enforcement authorities can achieve strong synergies with ongoing enforcement activities relating to the SGD.

C. Coherence

PO4 would be coherent with the existing EU framework, especially with the SGD and the ESPR. It would be implemented through amending the SGD, and would bring more coherence in the Single Market by aligning liability periods among Member States. It would also build on the established definition of refurbishment in ESPR. By strengthening the legal framework on refurbished goods, this PO is coherent also with the broader objectives of the ESPR and the Circular Economy Action Plan in the context of the European Green Deal.

CLUSTER II: Facilitating and encouraging repair and reuse beyond the legal guarantee

All POs in this cluster contribute to the general objective of sustainable consumption and the specific objective of increasing repair and reuse of viable consumer goods beyond the legal guarantee. As the larger share of defects occur beyond the legal guarantee (e.g. due to wear and tear or consumers own handling),[146] the increase of repair will have a significant effect on the number of repaired goods. However, irrespective of the effectiveness of POs in this cluster, in certain situations most consumers would still refrain from repair, because this is not an economically advantageous choice. This is the case particularly, where the repair price is above the range of 17%-27% of the value of the product[147], the age of the product

[146] IA Study, Annex 1.4, Consumer Survey, Section 3, p. 115, QC4.
[147] IA Study, Section 3.1.

increases[148] and when low value goods are concerned.[149] The POs are expected to influence the behaviour of consumers in particular in the segments of reluctant replacers and reluctant repairers by removing obstacles. To a smaller extent, the POs could also encourage enthusiastic replacers and enthusiastic repairers to repair more, by making repair easier and more accessible.

Impacts of Option 5: Information on where to repair

PO5A: Obligation on producers to inform where to repair	PO5B: Matchmaking platform on repair at national level	PO5C: Matchmaking platform on repair at EU level

A. Effectiveness

All POs contribute to the specific objective of increasing repair and reuse of viable consumer goods beyond the legal guarantee. All POs encourage repair by making available repair services more transparent in terms of location, price and general conditions. By helping to find repairers offering services that suit the consumers' needs, they facilitate consumer decision-making on repair and improve consumer protection by increasing transparency on key decision-making factors for repair. The POs do not have any negative impacts on consumers. All POs will have positive environmental effects. More repaired goods means a longer lifespan of repaired products and less new replacement products sold and produced.

Under **PO5A**, producers would inform on their websites whether they provide repair services and to what extent (e.g. for which products/models) and, if combined with PO6C or 6D, whether they have an obligation to repair a product. This PO would partially tackle the driver on availability and transparency of repair services. Thus, it would facilitate consumer-decision making and somewhat increase consumer protection by more transparency on available repair services. PO5A has rather limited positive environmental impacts over 15 years, because it would lead to a relatively small increase in repair (take-up increase of 2%) and avoided purchases of products (25.1 million units). The respective savings of CO2 emissions are 0.7 million tons CO2-eq (2% increase compared to the baseline), the use of new resources is reduced by 0.08 million tons (2% increase), and the waste savings are 0.1 million tons (2% increase).

PO5B would inform consumers about the availability of repair providers and make key conditions of repair (e.g. average duration, price ranges) more transparent. The information would cover a wide range of repair services as it would show availability of relevant repairers in a given MS and cover the full range of consumer goods. It would facilitate consumer

[148] IA Study, Annex 1.
[149] IA Study, Section 3.3.

decision-making and improve protection, because it would cover key factors for consumer decisions to repair, as well as a wide range of products and repair services. It is estimated to increase the take-up of repair by 6.7%[150]. Over 15 years this results in a moderate positive impact on the environment: savings of CO2 emissions are 2.5 million tons CO2-eq (5% increase); the use of resources is reduced by 0.3 million tons (5% increase) and waste savings of 0.5 million tons (5% increase).

PO5C would make conditions of repair (e.g. average duration, price ranges) more transparent. The EU level platform (EPREL+) would show relevant repairers across all MS, but the scope of repair services on EPREL+ would be limited to energy-labelled goods. The effectiveness of this PO would be enhanced by synergies with current functionalities of EPREL, which enables consumers to get product-related information by scanning the energy label. This information would then be complemented by a section on 'repair this product', raising awareness of repair possibilities, whenever consumers consult EPREL+ and encouraging them to choose repair. It would therefore facilitate consumer decision-making on repair and improve protection, but only to a limited degree, due to the scope limitation of this option. It is estimated to increase the take-up of repair by 6.7%. Due to the limited product scope of this option, this translates[151] into less avoided purchases than under PO5B, i.e. 17.4 million units. The environmental impacts over 15 years are moderately positive: the savings of CO2 emissions are 1.8 million tons CO2-eq (4% increase); there are 0.09 million tons resource savings (2% increase) and waste savings of 0.1 million (1% increase).

Stakeholder views*:* These options are largely based on consumer attitudes and draw on experiences in other fields.[152] Consumer behaviour suggests that transparency on aspects of repair services, including price, conditions, quality assurance and availability of repair services relevant decision-making factor for repair decisions.[153] When combined, they can have an even higher impact on consumer decisions to repair.[154]

B. Efficiency

Economic impacts: Increased repair means longer lifespan of repaired products, leading to a decrease in sales of new products. Thus, over 15 years, PO5A would lead to EUR 62.2

[150] This take-up rate translates into avoided purchases of 84 million units.

[151] Based on an increase in take-up rate of 6.25%, which is the same as under PO3B, based on a conservative assumption for 15 years.

[152] The OPC did not consult on these POs; they were introduced later in response to evidence from the IA Study.

[153] IA Study, Annex 1.5.

[154] Feedback from producers of home appliances also suggests that more visibility of repair services is warranted to encourage consumer demand. E.g. APPLiA calls for the introduction of a European registry of professional repairers (Position paper on the Commission initiative on the sustainable consumption of goods - promoting repair and reuse, April 2022, p. 2, available at https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13150-Sustainable-consumption-of-goods-promoting-repair-and-reuse/F3011268_en).

million decrease in GVA for producers in the EU and EUR 286.6 million for traders in the EU due to forgone sales of new goods. The platform options PO5B and PO5C create bigger losses for producers and traders, because they increase repair rates more and result in more avoided consumer purchases. Producers in the EU would have decreased GVA of EUR 208.3 million under PO5B and EUR 108.2 million under PO5C. Traders in the EU would lose EUR 960.1 million (PO5B) and EUR 757.2 million (PO5C). The business adjustment costs for producers and traders in the EU would be minimal under PO5A (EUR 106.6 million one-off costs and EUR 160 million ongoing costs over 15 years). It is assumed that PO5B and PO5C create negligible business adjustment and administrative costs, as registration on the platform would be voluntary and would be covered by the current costs for running a business by interested companies. The losses of GVA for producers and traders would not be evenly spread, as those focusing on ecodesign products may gain a competitive advantage because consumers are increasingly likely to prefer sustainable repairable products. Overall, traders in the EU would lose more than producers in the EU, as many of the goods they are selling are produced by third country producers.

All these measures are beneficial for the EU repair sector due to the increased demand for repair services. Independent repairers, producers and traders offering spare parts and repair services would have additional revenue. The increase in GVA for EU repairers is EUR 722.6 million under PO5A, EUR 2.4 billion under PO5B and EUR 1.3 billion under PO5C. All options will result in consumer savings as consumers will spend less on replacement products[155]. The expected consumer savings over 15 years are EUR 10.5 billion for PO5A; EUR 35.2 billion for PO5B and EUR 21.7 billion for PO5C.

Social impacts: All POs are likely to have an overall net limited positive impact on employment in the repair sector in the next 15 years. Minimal jobs would be lost in production in the EU (between ~100 and ~400, depending on the PO) due to a decrease in demand for new goods by consumers to replace defective goods that would be repaired. More jobs would be lost in trade (between ~500 and ~1,600 depending on the PO), because traders in the EU would see a decrease in sales also of goods imported from third countries. Increased demand for repair would secure and create more jobs in repair (between ~1,200 and ~4,000 depending on the PO). This would also benefit local communities, as many repairers are SMEs operating locally. New local employment in repair could benefit job seekers. Especially for repair activities that do not require long-term specialised training, short-term training courses could offer inclusive opportunities to job seekers with various backgrounds. Increased economic activity would have indirect positive benefits on local communities.

Public administration: Public administration would incur moderate enforcement and implementation costs for monitoring compliance with PO5A (EUR 12.2 million total average for the EU for 15 years), as the PO only concerns producers. Medium implementation costs for IT development and ongoing costs for maintenance and updates would be necessary for

[155] The scale of consumer savings will depend on the take-up of POs by businesses and consumers.

PO5B (EUR 32 million total average for the EU for 15 years)[156]. These costs are rather minimal for PO5C as it concerns only one platform at EU level (EUR 4.5 million total average for the EU for 15 years)[157]. These costs for the creation of the platform options are factored into the public administration costs under 'enforcement and implementation costs for public administration' of options.[158]

C. Coherence

All POs would contribute to sustainable consumption, the circular economy and European Green Deal by increasing repair behaviours among consumers. They would indirectly also impact producers' circular behaviour. PO5A is coherent with EU sectorial ecodesign legislation, which introduces such an information requirement for specific categories of products. While product specific reparability rules will remain restricted in scope to specific product groups, this PO will expand the information requirement on repair services horizontally to consumer goods in general. PO5B and 5C contribute to greater digitalisation in the repair sector, in line with the digital and interoperable by default principle and use the advantages of the digital transition to promote the green transition objective. While MS have flexibility to implement PO5B in their national context, this option is somewhat more coherent than PO5C when it comes EU consumer law, because it takes a horizontal approach covering all consumer goods. PO5C brings coherence at EU level through a single repair platform, but has a more restricted scope compared to EU consumer law, because it builds on the existing EU platform EPREL, which is relevant for energy-related products.

Impacts of Option 6: Enhance transparency/conditions for repair

PO6A: Voluntary commitments of business at EU-level	**PO6B: Obligation to issue a repair quote on price and conditions for repair in a standardised form**	**PO6C: Obligation to repair goods that are subject to reparability requirements under EU law (against a price)**	**PO6D: Obligation to repair all products (against a price)**

A. Effectiveness

[156] The total cost estimate of EUR 32 million comprises one-off costs for the creation of the platform for the 27 MS (EUR 8.6 million) and total ongoing costs for its maintenance over 15 years for the 27 MS (EUR 23.4 million).

[157] The total costs of EUR 4.5 million comprises one-off costs for the creation of a single platform at EU level (EUR 1.5 million) and total ongoing costs for its management at EU level over 15 years (EUR 3 million).

[158] These costs are fully reflected in the CBA and MCA under the sub-criterion of 'public administration' costs, which comprise both enforcement and implementation costs of options.

All POs contribute to the specific objective of increasing repair and reuse of viable consumer goods beyond the legal guarantee. All POs facilitate consumer decision-making on repair, by enhancing consumer confidence and trust in the quality of repair services. While PO6A envisages a voluntary quality standard to increase consumer trust, PO6B, 6C and 6D go further to strengthen consumer rights by creating new rights through regulatory intervention. All POs will have positive environmental effects. More repaired goods means less new replacement products bought and produced. PO6A would have a small positive impact, PO6B and PO6C a substantial one and PO6D a high positive impact on the environment.

PO6A would facilitate consumer decision-making on repair by addressing quality and to some extent inconvenience-related concerns. It would reassure consumers about the quality and ease of repair through an EU standard, visualised by an 'easy repair' label. This standard would cover repair of all consumer goods, thus extending its useful impact to all sectors contributing to an increase in consumer trust. The take-up and respective effectiveness are limited due to the voluntary nature for business.[159] It is estimated to lead to a 4% increase in repair take-up by consumers. This translates into avoided purchases of 50.1 million units in the next 15 years. This corresponds to savings of CO2 emissions of 1.5 million tons CO2-eq (3% increase compared to the baseline); reduced use of new resources by 0.12 million tons (3% increase) and waste savings of 0.3 million tons (3% increase).

Stakeholder views: A slight majority of responding stakeholders (52.5% – 174 out of 331) supported a voluntary commitment by business, while 28% (94 out of 331) found it ineffective. A slight majority of business stakeholders considered the measure effective (52.5% - 55 out of 105), while a clear majority of responding environmental organisations (75% - 6 out of 8), as well as half of responding consumer organisations (50% 5 out of 10) opposed it. The views of public authority respondents were split among neutral (36% - 4 out of 11) and ineffective (45% - 5 out of 11).

PO6B would tackle to some extent three drivers that deter consumers from repair beyond the legal guarantee: lack of transparency on conditions, inconvenience factors and price of repair. It would facilitate consumer decision-making and trust by increased transparency on repair conditions, including key inconvenience factors and price. Moreover, this PO provides the highest transparency on price by an individualised and binding price quote, thus effectively reacting to a key factor for repair decisions. It would cover repair for all consumer goods but its effectiveness still depends on the consumers' decisions. This PO is estimated to increase the take-up of repair beyond the legal guarantee by 13.4%. In the next 15 years this translates into avoided purchases of 167.9 million units - a substantial contribution to sustainable consumption. This corresponds to significant savings of CO2 emissions of 5 million tons

[159] The actual take-up will depend on the content of the standard. As in the OPC a slight majority of business respondents considered the measure effective, the business take-up is assumed to be 30-50%.

CO2-eq (10% increase in CO2 savings as compared to the baseline), reduced use of new resources by 0.5 million tons (10% increase in resource savings) and waste savings of 0.9 million tons (10% increase in waste savings).

Stakeholder views: Data from a behavioural experiment suggests that consumers are more likely to repair when they are given all key elements for a decision to repair: price, duration and conditions of repair.[160]

PO6C would increase consumer trust and protection by strengthening consumer rights through a regulatory intervention, creating an enforceable consumer right. Moreover, it would improve availability of repair services by requiring manufacturers to provide repair. This right can realistically be made enforceable only vis-à-vis the producer. Sellers may not have repair facilities and independent repairers may not have access to all necessary repair information, tools (including software) or spare parts. It is therefore likely to serve as a safety net where consumers cannot find a more advantageous repair service in the market. The effect of this PO will be subject to the scope of goods with reparability requirements in EU law. Some consumers would still be deterred by other factors, notably those relating to convenience and other conditions of repair, which this PO does not address. This PO would facilitate consumer decision-making to repair and is estimated to increase the take-up of repair by consumers beyond the legal guarantee by 12.1%[161]. As this option is only relevant for products subject to reparability requirements, the relatively high take-up rate in the next 15 years translates into avoided purchases of 31.4 million units. This corresponds to savings of CO2 emissions of 3.2 million tons CO2-eq (7% increase in CO2 savings as compared to the baseline), reduced use of new resources by 0.2 million tons (3% increase in resource savings) and waste savings of 0.2 million tons (2% increase).

PO6D has similar effects as PO6C, but it covers all sectors and consumer products. It is estimated to increase the take-up of repair by consumers by 15.2%.[162] As the scope of this option covers all goods, in the next 15 years this translates into avoided purchases of 190.5 million units - a substantial contribution to sustainable consumption. This corresponds to

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[160] IA Study, Annex 1, Data Collection, Section 3.3, Figure 69: When given all those key elements for a decision to repair, the likelihood to repair a smartphone is 0.67/1. For instance, repair chances drop to 0.37/1 when the price is missing.

[161] The rate is estimated based on a conservative scenario in a behavioural experiment for a sample of popular electr(on)ic goods. PO6C mainly concerns electr(on)ic goods for which reparability requirements currently exist in EU law or are expected. As consumer electr(on)ic goods are already popular repair items, the potential for increase in repair in this category is lower compared less popular repair items.

[162] The rate is estimated based on a conservative scenario in a behavioural experiment for a sample of popular electr(on)ic and non-electronic goods. The estimated increase in repair rates for PO6D is somewhat higher than for PO6C, as its scope covers all goods and non-electronic goods seem to have a higher potential for growth in repair as current repair rates are comparatively lower in this category.

savings of CO2 emissions of 5.7 million tons CO2-eq (12% increase in CO2 savings as compared to the baseline), reduced use of new resources by 0.6 million tons (12% increase) and waste savings of and 1 million tons (12% increase).

Stakeholder views for PO6C and 6D: The OPC addressed stakeholders' views on a possible obligation to repair in general. A slight majority of respondents (54.3% - 180 out of 331), including all responding environmental NGOs, most consumers organisations and citizens, agreed that a possible new obligation should apply to all consumer product categories, while only 24% (25 out of 105) of business stakeholders shared this view. As to the features of this obligation, the majority of respondents agreed that its duration should depend on the type of product (60% - 201 out of 331) and that a minimum duration should be set by law (52.5% - 174 out of 331). A majority of respondents agreed that the new obligation to repair should apply to wear and tear defects (58% - 193 out of 331), where defects occur after the legal guarantee (52.5% - 174 out of 331) and almost a third of all respondents thought it should cover defects the consumer causes before the end of the legal guarantee (32% - 107 out of 331). Most stakeholders preferred that the repair was done by the producer (39.5% - 131 out of 331). As to the price of repair, almost a third of respondents (32% - 106 out of 331) agreed that the price of repair should cover the cost of repair and include a reasonable margin of profit; an almost equal share (30% - 99 out of 331) thought it should only cover costs of the repair (e.g. labour costs, cost of spare parts). A clear majority of business stakeholders (62% - 65 out of 105) thought the price should include a reasonable margin of profit.

B. Efficiency

Economic impacts: All POs produce losses for traders and producers in the EU and gains for EU repairers.

In the next 15 years, traders in the EU would experience losses due to decreased sales of new products. PO6A, which is non-binding and would lead to a moderate increase in repair, will cause EUR 573.2 million losses in GVA to traders in the EU. PO6B and PO6D are binding and concern all products and thus result in higher losses respectively of 1.9 billion (PO6B) and EUR 2.2 billion under (PO6D). PO6C is also binding, but concerns a smaller range of products (subject to EU reparability requirements) and thus results in smaller losses (EUR 1.4 billion). Producers in the EU would also lose due to decreased sales of new products, but the losses would be comparatively lower than for traders, because EU production accounts for a small share of all products sold in the EU. In the next 15 years producers in the EU would lose in GVA EUR 124.4 million under PO6A, EUR 416.6 million under PO6B, EUR 195.3 million under PO6C and EUR 472.6 million under PO6D. In the context of the obligations to repair (PO6C and 6D), producers in the EU would gain also benefits, as they would obtain profit from the repairs they offer. The obligations to repair would require the producers to

create repair facilities, invest in existing facilities or sub-contract such services[163]. Producers would share a part of the repair sector gains from repair services, as they would be provided against a price.[164] Producers and traders in the EU will face adjustment and administrative costs of various magnitude under the different POs. The costs for producers in the EU can be estimated concretely for PO6C and PO6D, as producers are the only addresses of these POs. As for PO6A and PO6B, the costs for repairers presented below concern all repair actors, including producers and traders in the EU providing repair services and independent repairers. Under PO6C, producers in the EU would face one-off adjustment costs of EUR 45.0 million and ongoing moderate adjustment costs of EUR 582.1 million over 15 years. Producers in the EU would also have small one-off administrative costs of EUR 69.8 million under PO6C. Under PO6D, producers in the EU would face one-off adjustment costs of EUR 674.4 million producers and significant ongoing adjustment costs EUR 3.3 billion. They would also have one-off administrative costs of EUR 161.8 million.

EU repairers would have substantial gains in GVA under each PO in the next 15 years. They amount to EUR 1.4 billion under PO6A, EUR 4.8 billion under PO6B, EUR 2.3 billion under PO6C, EUR 5.5 billion under PO6D. In the context of the obligations to repair (PO6C and 6D), it is however difficult to estimate to what extent the beneficial effect for the repair sector falls to the producers and to the independent repairers. While repairers affiliated with producers would have increased revenue because of the obligation to repair, independent repairers who are not sub-contractors of producers might lose market share. Third-country producers would also be subject to a repair obligation. Therefore it is likely that affiliations with EU repairers would be the most convenient solution for them to comply with this obligation, thus bringing increased benefits in the European repair sector. Under PO6B, repair service providers would have considerable adjustment costs of EUR 475.4 million (one-off) and EUR 5.9 billion (ongoing), assuming that they decide to bear the costs for the quote and provide it for free to consumers to gain a competitive advantage and more customers.

As for consumer savings, PO6A has few positive impacts (EUR 21 billion) following from a rather limited increase in repair take-up. On the other hand, PO6B (70.5 billion), PO6C (39.2 billion) and PO6D (79.9 billion) have more significant positive impact on consumer savings. The respective consumer savings would be fed back into the economy (e.g. as purchases of more (sustainable) products and services or as savings which could be used as credits for new investments or contribute to capital reserves reinforcing the financial system).

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[163] The impact of these measures depends on their scope and on the current business model of producers, i.e. if they already have extensive repair networks or not. See Annex 6 for more detail.

[164] The percentage of gains from repair services cannot be estimated in a robust manner, as producers could set-up in-house repair services, sub-contract repair activities to independent repairers or use a mix of the two models in different Member States where they operate. The revenue from assumed future sales of spare parts is factored into the GVA.

Social impacts: All POs lead to loss of jobs in EU trade and production, but bigger employment gains in the repair sector, which result in a net benefit for employment in the next 15 years. The negative impact is higher in trade due to a larger decrease in sales of new products by traders in the EU, who largely sell goods from third countries (~1000 for PO6A, ~2,300 for PO6C, ~3,200 for PO6B and ~3,600 PO6D). Jobs in EU production would also decrease, but on a much smaller scale (~200 for PO6A, ~800 for PO6B, ~300 for PO6C, ~900 for PO6D). All POs would create more new jobs in the EU repair sector (~2,400 for PO6A, ~8,200 for PO6B, ~4,500 for PO6C, ~9,300 for PO6D). Some of the repair jobs created under PO 6C and PO 6D may be in-house repair jobs at producers or at sub-contracted independent repairers. This would depend on producers' approaches to developing repair services for their brand, which may vary.

Public administration: Enforcement costs for public administration in PO6A will be negligible (EUR 2.5 million total average for the EU for 15 years) as enforcement authorities are not required to enforce voluntary commitments. However, consumers may occasionally alert them to possible cases of non-compliance via consumer complaints. In PO6B enforcement authorities would need to verify compliance of repairers, leading to moderate enforcement costs (EUR 26.4 million total average for the EU for 15 years). PO6C would concern only producers who are subject to reparability requirements under EU law, which would only cause negligible enforcement costs (EUR 4.5 million total average for the EU for 15 years). In PO6D, enforcement costs would be higher than in PO6C (EUR 12.3 million total average for the EU for 15 years) as enforcement authorities would have to verify compliance by all producers.

C. Coherence

All POs have strong synergies with the current and future ecodesign measures. The POs will reinforce the ecodesign requirements concerning the production phase, by increasing demand for repair of ecodesign goods in the after-sales phase. They are also coherent with the ECGT, which facilitates sustainable consumer choices at the point of sale before purchasing a product. By choosing more reparable and durable products, more consumers would be motivated to avail themselves of repair opportunities under PO6A and 6B and invoke the obligation to repair defects under PO6C and 6D.

All POs would contribute to the circular economy and the European Green Deal by increasing repair among consumers. They would indirectly also impact sellers' and producers' circular behaviour. The POs will also contribute to the Commission priority of an Economy that works for people, by enhancing consumer rights and creating more local jobs in the repair sector in the EU. PO6A would contribute to more coherence at national and EU level by promoting a recognisable standard/label of quality of repair services across the EU, as far as its voluntary nature allows. PO6B by design incorporates relevant information obligations from existing EU law (CRD and Services Directive) and would ensure coherent outcomes also at national level through a single standardised EU format on repair

information. PO6C is directly linked to and therefore fully coherent with relevant EU rules on reparability; it would also achieve coherent outcomes at national level as a fully harmonised new EU right. While PO6D is coherent with the broader policy objectives, it is not coherent with EU rules on reparability requirements on product design, notably under the ESPR, because PO6D has a broader scope. Due to this mismatch in scope between the general obligation to repair and product specific requirements on spare parts and repair information, the obligation to repair may often lead to repair requests being turned down by the producer either because the good is not subject to reparability rules on product design or due to unavailability of spare parts, absence of available repair service etc., which are often pre-conditions for technical feasibility of repair.

Impacts of Option 7: Adding a functionality on refurbished goods in the matchmaking platform for repair (PO5B)

A. Effectiveness

PO7 would contribute to the specific objective of promoting the reuse of goods outside the legal guarantee. It would facilitate consumer choices when their products become defective, by helping to search and identify sellers of potential refurbished replacement products. The platform would bring together supply and demand of refurbished goods by increasing consumer awareness and facilitating the search for specific categories of refurbished products. It would help sellers of refurbished goods gain visibility and contribute to competition. This could also promote the sellers' interests to get registered in the platform. Furthermore, the platform would also facilitate business arrangements for selling and purchasing viable defective goods for refurbishment, as it would also increase visibility of existing take-back services. More refurbished goods means a longer lifespan of products and less new replacement products produced and bought.

The effectiveness of PO7 is limited, with an estimated increase in take-up rate for refurbished goods of 0.6% and respectively 7.9 million avoided new purchases in the next 15 years. Because of the relatively low take-up, PO7 would have minimal, albeit positive environmental impacts. The limited take-up is due to the fact that the functionality this PO creates is likely to reach primarily consumers looking for repair or refurbished goods and thus entering this matchmaking platform. It raises consumer awareness of refurbished goods as a sustainable consumption possibility, but leaves it to the consumer to decide if they want to proceed to the sales contract with sellers identified through the platform. PO7 also has potential to contribute to increase of business arrangements for resales of defective products for refurbishment, but these benefits cannot be estimated in a robust manner. On the other hand, PO7 does not produce negative impacts (except limited implementation costs). As PO7 produces a strong synergy with PO5B in cluster II, it is best implemented as a sub-functionality of the matchmaking platform for repair, thus minimising the costs for PO7. Thus, the overall trade-off is positive.

Stakeholder views*:* Consumer attitudes and behaviour suggests that a share of consumers are guided by environmental considerations[165] when buying refurbished goods[166]. An association representing the refurbishment industry in Europe suggests that refurbishers would welcome solutions that help identify and raise visibility of businesses active in refurbishment[167].

B. Efficiency

Economic impacts: In the context of PO7, forgone sales of new products (where consumers buy refurbished goods instead) would affect producers and traders in the EU selling new goods, translating into a limited decrease GVA in the next 15 years (EUR 19.6 million for producers in the EU and EUR 90.3 million for traders in the EU). The sellers of refurbished goods would gain as a result of sales of more refurbished products. The repair and refurbishment sectors would benefit from PO7 as a result of increased demand in the next 15 years (EUR 227.6 million GVA increase). PO7 would help achieve small consumer savings (EUR 1.9 billion) in the next 15 years as a result of purchasing cheaper refurbished products that serve the same purpose.

Social impacts: PO7 is likely to have a limited positive impact on employment. A few jobs would be lost in EU production (~40) and trade (~200 jobs) due to a decrease in demand for new goods. However, increased demand of refurbished products would create new jobs in repair/refurbishment and sales of refurbished products (~400 jobs), ultimately leading to a minimal net benefit in EU employment in the next 15 years.

Public administration: PO7 results in small enforcement and implementation costs (EUR 3.8 million total average for all MS over 15 years). These include IT development and ongoing costs for maintenance, updates and communication campaign. There are significant cost synergies when adding this PO to the same IT platform as PO5B.

C. Coherence

PO7 is coherent with the ESPR, which introduces 'refurbishment' into EU legislation. It corresponds to the objectives of the European Green Deal and the Circular Economy Action Plan.

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[165] When asked about reasons for buying a used product, 18% mentioned the carbon footprint and 16% concerns about waste, IA Study, Annex 1.4, Consumer Survey, Section 5, QE2, p. 131.

[166] The OPC did not inquire about this PO, as it was introduced at a later stage in response to evidence from the IA Study.

[167] European Refurbishment Association (EUREFAS), Position Paper, p. 1, available at https://www.eurefas.com/wp-content/uploads/2022/06/Eurefas-position-paper-on-right-to-repair-.pdf.

7. How do options compare

The comparison of impacts of different options is carried out based on the results of the multi-criteria analysis (MCA) and the Cost-Benefit analysis (CBA).[168]

Different scenarios in the MCA assign the weights of the impacts based on: 1) the magnitude of each impact, 2) ensuring a balanced distribution between costs and benefits and 3) ensuring a balance between the different stakeholder categories affected. The scenario below has been selected as the most balanced. It attributes equal weights (33% each) to the high level criteria of effectiveness, efficiency and coherence and ensures a balanced distribution of weights between costs and benefits, as well as among the main stakeholder groups (consumers, business, society). Alternative scenarios in the sensitivity analysis confirm the ranking of the options (see Annex 4 on alternative scenarios).

The results of the cost-benefit analysis (CBA) are included in the MCA via different sub-criteria.[169] Sub-criteria of the MCA comprise the relevant impacts of the POs, allocated between the assessment criteria of effectiveness, efficiency and coherence. The sub-criteria under effectiveness (savings of resources, waste and CO2 emissions, as well as consumer trust, protection and decision-making) are almost entirely based on available quantitative data and reflect how far the POs achieve the objectives of sustainable consumption.[170] The efficiency criteria are purely assessed on a quantitative basis relating to the impacts of the POs in terms of monetised costs and benefits (e.g. impacts on business, consumers, jobs and public administrations). Coherence is assessed qualitatively in relation to the existing EU legal framework (based on the analysis in the assessment of options).

Cluster I focuses on defects in the scope of the legal guarantee. While the share of defects tackled by this cluster is relatively small (11.6%)[171], the willingness to repair such defects is high, because consumers are entitled to free remedies and the relevant defects occur relatively early in the lifespan of goods. The take-up rate of repair varies. PO1 triggers a high take-up rate of repair, because consumers have limited margin to request replacement. PO2 results in a lower take-up, in particular under PO2A where consumers are encouraged, but not required to choose repair. They can still obtain replacement goods as an easily accessible alternative. Due to the consumers' prevailing preference for replacement goods, the effectiveness of PO2A is lower than PO1. PO2B grants consumers only repair as a possibility in the third year of an extended liability period and consumers will take it up given the absence of an alternative remedy. However, as the share of non-conformity defects that manifest

[168] For more information on how the CBA feeds into the MCA, see Annex 4.
[169] For example the calculated CO2 emission savings are taken into account in the percentage weight of the sub-criterion 'contributing to fighting climate change'.
[170] The sub-criteria under efficiency are further explained in Annex 4.
[171] IA Study, Section 5.3.2.

themselves in year 3 is minimal, PO2B concerns a very small number of cases and the effectiveness of this option is relatively low.

POs 3 and 4 do not encourage consumers to repair their own goods, but promote the reuse of refurbished goods. Both PO3A and 3B score relatively low in terms of effectiveness, as they are only relevant either for a small number of cases (PO3) or a small share of consumers (PO4).

PO3 applies where businesses could offer refurbished products as an alternative remedy to repair under the legal guarantee. It is hard to estimate in how many cases refurbished goods would be available. PO3A, which enables refurbished goods as replacements only during the extended liability period would have a very small impact on sustainable consumption, as the number of defects appearing in the third year of extended liability is estimated to be minimal. PO3B, which applies to the second year of the current liability period, would have a slightly bigger, but still small impact, as the number of non-conformity defects appearing in the second year is still small.

In encouraging the purchase of refurbished goods by means of an extended liability period as a quality assurance, PO4 has a limited group of potential beneficiaries. It is relevant only for those MS that currently allow for a shorter liability period for refurbished goods and only for those consumers who are deterred from purchasing refurbished goods due to concerns about the quality or length of the liability period, thus a limited number of consumers. At the same time, all traders of refurbished goods in the MS concerned would face extra costs for financing additional repair in the additional year of liability period. The costs are likely to be particularly burdensome for SMEs. They may discourage some providers from adding refurbished goods to their stock or even entering the business.

The main impact figures on Cluster I POs, contributing to the cost-benefit analysis (CBA), are:

PO	Benefits	Costs
1A	- Savings in production costs: EUR ~15.6 billion - Monetised resource savings: EUR ~341.7 million - Monetised waste savings: EUR ~170.6 million - Monetised CO2 emissions savings: EUR ~958 million	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~-827.9 million - Business adjustment costs: EUR ~862.3 million - Change in no. of jobs: -1,287 jobs corresponding to EUR ~-482.6 million in personnel costs - Implementation and enforcement costs for public administration: EUR ~28.2 million
1B	- Savings in production costs: EUR ~15.6 billion - Monetised resource savings: EUR ~341.7 million - Monetised waste savings: EUR ~170.6 million	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~-827.9 million - Business adjustment costs: EUR ~845.7 million - Change in no. of jobs: -1,287 jobs,

	- Monetised CO2 emissions savings: EUR ~958 million	corresponding to EUR ~–482.6 million in personnel costs - Implementation and enforcement costs for public administration: EUR ~28.2 million
2A	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~12.7 million - Savings in production costs: EUR ~2.6 billion - Consumer savings: EUR ~5.4 billion - Change in no. of jobs: 24 jobs, corresponding to EUR ~8.8 million in personnel costs - Monetised resource savings: EUR ~57.5 million - Monetised waste savings: EUR ~28.7 million - Monetised CO2 emissions savings: EUR ~161.3 million	- Business adjustment costs: EUR ~2.1 billion - Implementation and enforcement costs for public administration: EUR ~28.2 million
2B	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~68.7 million - Consumer savings: EUR ~406.3 million - Change in no. of jobs: 112 jobs, corresponding to EUR ~41.9 million in personnel cost - Monetised resource savings: EUR ~9.2 million - Monetised waste savings: EUR ~4.4 million - Monetised CO2 emissions savings: EUR ~25.8 million	- Business adjustment costs: EUR ~1 billion - Implementation and enforcement costs for public administration: EUR ~28.2 million
3A	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~139 million - Consumer savings: EUR ~822.2 million - Change in no. of jobs: 226 jobs, corresponding to EUR ~84.9 million in personnel cost - Monetised resource savings: EUR ~18.6 million - Monetised waste savings: EUR ~8.8 million - Monetised CO2 emissions savings: EUR ~52.2 million	- Business adjustment costs: EUR ~228.6 million - Implementation and enforcement costs: EUR ~28.2 million
3B	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~623.9 million - Savings in production costs: EUR ~2 billion - Change in no. of jobs: 1,040 jobs, corresponding to EUR ~390.1 million in personnel cost - Monetised resource savings: EUR ~41.8	- Business adjustment costs: EUR ~326 million - Implementation and enforcement costs for public administration: EUR ~28.2 million

	million - Monetised waste savings: EUR ~19.9 million - Monetised CO2 emissions savings: EUR ~117.4 million	
4	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~596.3 million - Consumer savings: EUR ~1.5 billion - Change in no. of jobs: 1,004, corresponding to EUR ~376.4 million in personnel cost - Monetised resource savings: EUR ~61.9 million - Monetised waste savings: EUR ~30.9 million - Monetised CO2 emissions savings: EUR ~173.5 million	- Costs for financing additional remedies: EUR ~-776.5 million - Business adjustment costs: EUR ~228.5 million - Implementation and enforcement costs for public administration: EUR ~0.7 million

The MCA (including the CBA) leads to the following scores (range -5 to +5) for Cluster I POs, showing also the distribution among effectiveness, efficiency and coherence[172]:

Policy Options	Effectiveness	Efficiency	Coherence	Total (MCA)
PO1A	0.71	-0.19	1.67	**2.19**
PO1B	0.50	-0.19	1.67	**1.98**
PO2A	0.25	-0.29	1.67	**1,63**
PO2B	0.23	-0.28	1.67	**1.62**
PO3A	0.15	-0.23	1.33	**1.25**
PO3B	-0.01	-0.14	1.33	**1.18**
PO4	0.26	0.06	1.67	**1.99**

Cluster II POs tackle defects not covered by the legal guarantee, i.e. the very large majority of defects. Unlike in Cluster I, consumers have to pay for repair and many of the relevant defects appear later in the lifespan of products. Respectively, consumer willingness to repair is significantly lower and it decreases with the age of the product or a higher price of repair. Therefore, even if Cluster II POs could tackle a much bigger number of defects in absolute terms compared to Cluster I, due to the lower willingness to repair, their effectiveness is only partially higher compared to Cluster I.

PO5 and 6 pursue the specific objective of increasing repair beyond the legal guarantee by tackling different obstacles to consumer decisions to repair.[173]

[172] See full table in methodological Annex 4 and IA Study, Sections 5.3.3 and 5.3.4.

In PO5, PO5B on the national matchmaking repair platform scores the highest, because it covers a wider range of goods compared to PO5C and provides a wider range of information compared to PO5A. It is therefore likely to influence repair decisions in more cases, resulting in a higher estimated increase in take-up of repair and respectively most avoided purchases compared to PO5A and PO5C.

PO6 is overall more effective compared to PO5, because PO6 tackles more drivers - not only transparency related, but also inconvenience and price related, the latter being more significant drivers influencing more cases and consumer decisions to repair. PO6A has a relatively low effectiveness compared to other POs in this cluster, but scores decently high overall. This is because a voluntary quality standard does not entail much cost, but brings benefits to both business and consumers using it. PO6B triggers a significant increase in repair take-up, helping consumers identify repair providers and services that suit them most for all consumer goods. It provides not only relevant, but also individualised information, thus tackling most key decision-making factors for repair, compared to the other POs. These benefits outweigh the business costs and the overall result is clearly positive, ranking this options highest in this cluster and overall. PO6C on the obligation to repair goods subject to reparability requirements is the option with the second highest overall scoring in this cluster and overall. Even though it concerns a smaller range of goods than other POs in this cluster, it is highly effective in increasing repair. It brings significant environmental benefits for the product range concerned (notably energy related products covered by ecodesign reparability requirements). It also brings consumer savings, jobs and gains for the repair sector thus outweighing the business adjustment costs and loss of turnover and GVA. Furthermore, PO6C is coherent with reparability requirements under EU law (notably under eco-design legislation) because its scope is directly linked to these requirements. It will therefore bring legal certainty and predictability for producers, because the new obligation to repair goods upon consumers request will only be relevant for products which are repairable by design and repair is technically feasible. As reparability requirements affecting the effectiveness of PO6C will be introduced gradually over time and only for those products which have an added value because sustainability benefits outweigh the costs, this decreases its effectiveness. In addition, once ecodesign rules are fully rolled out over the next decade, PO6C may have less added value, as repair services should generally evolve as a result of ecodesign reparability requirements. PO6D (obligation to repair all products) due to its broader scope would cover more products compared to PO6C and therefore is also effective. PO6D has higher benefits for the environment and the repair sector compared to PO6C. Under PO6D consumers do not need to wait for the obligation to repair to become operational progressively for different product groups. PO6D entails however significant

[173] PO6 tackles aspects of information (in particular PO6B) as well as quality/content of repair (including price). PO5 focuses on information-related drivers, i.e. transparency on repair providers (e.g. on location, general conditions).

business adjustment costs and losses in forgone sales for traders and producers in the EU. Under PO6D also producers who manufacture products that do not need to comply with reparability requirements would incur adjustments costs. These costs are likely to be disproportionate for SME producers or for certain sectors (e.g. low value goods which consumers replace frequently).

While under all Cluster II POs consumers would have to pay for repair to ensure that this is economically viable, consumer savings would increase because consumers would achieve savings by repairing their goods and using them longer, instead of spending more money on replacement products. Businesses would have an interest to provide good quality services and reasonable prices to tap in the increased consumer demand for repair in order to gain new customers.

PO7 promoting the reuse of refurbished goods has a limited effectiveness compared to other POs. However, overall it gets a positive score, because it is coherent, the costs are very limited and it generates efficiency gains when combined with a repair platform. When combined with a repair platform, PO 7 potentially could benefit a wider range of consumers, because it would be visible to the broader segments of consumers interested in repair. Thus, it would promote refurbished goods as a sustainable consumption possibility for consumers who are already considering more sustainable consumption choices.

The main impact figures on Cluster II POs, contributing to the cost-benefit analysis (CBA), are:

PO	Benefits	Costs
5A	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~373.8 million - Consumer savings: EUR ~10.5 billion - Change in no. of jobs: 631 jobs, corresponding to EUR ~236.5 million in personnel costs - Monetised resource savings: EUR ~44.9 million - Monetised waste savings: EUR ~21.9 million - Monetised CO2 emissions savings: EUR ~134.2 million	- Business adjustment costs: EUR ~266.6 million - Implementation and enforcement costs for public administration: EUR ~12.3 million
5B	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~1.3 billion - Consumer savings: EUR ~35.2 billion - Change in no. of jobs: 2,113 jobs, corresponding to EUR ~792.3 million in personnel costs - Monetised resource savings: EUR	- Implementation and enforcement costs for public administration: EUR ~32 million

	~150.4 million - Monetised waste savings: EUR ~73.5 million - Monetised CO2 emissions savings: EUR ~449.6 million	
5C	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~433.3 million - Consumer savings: EUR ~21.7 billion - Change in no. of jobs: 1,067 jobs, corresponding to EUR ~400.2 million in personnel costs - Monetised resource savings: EUR ~99.4 million - Monetised waste savings: EUR ~16.5 million - Monetised CO2 emissions savings: EUR ~315.5 million	- Implementation and enforcement costs for public administration: EUR ~4.5 million
6A	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~747.7 million - Consumer savings: EUR ~21 billion - Change in no. of jobs: 1,261 jobs, corresponding to EUR ~473 million in personnel costs - Monetised resource savings: EUR ~89.8 million - Monetised waste savings: EUR ~43.9 million - Monetised CO2 emissions savings: EUR ~268.4 million	- Implementation and enforcement costs for public administration: EUR ~2.5 million
6B	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~2.5 billion - Consumer savings: EUR ~70.4 billion - Change in no. of jobs: 4,227 jobs, corresponding to EUR ~1.6 billion in personnel costs - Monetised resource savings: EUR ~300.8 million - Monetised waste savings: EUR ~147 million - Monetised CO2 emissions savings: EUR ~899.2 million	- Business adjustment costs: EUR ~6.4 billion - Implementation and enforcement costs for public administration: EUR ~26.4 million
6C	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~782.8 million - Consumer savings: EUR ~39.2 billion	- Business adjustment costs: EUR ~627.1 million - Business administrative costs: EUR ~69.8 million

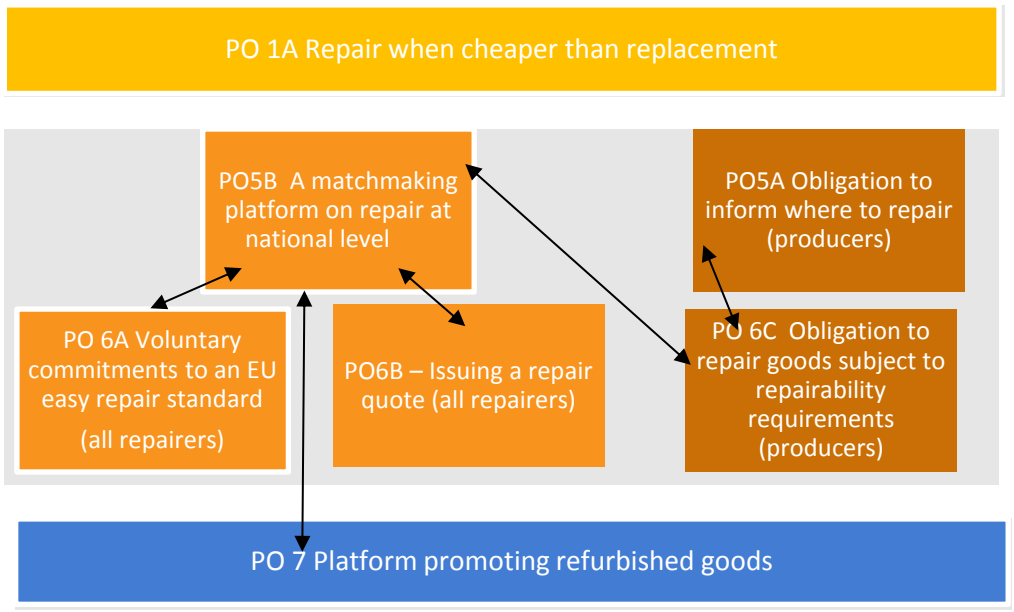
	- Change in no. of jobs: 1,928 jobs, corresponding to EUR ~723 million in personnel costs - Monetised resource savings: EUR ~179.5 million - Monetised waste savings: EUR ~29.7 million - Monetised CO2 emissions savings: EUR ~569.7 million	- Implementation and enforcement costs for public administration: EUR ~4.5 million
6D	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~2.8 billion - Consumer savings: EUR ~80 billion - Change in no. of jobs: 4,795 jobs, corresponding to EUR ~1.8 billion in personnel costs - Monetised resource savings: EUR ~341.2 million - Monetised waste savings: EUR ~166.7 million - Monetised CO2 emissions savings: EUR ~1 billion	- Business adjustment costs: EUR ~3.9 billion - Business administrative costs: EUR ~161.8 million - Implementation and enforcement costs for public administration: EUR ~12.3 million
7	- Growth and investment (in Europe - GVA traders, producers, repairers): EUR ~117.8 million - Consumer savings: EUR ~1.9 billion - Change in no. of jobs: 199 jobs, corresponding to EUR ~74.5 million in personnel costs - Monetised resource savings: EUR ~14.1 million - Monetised waste savings: EUR ~6.9 million - Monetised CO2 emissions savings: EUR ~42.2 million	- Implementation and enforcement costs for public administration: EUR ~3.8 million

The MCA leads to the following scores for the Cluster II POs[174]:

Policy Options	Effectiveness	Efficiency	Coherence	Total (MCA)
PO5A	0.26	-0.04	1.33	**1.56**

PO5B	0.74	0.00	1.00	**1.74**
PO5C	0.27	0.10	0.67	**1.03**
PO6A	0.42	0.14	1.00	**1.57**
PO6B	1.38	0.04	1.67	**3.09**
PO6C	0.61	0.06	1.67	**2.33**
PO6D	1.63	0.07	-1.00	**0.70**
PO7	0.15	-0.01	1.00	**1.14**

8. Preferred Option



The preferred option package addresses both problems and contributes to achieving the general and specific objectives. The POs are chosen based on an analysis of effectiveness, efficiency and coherence (see section 6), a weighing of options based on the cost-benefit analysis (CBA) and their ranking in the multi-criteria analysis (MCA) comparison, as well as based on considerations of subsidiarity and proportionality and in view of the synergies they produce. The preferred options package has an added value that is more than the sum of the individual elements, because some options produce synergies when combined. For instance, the matchmaking platform reinforces other POs by giving them a digital dimension, access to more repair possibilities for consumers and a wider range of clients for business. The preferred options package includes elements from both Clusters, with a focus on Cluster II addressing repair beyond the legal guarantee. This focus is guided by the fact that the largest share of defects appears in this scenario and hence the potential to increase repair is the highest in this Cluster. The detailed figures for each of the measures in the preferred option package are displayed in Annex 3 (preferred option) and Annex 4 (methodology).

Cluster I: Preferred option:

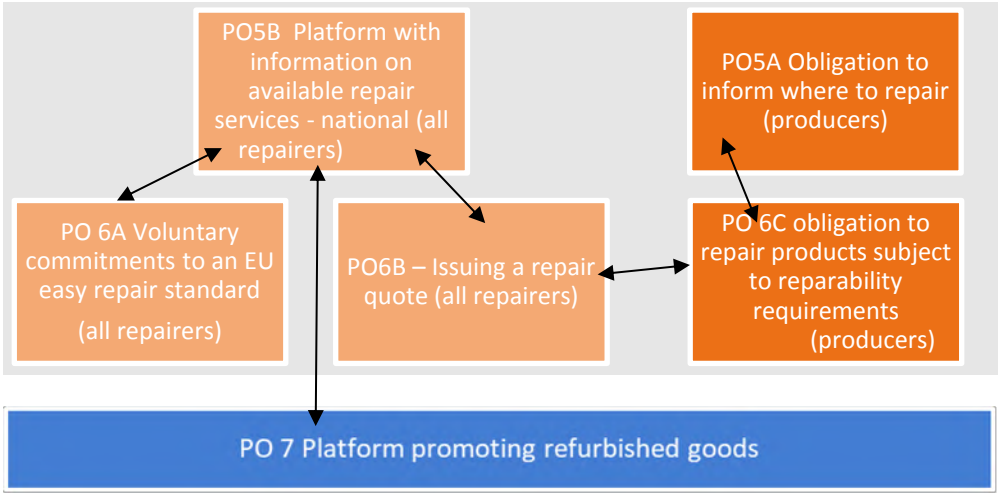
PO 1A Repair when cheaper than replacement

PO1A has been selected from Cluster I, because it addresses problem 1 effectively, by considerably increasing repair under the legal guarantee. It scores highest in the MCA in Cluster I. While it somewhat reduces consumers' economic rights for the benefit of the environment, changes are proportionate and allow businesses to use the cheaper and therefore economically preferable remedy. While businesses have adjustment costs, they are clearly outbalanced by considerable business savings and benefits for the environment.

PO1A respects **subsidiarity**, as MS cannot achieve this objective due to the full harmonisation under the SGD. PO1A is **proportionate** because it amends national laws only to the minimum extent necessary to increase repair under the legal guarantee and to achieve the objective of sustainable consumption. While the impact of PO1A and PO1B is similar, PO1A is preferable as it limits consumer rights less than PO1B. Due to the full harmonisation effect of the SGD, PO1A ensures that rights of consumers in terms of choice of the remedy within the legal guarantee period are similarly guaranteed across the internal market, however allowing MS to keep their existing schemes on the length of the liability period. Unlike PO2 in this cluster, this option does not therefore require significant changes to national laws and does not interfere with well-established national arrangements on liability periods.

Options not selected: Both sub-options of PO2 did not prove to be sufficiently effective to reach the specific objective of increasing repairs within the legal guarantee. PO3 scores very low on effectiveness and is likely to be of little relevance in practice due to the small number of cases concerned, while PO4 is relevant only for a limited number of consumers, i.e. in those MS that currently allow for a shorter liability period for refurbished goods and only for those consumers who are deterred from purchasing refurbished goods due to concerns about the quality or length of the liability period. However, it bears a risk of adverse impact on the supply of refurbished goods, as a higher liability period entails costs for sellers of refurbished goods and risks dissuading providers from entering the business or adding refurbished goods to their stock. The costs for financing extra remedies would weigh disproportionately on SMEs, which operate at small margins.

Cluster II Preferred options package



In PO5, the option scoring best, i.e. the national platform covering a broad scope of products **(PO5B)**, increases transparency and facilitates the search for repair and produces significant net benefits. While the producers' obligation to inform about repair **(PO5A)** has rather small effectiveness, it brings benefits to consumers from increased transparency on repair possibilities. Overall, PO5 contributes to sustainable consumption by increasing repair as a result of improved transparency on repair services. It contributes to EU growth, investment, and competition in repair services in the internal market, while bringing benefits to consumers and the environment, as well as jobs in the repair sector.

Even though the effectiveness of the easy repair standard (**PO6A**) is limited due to the relatively small increase in repair, it has negligible costs and brings benefits to both the supply and demand side of repair. It is a useful add-on to the POs introducing binding rules. The obligation to issue a binding repair quote (**PO6B**) will effectively tackle consumer price concerns through transparency and predictability on the repair price. It will also help consumers identify repair conditions that best suit their needs, tackling the inconvenience driver behind the reluctance to repair. While business adjustment costs and forgone sales for traders and producers in the EU in PO6B are rather high, the benefits in terms of consumer savings, gains for the repair sector, net employment and environmental gains outweigh these costs by far, resulting in top ranking of this PO overall. The obligation to repair products subject to EU reparability requirements (**PO6C**) scores high in Cluster II. PO6C triggers significant consumer savings and growth and investment gains driven by the repair sector, including jobs. It ensures that when it comes to goods subject to reparability requirements under EU law, for instance eco-design goods, such as a refrigerator or a washing machine,[175], consumers have a legally enforceable right to get their products repaired not only within the

[175] The reparability requirements may relate e.g. to disassembly or availability of spare parts (see p. 4 on Ecodesign product groups covered by reparability requirements). This list of products is expected to expand over time, in particular because reparability requirements under the Ecodesign framework continue to be introduced on a product-by-product basis.

legal guarantee but also beyond the legal guarantee period. These benefits outbalance high losses due to forgone sales of new products as well as adjustment costs for producers and traders in the EU. The environmental impacts are among the highest of all measures. Overall, PO6 contributes to sustainable consumption by increased repair as a result of improved conditions of repair services. It contributes to EU growth, investment and competition in repair services in the internal market, while bringing significant benefits to consumers and the environment and creating jobs in the repair sector.

While the effectiveness of the refurbishment platform (**PO7**) is limited, there are almost no costs when it is an additional functionality of the repair platform under PO 5B. At the same time PO7 brings benefits both to the demand and supply side of refurbished goods. Overall, PO7 contributes to sustainable consumption by promoting the use of refurbished goods as a result of increased transparency on refurbishment services and products. It contributes to growth, investment and competition in refurbishment services in the internal market, while bringing benefits to consumers and the environment.

All selected POs in Cluster II produce **strong synergies**. The repair platform (PO5B) will reinforce the easy repair standard (PO6A) by giving it a digital dimension and increased visibility to its subscribers vis-à-vis a wide range of consumers. Similarly, the repair platform will help identify providers who can offer a quote (PO6B) for free or at a distance. Thus, it will help consumers gather and compare more offers, while increasing repairers' potential of gaining new clients. The binding quote (PO6B) and repair platform will produce synergies with PO6C as producers that are subject to the obligation to repair could provide a binding quote to consumers on the platform and thus make their repair services more visible. The producers' obligation to inform (PO5A) creates synergies with the obligation to repair (PO6C) by ensuring that consumers are aware of this obligation.

Almost half of the POs (PO5B, PO6A, PO6B) aim at increasing transparency and therefore competition in the market. These combined POs benefit repair service providers, including independent repairers and SMEs by encouraging repair and giving their services more visibility. As consumers are more likely to look, for convenience reasons, for repairers in their proximity, they will not necessarily go to producers and are likely to first seek local SME providers. Thus, independent repairers and local SMEs are well placed to benefit from this package. The preferred POs combined also encourage competition in repair services in the internal market. Increased demand for repair would trigger increased demand and production of spare parts for more repair and refurbishment services. This would contribute to cross-border movement of spare parts and refurbished goods and benefit EU manufacturers and traders.

The choice of preferred options in Cluster II is also based on **subsidiarity and proportionality** considerations. Harmonisation at EU level is limited only to those options, i.e. the quote and obligation to repair, which have an internal market dimension. The preferred policy option in Cluster II ensures that consumers across the internal market

seeking repair possibilities (PO6B) or claiming repair from the producer (PO6C), have the same rights irrespective of the MS where they reside or of the establishment of the seller or the producer. Where a national level solution is effective – as is the case of PO5B because a national platform is closer to consumer needs – this is the preferred choice. It also gives a large margin to MS in its implementation. The rights of consumers are however guaranteed in a similar manner across the internal market, so that consumers can achieve the same result across the EU: finding suitable repair or refurbishment opportunities for their defective goods. The key requirements and main functionalities of the platform are regulated by the EU and repair providers remain free to register also to platforms of other MS where they can provide their services. Furthermore, where possible, the choice or design of a PO limits itself to what is necessary to increase repair. For instance, the 'easy repair standard' is shaped as a voluntary commitment to avoid far-reaching interference into national laws regulating services.

Options not selected: The EU repair platform (PO5C) has limited effectiveness due to its more limited scope; its objectives may be better achieved at a national level. The obligation to repair all goods (PO6D) causes significant adjustment costs for business as well as significant losses in turnover and GVA. It also raises serious issues of coherence and proportionality due to a mismatch between the new consumer right it creates and the product specific reparability rules on product design which are more limited in scope. This incoherence also undermines the practical application of this PO, as it leaves much uncertainty as to when the obligation applies given that many products would remain unregulated and could be irreparable by design. Ultimately, this option is not proportionate, because it would impose a more far reaching obligation to repair in the after-sales phase, compared to the more targeted scope of ecodesign reparability rules ensuring that products are reparable by design. Finally, the specific objective and similar impacts can be achieved by means of less intrusive options.

Main delivery risks of the preferred options

While the take-up rates of the POs are based on representative, robust data (e.g. from behavioural experiments), consumer behaviour cannot be predicted with certainty. Therefore, a delivery risk is that Cluster II POs will not succeed in changing consumers' behaviour towards repair to the extent expected and that the impacts of the preferred options will not materialise fully. However, while take-up rates may be in the short term lower than indicated, they are likely to be higher than indicated in the long run because citizens adjust to new policies and behaviour can change over time. This may mean that respondents who indicated that they would replace would repair instead, as the trend of sustainable consumption strengthens. In addition, the ratio between costs and benefits will remain the same, i.e. the lower the benefits, the lower the costs and vice versa. Furthermore, the risk that one option will not be as successful compared to others (e.g. lower take-up of easy repair standard or obligation to repair than expected) is mitigated by the fact that all options are self-standing. Even if one option is not taken up widely, the others can still succeed independently.

Another delivery risk of Cluster II POs relates to consumer awareness on their rights, e.g. consumers may not be aware of the obligation to repair. This risk is already factored into all estimates of impacts, by a conservative assumption that the take-up rates of all options will not reach their full potential in the first two years of application of the measures.[176] Furthermore, the purpose of PO5A and 5B is precisely to mitigate this risk. In addition, these risks can be mitigated further by an obligation on MS to inform consumer on the new rights, which would be included in the proposal and the costs of which are factored into the implementation costs. Furthermore, a delivery risk linked to PO6A is that companies would be reluctant to voluntarily commit or subscribe to an EU repair quality standard, because of the higher level of service it would entail. However, this risk is mitigated by the increased sustainability awareness of both consumers, sellers and producers due to the impacts of other POs and circular economy initiatives in general, leading to larger demand of durable and reparable products and therefore good quality repair services. Furthermore, the opportunity to display a quality label on the repair platform would further increase visibility and attractiveness of such repairers.

Combined impacts of the preferred option

The package contributes effectively to the general objective and specific objectives by encouraging repair as well as promoting the reuse of goods within and beyond the legal guarantee. The combination of preferred options is designed to change consumers' consumption patterns towards sustainability (repair and reuse) in the long term: the measures create incentives for consumers to spend less money due to less replacement of viable consumer goods, which benefits consumers and the environment as less products are purchased and produced in the first place. The behavioural change[177] is driven by the removal of obstacles for consumers who are in principle open to repair, but hindered by obstacles that discourage them.[178]

Altogether the package increases consumer protection. The partial reduction of consumer remedies under PO1 is being outbalanced by introducing new rights and tools for consumers

[176] See Annex 4.

[177] The assumptions on behavioural change by consumers correspond to the increased take-up of repair or use of refurbished goods as a result of the preferred option. The calculated behavioural change can be assumed to extent to the whole segment of consumer goods that can potentially be repaired or refurbished, as the estimates have been extrapolated to the whole economy. See Annex 4 p. 4-9 for take-up rates and p. 14 and 25 for extrapolation.

[178] This is particularly relevant for reluctant replacers and reluctant repairers, as well as enthusiastic repairers who also occasionally face repair obstacles (see p. 10 for consumer segments). These consumers will get easier access to more attractive repair opportunities and will be able to get their preferred repair choices more frequently. Furthermore, the behavioural experiments suggest that the preferred option has an impact on all consumer segments, including on enthusiastic replacers (albeit to a smaller extent) who may change their behaviour under attractive repair conditions.

beyond the legal guarantee through the Cluster II POs. The main impact figures of the preferred option package are[179]:

	Benefits for 15 years	Costs for 15 years
Environmental impact	CO2 savings: 18.5 million tons CO2-eq = EUR 3.3 billion Resource savings: 1.8 million tons = EUR 1.1 billion Waste savings: 3 million tons = EUR 493.4 million Total monetised: EUR 4.9 billion,	
Economic impact	Savings in production costs: EUR 15.6 billion Growth and investment (in Europe - GVA traders, producers, repairers): EUR 4.8 billion Consumer savings: EUR 176.5 billion (25 EUR per consumer per year)	Business adjustment costs: EUR 8.1 billion Business administrative costs: EUR 69.8 million
Social impact	8,872 jobs, corresponding to EUR ~ 3.3 billion in personnel costs	
Impact on public administration		Implementation and enforcement costs: EUR 105.5 million

The **environmental impact** of the preferred option needs to be seen in comparison and together with other initiatives under the Green Deal. While for instance concerning CO2 savings within 15 years, the ECGT will save 0.33-0.47 million tons, this initiative will save 18.4 million tons and the ESPR 471 million tons. The ESPR CO2 savings are naturally much higher since the ESPR is aiming for far-reaching changes in product manufacturing. Still, the preferred option would save several times more CO2 than the ECGT. It is however much more important to see the impact of the present initiative together with all other Commission initiatives in the green transition.[180] This initiative is one building stone of the overall environmental impact that all the respective initiatives taken together are aiming to achieve, contributing to tackle a problem which is far too comprehensive to be dealt with by one or two separate initiatives.

In terms of **economic impact**, despite the losses in GVA for traders and producers in the EU, the net GVA is positive, driven by significant gains by EU repairers due to an increase in demand for repair services. Meanwhile, significant savings in production are achieved by avoiding replacing a share of defective goods with new products. These savings result in an increase in competitiveness for EU business. The business adjustment costs are not

[179] See details of the preferred option in Annex 3 and the methodology in Annex 4 as well as IA Study, Section 5.3.4.

[180] The present initiative could also indirectly help the other initiatives generate their impact, the extent of which cannot be robustly assessed.

inadequate given the substantial impact of the initiative. Gaining consumer savings of around EUR 176.5 billion[181] over 15 years outweighs the business adjustment and administrative costs by far. This figure translates into 25 EUR savings per year per consumer and brings therefore tangible benefits to every household. While consumer savings reflect a transfer from businesses revenues to consumers' welfare, consumers will invest the saved money in the overall economy which in turn will lead to growth and investment.

These impacts on the various economic operators (sellers, producers and repairers) are valid also for SMEs[182]. Although adjustment and administrative costs relative to business revenues are disproportionately higher for SMEs, the overall balance of costs and benefits under the preferred option is expected to be beneficial for SMEs as a whole. This however masks a difference between SMEs in repair, which will clearly benefit, and SMEs in manufacturing and retail, which will be somewhat disadvantaged, also vis-à-vis their larger competitors. The overall impact on EU business is positive.

The negative impact on third countries relates only to third-country producers. Despite decrease in turnover from forgone sales (EUR 29.8 billion for 15 years), the longer-term global impact is likely to be positive, as third country producers could gain an incentive to switch production to more durable goods, contributing to a more sustainable use of resources and more sustainable business models. Third countries will therefore also benefit from the preferred option, which will reduce the negative environmental consequences and associated costs resulting from the problems.

In terms of **social impact**, the impacts on EU jobs is not significant, with an expected net job increase exceeding 8000 jobs, mainly in the repair sector. Additional spending by consumers is likely to create new jobs in other sectors, but these impacts cannot be estimated in a robust manner.

In total, the benefits of the economic, social and environmental impacts outweigh the costs for businesses and public administration. The preferred option will contribute to avoiding or reducing fragmentation of national rules as regards consumer sales of goods and repair services in the internal market, pursuing the objective of improving sustainable consumption and consumer protection. To that end, it will remove actual and potential obstacles for cross-border trade in goods and repair services in the EU.

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[181] The consumer savings from longer use of repaired products over a period of 15 years amount to a considerable amount of cumulative savings for EU consumers. This amount is realistic considering that consumers often replace viable products that could potentially be used for twice as long. IA study, Annex 3.4.

[182] Almost all repairers in the EU are SMEs (99.7%), while in the retail sector their share in aggregate turnover and GVA is 51% (excluding motor vehicles). The impact of the preferred PO package is positive for SMEs. See Annex 8.

The preferred option package is **coherent** with EU legislation and EU policy priorities, in particular the European Green Deal and the Digital Transition. It is consistent with and complements the effect of the ESPR and the ECGT by encouraging repair in the after-sales phase. It is also conducive to fundamental freedoms, notably to free movement of goods and repair services. It contributes to cross-border competition in the single market. The package has a positive impact on fundamental rights enshrined in the Charter of Fundamental Rights. It promotes the right to environmental protection (Article 37) and it contributes to a high level of consumer protection (Article 38) by strengthening consumer rights beyond the legal guarantee. While it regulates certain business practices concerning repair in view of the sustainable consumption objective, it safeguards contractual freedom and is conducive to the freedom to conduct business (Article 16).

'One in, one out' approach (OIOO)

The preferred option does not produce any administrative cost savings for businesses or citizens/consumers in the context of the OIOO, but it produces direct adjustment costs and administrative costs for businesses (total costs of the preferred option):

- Direct adjustment costs: EUR 731 million (one-off) and EUR 7.4 billion (recurrent costs over a period of 15 years)
- Administrative costs: EUR 69.8 million (one-off) and no (recurrent) costs.

Choice of instruments: The preferred instrument for the proposed options package is a self-standing directive, also introducing an amendment to the SGD to implement PO1A. The "easy repair standard" (PO6A) will be implemented either by self-regulation (code of conduct) or a Commission standardisation mandate.

9. How will actual impacts be monitored and evaluated?

The Commission will evaluate the effectiveness, efficiency, coherence and EU added value of this initiative 5 years after its entry into application, which allows for the necessary period for application and evidence collection in MS. The progress will be monitored based on a set of indicators covering the package as a whole and its individual elements. These indicators are largely based on statistics that have been collected for the analysis of problems and POs in the IA.

Policy options – impacts	**Objective**	**Monitoring indicators**
Overall effect of policy options package	**Sustainable consumption**	% of consumers who have repaired their goods in the past 24 months % of consumers who have bought second-hand including refurbished goods in the past 24 months % of consumers willing to repair or purchase

		refurbished products in the future. Number of repairs conducted in the year (average annual data)
PO1A	Increase repair (under legal guarantee)	% of sellers who provided repair as a remedy under the legal guarantee % of cases when traders repaired products under the legal guarantee
PO5A	Increase repair (beyond the legal guarantee)	% of consumers who are aware of the obligation to repair % of producers providing repair Number of ecodesign product groups for which the obligation to repair exists
PO5B	Increase repair (beyond the legal guarantee)	Number of visits to the platform per year per MS with indication of users coming from other MS looking for cross-border repair % of successful repairs achieved via the platform % of repair businesses registered on the platform per MS per year with indication of businesses from other MS offering cross-border repair. % of businesses displaying quality standards on the platform Number of new local repair businesses due to higher demand Number of refurbished goods purchased via the platform Number of refurbishment businesses registered on the platform Number of searches for refurbishment purchasers
PO6A	Increase repair (beyond the legal guarantee)	Number of repair businesses subscribing to the standard per MS per year
PO6B	Increase repair (beyond the legal guarantee)	Number of quotes requested by consumers % of repair providers offering quotes for free
PO6C	Increase repair (beyond the legal guarantee)	% of consumers who invoked the obligation to repair in a MS for the past 24 months
PO7	Increase use of refurbished goods	Number of visits on platform for refurbished goods % of consumers who purchased refurbished goods over the past 24 months % of consumer willing to purchase refurbished goods in the future Number of refurbished goods purchased in the EU (average annual data)

Data on the transposition and application of the initiative will also feed into the evaluation. For that purpose, the Commission will also remain in contact with MS and stakeholders.

Annex 1: Procedural information

LEAD DG, DECIDE PLANNING/CWP REFERENCES

European Commission Directorate-General Justice and Consumers, DG JUST, Ref. Decide: PLAN/2020/9848 – Sustainable consumption of goods – promoting repair and reuse, CWP 2020

ORGANISATION AND TIMING

Roadmap consultation period – 30 June to 28 July 2021

Open public consultation period – 11 January 2022 – 05 April 2022

The Call for Evidence was published on 11 January 2022, along with the OPC. The Call for evidence outlined the initiative's context, objectives and policy options.

There have been four ISSG meetings on the initiative between June and November 2022, including participation from SG, SJ, JUST, GROW, CNECT, COMP, ENER, ENV, JRC, INTPA. One ISSG written procedure was organised in December 2022, including participation from the same DGs.

CONSULTATION OF THE RSB

3.1. Upstream meeting with the RSB – 08 March 2022

The guidance and advice provided by the RSB was implemented in this impact assessment, in particular:

- The interplay of this planned initiative with other relevant policy measures (in particular the Empowering consumers and SPI proposals) were addressed in close cooperation with other Commission services, to ensure that all initiatives serve consistent objectives and achieve synergies.
- The Board stressed the need to define a clear set of measures and to specify whether options are alternatives or complementary. This has been has been detailed throughout the IA.

3.2. Opinions of the RSB and responses

The Impact Assessment report was reviewed by the Regulatory Scrutiny Board. It received a negative opinion on 30 September 2022. The Impact Assessment was revised to take into account the Board's comments and resubmitted to the RSB on 15 December 2022. The RSB reviewed the revised Impact Assessment draft and delivered a second positive opinion with reservations on 24 January 2023. The Impact Assessment was amended with further clarifications addressing the RSB comments.

RSB opinion of 30 September 2022	
RSB Opinion – Section C: What to improve	**DG JUST replies**
1) The report should explain better the scope of	The draft impact assessment report now provides

the initiative and its coherence with other EU legislation dealing with consumer goods, sustainability and the circular economy, notably the Ecodesign for Sustainable Products Regulation. The report should be clear on precisely which consumer goods are in the scope of the initiative. It should better explain to what extent the business-to-business market is affected by similar problems and if so, how these will be addressed, given that they are not covered, while ensuring coherence with the present initiative. It should better justify why the business segment is out of scope.	clarifications on the scope of the initiative and explains more comprehensively its links with other EU policy initiatives under section 1.2 (policy context) and section 5 (baseline). The draft impact assessment report clarifies which consumer products are within the scope of the initiative under section 2 on the problem definition (product coverage). The reasons for not including the B2B dimension in the scope of the initiative are now explained under section 1.2 on the policy context (conclusions for the scope of this initiative), while pointing to other EU policy initiatives dealing with this dimension.
2) The report should explain better why the Sale of Goods Directive is the correct instrument to tackle the premature disposal of repairable consumer goods. It should explain better how the problem of premature disposal after the guarantee period fits in with EU consumer law. It should also explain better how this articulation would work in practice when consumers will be given a legally enforceable "right to repair", yet not all products are equally repairable in the years to come and not all repairs are equally favoured over replacement. It should further develop the intervention logic, including by clearly explaining and substantiating with evidence on how the issue of refurnished products fits therein, as currently there is no clear link to the identified problems. It should be clear if the problem is specific to some consumer goods categories.	Section 1.2 (related policy initiatives and legal context, reference to SGD) explains to what situations SGD applies. Section 5 on available policy options (description of policy options, Cluster I and options for instruments) explains why SGD is the relevant instrument when it comes to changes within the legal guarantee. It is also explained in section 1.2 that the lack of repair of consumer goods depends on decisions made by consumers and that regulatory tools of EU consumer law are able to influence such decisions. The design of the preferred instrument for the proposed options package has been amended. It is a self-standing directive introducing new rules for defects beyond the legal guarantee as well as also providing an amendment to the SGD as regards changes to the current legal guarantee rules (section 8 on the preferred policy option, choice of instruments). The report now acknowledges the differences in the reparability of products. Section 2 (product coverage) includes new data on consumer attitudes to repair of different product groups. Furthermore, reparability requirements under EU law are taken into account directly when designing the policy options on the obligation to repair. PO6C, the relevant element of the preferred options package, specifically imposes an obligation to repair only goods subject to reparability requirements under EU law (section 5 on available policy options, PO6C). Section 6 on assessment of the impacts of options PO6C and PO6D (coherence) elaborates on the relationship

	of reparability rules on the product design phase and consumer rights to repair beyond the legal guarantee. This consideration is reflected in the reasoning and is one of the main elements for the choice of the preferred option (section 8). A problem tree (figure 1) has been introduced in section 2 to clarify the logic of the problem analysis. The link with the refurbished goods aspect is explained as a horizontal issue relevant to both problems in section 2 ('limited use of refurbished goods' after the descriptions of problems 1 and 2). The intervention logic chart in Section 5 (figure 2) has been amended. It clarifies the relationship between problems, objectives and policy options. Different color codes are used for the two problems and the respective drivers, objectives and corresponding options which address the two problems. The cluster structure in the intervention logic has been revised (two clusters instead of three) recognizing that refurbished goods are part of the two clusters of problems, options and specific objectives within and beyond the legal guarantee.
3) The report should present a more dynamic baseline scenario with a more realistic timeline allowing the estimated effects to materialise. It should fully reflect the expected improvements resulting from the Ecodesign for Sustainable Products Regulation and related circular economy measures, including by providing quantitative estimates and projections of some key impact indicators. It should also explain why the problem of premature disposal of repairable consumer goods is likely to increase in the next decade and if it applies to specific consumer goods categories.	The draft impact assessment report now presents a more dynamic baseline scenario, calculating the impacts of the policy options for a period of 15 years. The baseline scenario takes into account the impacts of other circular economy related initiatives, in particular the ESPR and the ECGT in section 5. Based on additional data, robust projections were introduced for the new dynamic indicator of increase in repair rates for the next 15 years. The quantitative estimates of the impacts of the baseline have been recalculated on this basis. A dynamic assumption on the projected average growth of the market has also been factored in section 6 (impacts of the baseline scenario) and Annex 4. The scale of the problem of premature disposal of repairable consumer goods (section 2, scale of the problem) has been quantified based on a conservative estimate of the size of the market failure. Differences with respect to distinct consumer goods categories are reflected in the scale of the problem (section 2, product coverage). Furthermore, section 2 ('how likely are the problems to persist') explains why the problems are expected to persist and will not be resolved

	under the related initiatives under the baseline.
4) The report should better demonstrate, based on clear and robust evidence, how a mandatory "right to repair" will significantly change a consumer's current preference for replacement. It should analyse better how economic operators such as sellers and producers, including SMEs, will be impacted by the "right to repair". It should clarify how realistic and robust the assumed take-up rates for the various measures and estimated consumer savings are, given the stated reluctance of consumers to change behaviours in the near future.	Section 2 (on problem 2) clarifies that the problem focus is on obstacles that deter consumers from repair, rather than on life-style choices (new driver 6). Respectively, the 'obligation to repair '(PO6C and PO6D), as well as all Cluster II options, influence consumer behavior by removing obstacles that deter consumers from repair where they are in principle open and interested in repair. Take-up rates under options PO6C and PO6D have been adapted to reflect the different scope of these options. The take-up rates are estimated based on robust data from behavioural experiments (see Annex 4, section I on effectiveness, explanations on data robustness). The draft impact assessment report acknowledges that in the context of the obligation to repair (as with any measure), there is no certainty of achieved changes in consumer preference, as the repair decision beyond the legal guarantee is ultimately left to the consumer. Section 8 identifies the main delivery risks and explains how they are factored in and mitigated (section 8, main delivery risks) The take-up rates for all policy options are estimated based on conservative assumptions, reflected in Annex 4. Take-up rates for some options have been revised downwards, based on conservative assumptions (options POs 1A and 1B and POs 6C and 6D). The details and robustness of these take-up rates are explained under section 6 on the impacts of the policy options (effectiveness) and in Annex 4 (section 1 on effectiveness). The report provides further information on effects of the obligation to repair on the economic operators, including SMEs (section 6 on the impacts of the policy options (efficiency/economic impacts of PO6C and 6D)). The estimated consumer savings presented in section 6 (assessment of impacts) are realistic, as they are linked to the increase in repair as a result of options that remove obstacles deterring consumers from repair. The consumer savings for some options have been reassessed based on a new methodology linking savings directly to the projected increased number of repaired goods that these options trigger.

5) The report should provide a clearer assessment and comparison of the impacts and of the costs and benefits of all options, by integrating essential cost benefit estimates of measures currently presented only in the annex. It should better detail the methodology and assumptions behind the results of the multi-criteria analysis and justify the used weights of criteria, their allocation to the effectiveness and efficiency dimensions and how overlaps will be avoided. It should be clearer how the multi-criteria analysis feeds into the comparison of the options and how it relates to the results of the cost benefit analysis.	Section 6 (impacts of the options) now provides the essential cost/benefit estimates, under the assessment of efficiency of each policy option. Section 7 presents cost-benefit tables for both clusters of options. The MCA methodology has been revised to avoid any risk of duplication between effectiveness and efficiency criteria by moving all environmental impacts under effectiveness. Furthermore, the MCA criteria have been streamlined and monetized input values have been used as far as possible with the exception of two sub-criteria that could only be assessed qualitatively. The IA report uses now a scenario with a balanced distribution of weights between effectiveness, efficiency and coherence (33%), as well as among different stakeholder groups. The methodology and assumptions behind the multi-criteria analysis, how it feeds into the comparison of options, the used weights of criteria and their allocation to the effectiveness, efficiency and coherence dimensions are now better explained in section 7 on the comparison of options and in Annex 4.
6) As the report is not clear on the preferred option regarding obligations to repair (i.e. all product scope vs eco-design product scope), it should describe in more detail what the pros and cons and relative differences in terms of benefits and costs are as well as the implementation, coherence and proportionality of the two options to allow fully informed decision making. It should also explain why both options have the same take-up rates given that under the policy option with the eco-design product scope it should be easier (and cheaper) to opt for repair for consumers and business alike. It should also better justify why the obligation to repair all products for a reasonable price could feature in the preferred option despite being described as the most incoherent option.	Section 8 (preferred option) now clearly specifies the preferred option (obligation to repair goods that are subject to reparability requirements under EU law, PO6C). The pros and cons of this and other options are explained in section 6 (assessment of impacts), section 7 (comparison of options) and section 8 (preferred option). The draft impact assessment now provides different specific calculations for the take-up rates of the two obligations to repair (PO6C and PO6D), taking better account of the types of products they cover. While the take-up rates of these options are similar, the small difference is now reflected in the take-up rate and all respective estimates of impacts. An explanation on how these take-up rates were calculated is included in Annex 4.
7) The report should describe better what the main delivery risks are of the preferred option(s) to succeed in changing consumers' behaviour towards repair. It should better explain the costs and cost savings of the	The draft impact assessment report now clearly indicates the delivery risks of the preferred policy options package (section 8, main delivery risks of the preferred options). Key risks are factored in all estimates presented in section 6 (impacts of

preferred option(s) in scope of the One In, One Out approach.	options). The IA also explains how these risks are mitigated by the choice of the preferred options package. The costs and cost savings related to the One in, One Out approach are now described in the main impact assessment report (section 8 on the preferred policy option, 'One in, one out' approach (OIOO)), in addition to Annex 3.
RSB opinion of 24 January 2023	
RSB comments: Section C - What to improve	**DG JUST replies**
(1) The report should be clearer on successful repair rates (i.e. a percentage of goods successfully fixed by repairers) under the dynamic baseline. It should better explain how those rates were calculated and how they were factored into the dynamic baseline. It should also be more explicit that they are based on the preliminary data.	An explanation on the approach to calculating the successful repair rates from a technical perspective is included in Annex 4 (section II, economic impacts). This includes a table with a breakdown of historic data on the basis of which the successful repair rate projection was made. An explanation is included on how the data is factored into the dynamic baseline, as well as a clarification that the available data was based on a preliminary extract from the Sharepair project database. The data was preliminary, because the project was not yet finalised at the time of drafting the IA.
(2) The report should better demonstrate the extent to which the preferred option will change a consumer's preference for replacement over repair taking into account different consumer goods categories and different consumer types. The report should clarify to what extent the preferred option envisages a legally enforceable "right to repair" and whether this right applies to all consumer good categories envisaged by the initiative equally.	The IA report (section 8), clarifies that the behavioural change is driven by the removal of obstacles for consumers who are in principle open to repair, but hindered by obstacles that discourage them. The behavioural change is particularly relevant for consumer types of reluctant replaced, reluctant repairers and enthusiastic repairers and concerns all goods. The IA report (section 8) clarifies that the obligation to repair (PO6C) creates a legally enforceable right and is relevant for goods that are subject to reparability requirements under Union law, also referring to goods that are currently subject to such requirements.
(3) The report should further explain the methodological approach to estimate consumer savings. It should clearly present two approaches – the approach based on avoided purchases of new goods as well as the approach based on increased repair rates. It should be clear on how those methodologies differ in assumptions and underlying indicators for the estimates. For the latter, the report should better explain how the results for a sample of assessed products were extrapolated to all consumer durables including a	The methodological approach to consumer savings is explained in more detail in Annex 4 (section on effectiveness and section on efficiency, economic impacts). It clarifies that two different indicators are used for comparing options in Clusters I (number of avoided purchases) and in Cluster II (number of additionally repaired products) and that these indicators are also used for the quantification of the consumer-decision-making sub-criterion in the MCA. It is further clarified that the assumptions used for the approach to

clearer justification of the extrapolation factor. It should also provide more explanation on how the increased number of additionally repaired goods and increased repair rates as a result of the policy options are reflected in the modelling.	consumer savings were refined to take account of specificities between the clusters, to ensure consistency of the estimate with other estimates in the report (notably on the market failure) and to ensure a more accurate estimate of consumer savings for a period of 15 years. Further a section on the product sample used and the approach to extrapolation of the results for the whole economic segment of consumer goods is included in Annex 4 (section on efficiency, economic impacts).
(4) The report should be clearer about the robustness of the estimates and the underlying assumptions, in particular the assumptions behind the behavioural change towards repair by consumers. It should explain to what extent experts have verified the data robustness and representativeness. The report should explain how robust the estimates are in both methodological approaches. The level of certainty in the analysis and conclusions should be clear.	Annex 4 (section on effectiveness) includes a section on the robustness of estimates based on findings from the behavioural experiments and assumptions behind, including the level of certainty in the findings and expert verifications. It further specifies the methodology used for the selection of the product sample of consumer goods, in order to ensure that the sample is robust and representative and captures key consumer considerations for repair.
(5) The report should better explain the methodology and assumptions behind the results of the multi-criteria analysis. It should be clearer how the multi-criteria analysis feeds into the comparison of the options. It should ensure consistency between the multi-criteria scores reported in the main text and the annexes.	Annex 4 (section IV) includes a clarification on the assumptions behind the MCA analysis and how the sub-criteria were selected. It also clarifies the relationship between CBA and MCA. Annex 4 (section IV) also includes the 'selected scenario' for the MCA results that are presented in the main IA report (table on weight scenarios for sensitivity analysis and MCA results for sensitivity analysis).
(6) The report should better explain to what extent the preferred option – implemented through amending the current Sale of Goods Directive and adding a new self-standing Directive – is likely to lead to differences in consumer rights across Member States and if so, what the impact(s) will be. The report should describe better what the delivery risks are of the other instruments of delivery: self-regulation (code of conduct) and/or Commission standardisation mandate.	The IA report (section 8) explains the full harmonisation nature of the preferred options package and how it will ensure and that the rights of consumers will be similarly guaranteed across the internal market. It also specifies the main delivery risks for the option of an EU repair standard in view of its voluntary nature and clarifies how these risks are mitigated.
(7) The report should expand on the monitoring and evaluation arrangements needed to monitor the actual impacts of an information exchange platform as envisaged by the initiative. The report should explain better to what extent these costs are vectored in in the cost benefits calculations under enforcement costs by Member	The range of monitoring and evaluation arrangements of the repair platform option (PO5B) in the IA report (section 9) has been expanded to ensure that the monitoring arrangements cover all key aspects of the platform, notably, also its refurbishment features. The IA report (section 6, efficiency of PO5B and

States' administrations.	PO5C) explains how the costs for the creation of these repair platform options are factored into the estimates of the public administration costs ('namely as enforcement and implementation costs'), which are also reflected in the CBA and MCA.

EVIDENCE, SOURCES AND QUALITY

In view of preparing this IA, the Commission contracted a study to provide economic analysis and behavioral analysis.

The specific details of all these studies, their scope and methodology are described in Annex 4.

The Impact Assessment was further based on the results of the public consultation, the feedback provided by stakeholders on the call for evidence, a survey with citizens (over 8,000) done in the context of the behavioral economics study and numerous bilateral meetings with stakeholders and a workshop with MS. Annex 2 provides more details about these sources.

Annex 2: Stakeholder consultation

A. Outline of the consultation strategy/process

The Commission has organised both public and targeted consultations. In particular, the following stakeholder categories were addressed by the consultation strategy:

- Citizens;
- Consumers and consumer organisations at EU and national level;
- Businesses comprising large companies and SMEs, namely producers, retailers and repair service providers;
- Business associations representing producers, retailers, and the repair sector at EU, national and sectoral level;
- Environmental organisations and other non-governmental organisations (e.g. representing social interests);
- Academic experts and research bodies;
- National authorities.

Main consultation activities were:

- A Call for evidence for a period of 12 weeks which resulted in 325 contributions;
- An Open Public Consultation (OPC) for a period of 12 weeks which resulted in 331 contributions;
- A discussion and a targeted survey in the context of the European Consumer Summit 2022;
- Consumer and business surveys, behavioural experiments and targeted interviews carried out in the framework of a supporting study;
- Targeted bilateral meetings with stakeholders;
- A workshop with representatives of MS.

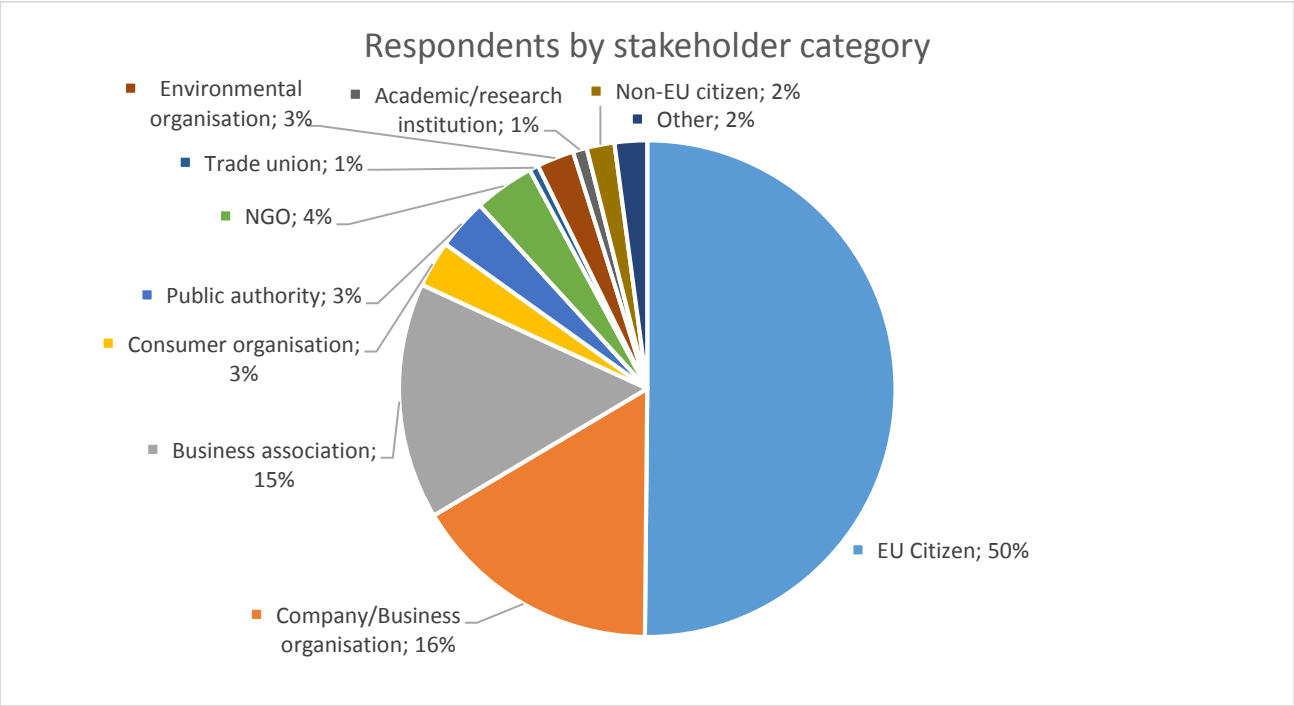
B. Open Public consultation on Sustainable consumption of goods – promoting repair and reuse

1. Introduction

The OPC was accessible between 11 January 2022 and 5 April 2022. It yielded a relatively high response rate, 331 replies, out of which 166 were EU citizens. A large number of companies/business organisations (54) and business associations (51)[183], representing a wide variety of interests and company sizes, contributed to the consultation. A number of associations representing environmental interests (8) and consumer interests (10) at EU or national/regional level, also contributed. The consultation included also input from public

[183] The OPC comprised both 'companies/business organisations' and 'business associations' as stakeholder category options open to respondents. Hereinafter these categories together will be referred to as 'business stakeholders'.

authorities (11, both national and regional), NGOs (13), as well as academic/research institutions (3) and trade unions (2).



In terms of geographical representation, the consultation included contributions from 19 MS, as well as from third countries. The geographical coverage, however, was broader because some associations indicating certain countries as their places of origin also represented stakeholders from other MS not directly mentioned in the responses. The majority of contributions came from Germany (95), followed by Belgium (53) and France (40). 91 position papers were also submitted in the OPC.

2. Summary of key results

2.1. Problems and problem drivers

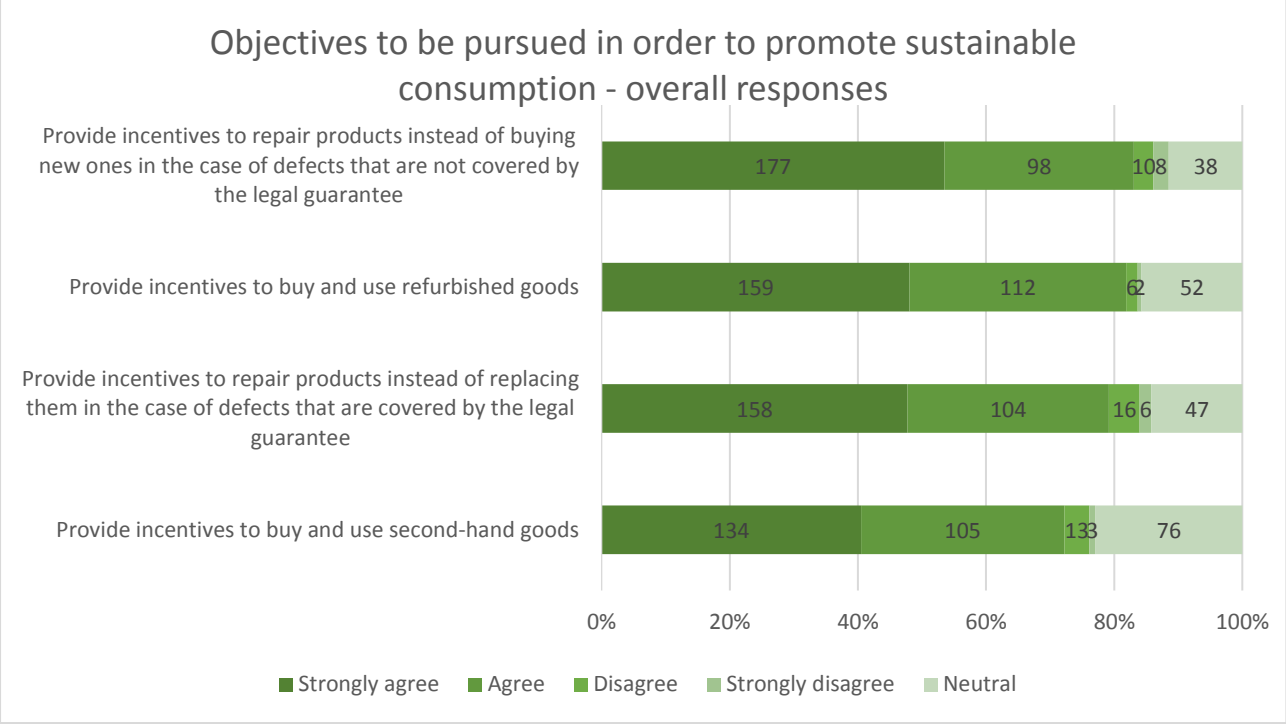
The problem of the **decrease in the time during which most consumer goods are used** was confirmed by 70% of all respondents (233 out of 331). An especially high number of consumer organisations, environmental organisations and NGOs (93.5% - 29 out of 31), EU citizens (87% - 149 out of 172) and public authorities (82% - 9 out of 11) were of this opinion, while only 37% of business stakeholders (39 out of 105) considered that the decrease exists.

The results of the OPC confirm the existence of the problem drivers explained in this IA. Concerning the **causes of the decreased lifespan of consumer goods**, the OPC confirmed as major causes **among all stakeholder categories** the difficulty for consumers to repair products themselves (54% - 179 out of 331), inconvenience or non-availability of repair services for consumers (50% - 166 out of 331) and expensive repair services for consumers (47% - 157 out of 331). In their responses, **EU citizens** agreed that these are the three major causes for the decreased lifetime of products. The majority of the responding **consumer organisations** considered the main causes of the decreased lifespan of consumer goods to be

expensive repair services for consumers and the inconvenience or non-availability of repair services for consumers (both at 70% - 7 out of 10). Consumer organisations also agreed that another important cause for the decreased lifespan of consumer goods is that consumers replace goods in view of the latest fashion, technological developments or new features (60% - 6 out of 10). Half of the consumer organisations considered as a minor cause that for defective goods under the legal guarantee, sellers reject repair and only offer replacement (50% - 5 out of 10). The responding **business stakeholders** considered as the most important cause of the decreased lifespan of consumer goods that consumers replace goods in view of the latest fashion, technological developments or new features (29% - 30 out of 105) (Unfortunately, 63% - 66 out of 105 business stakeholders did not provide an answer on this question). **Public authorities** considered the high price of repair services for consumer goods to be the major cause of the decreased lifespan of consumer goods, with 82 % agreeing with this statement (9 out of 11 respondents).

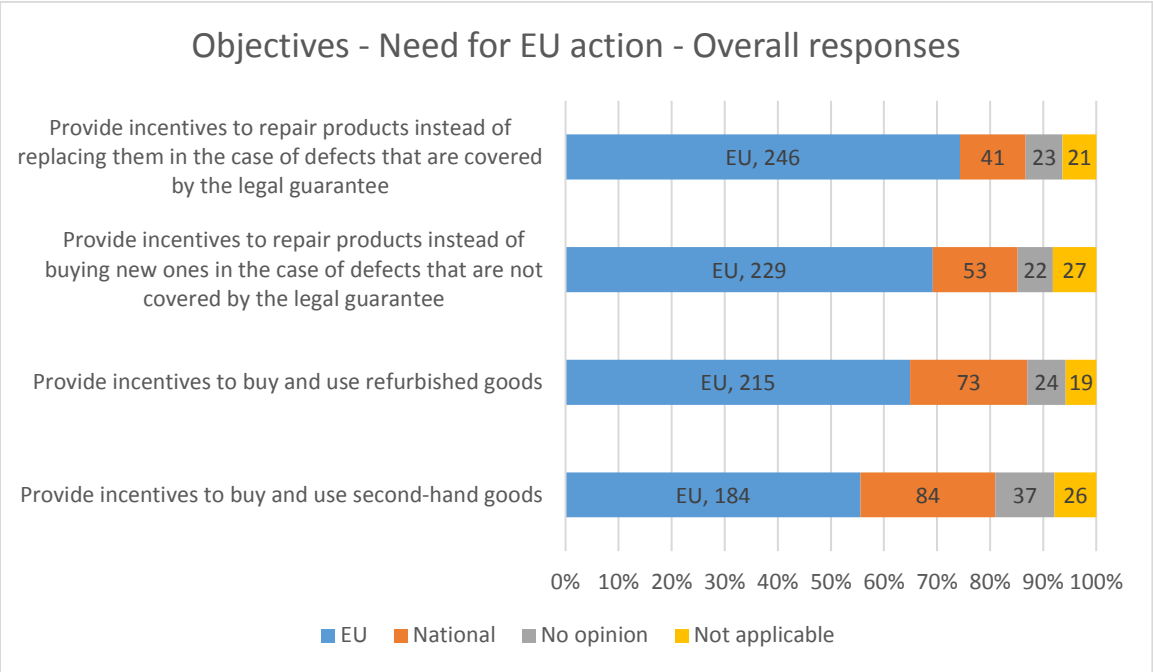
2.2. Objectives and possible policy interventions
Objectives

The OPC listed the following as the **objectives of the initiative**: providing incentives to repair products instead of replacing them in the case of defects that are covered by the legal guarantee, providing incentives to repair products instead of buying new ones in the case of defects not covered by the legal guarantee, and providing incentives to buy and use second-hand and refurbished goods.



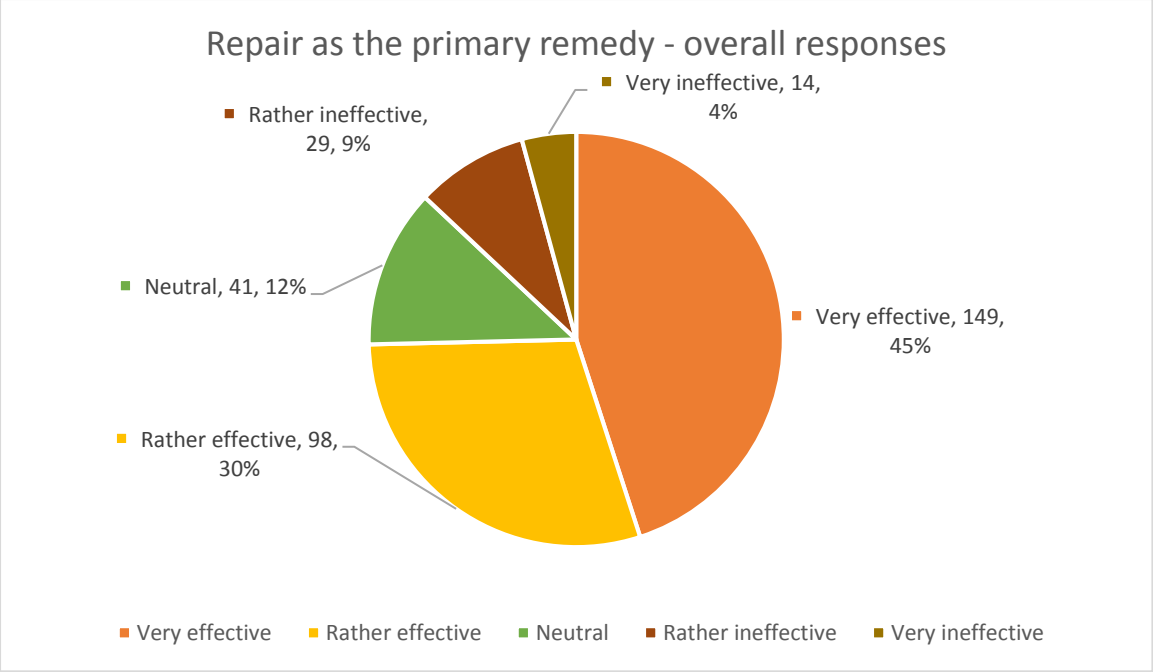
A very large majority of all respondents (83% - 275 out of 331) agreed that providing incentives to repair products instead of buying new ones in the case of defects that are not covered by the legal guarantee (e.g., when the legal guarantee period has expired, or the defect did not exist at the time of delivery) is an objective to be pursued in order to promote sustainable consumption. Such an objective should be achieved at EU level according to 69%

of all respondents (229 out of 331). An **equal majority of all stakeholders** (82% - 271 out of 331) also agreed that providing incentives to buy and use refurbished goods (i.e. second-hand goods that have been tested and, if necessary, repaired before they are sold) is an important objective for promoting sustainable consumption. **Almost as many of all stakeholders** (79% - 262 out of 331) agreed that the objective of providing incentives to repair products instead of replacing them in the case of defects that are covered by the legal guarantee should be pursued. Three out of four of all respondents (74% - 246 out of 331) indicated the EU as the appropriate level for action. **Almost as many of all respondents** (71% - 239 out of 331) agreed that there should be an objective to provide incentives to buy and use second-hand goods. A majority of all respondents also considered that the objectives of incentivising the purchase and use of refurbished and second hand goods are best achieved at EU level (65% - 215 out of 331 for refurbished goods and 56% - 184 out of 331 for second-hand goods).

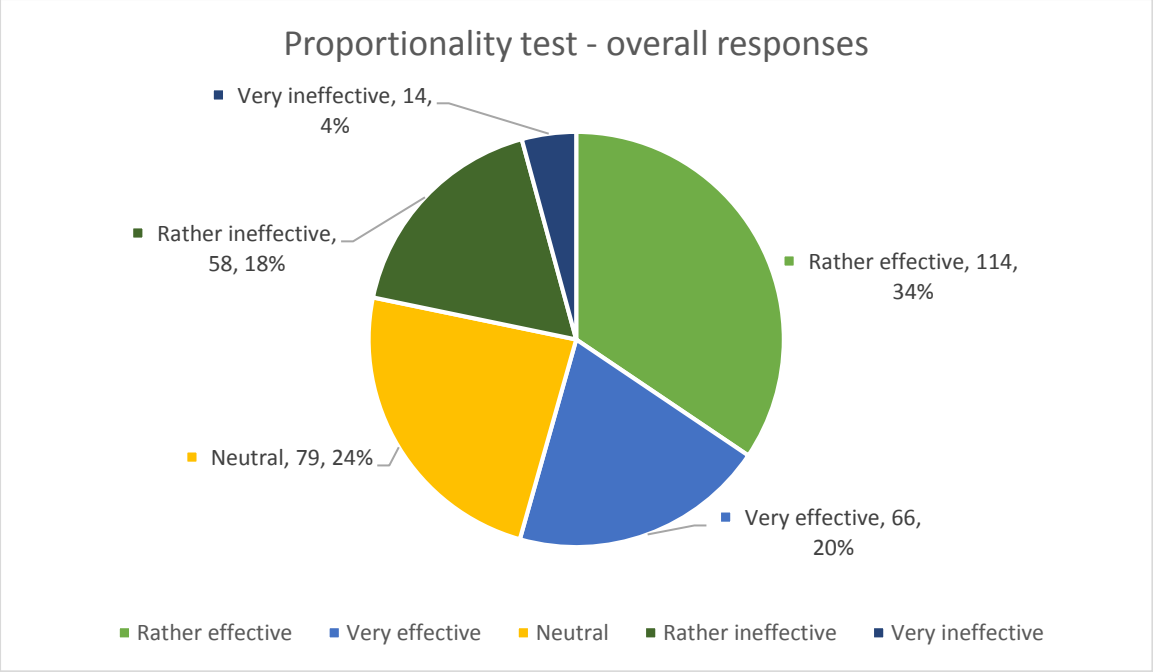


Policy options

Policy option 1: Prioritising repair within the remedies system of the SGD



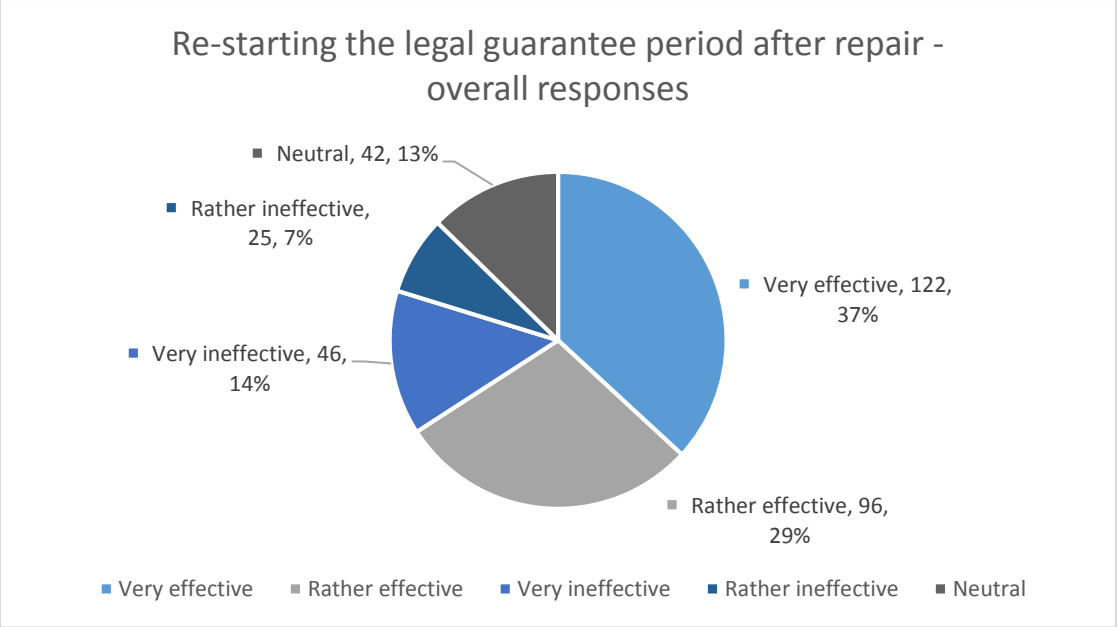
The OPC confirmed that the option considered most effective among all stakeholder categories in extending the use period of goods, once purchased, was **repair as the primary remedy**. 75% of all respondents (247 out of 331) considered this measure either very effective or rather effective (45% - 149 out of 331 very effective and 30% - 98 out of 331 rather effective). **Environmental organisations and trade unions unanimously agreed** on the effectiveness of the measure (100% very effective). In addition, **NGOs and academic/research stakeholders** agreed that repair as the primary remedy would be an effective measure (93.5% - 15 out of 16). It is notable that **a very large majority of responding EU citizens** also found this measure to be effective (80% - 138 out of 172). Two out of three **business stakeholders** agreed that this measure would be effective (65% - 69 out of 105), while only 16% (17 out of 105) found it ineffective. Among responding **public authorities**, a slight majority agreed on the effectiveness of the measure (54% - 6 out of 11), while 27% (3 out of 11) found it to be rather ineffective. The only stakeholder group where a majority (70% - 7 out of 10) found this measure to be ineffective (50% very ineffective and 20% rather ineffective) were responding **consumer organisations.**



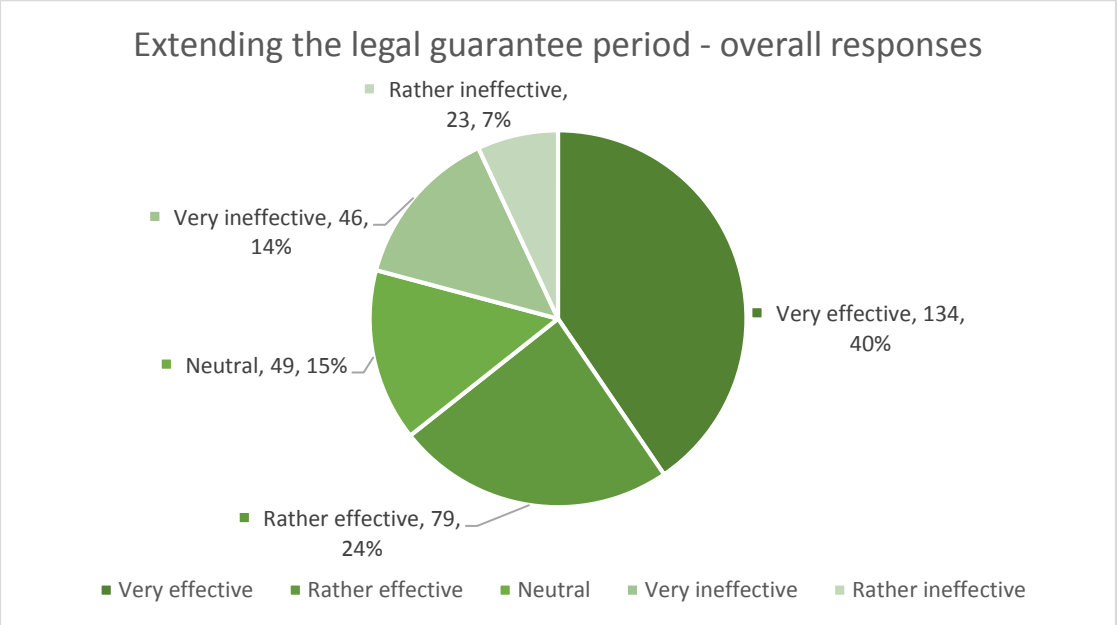
The measure which determined **repair as the consumer's remedy when the repair cost is less than or equal to the replacement cost** did not receive a similarly large support among stakeholders. Still, it was considered effective in extending the use of goods by a slight majority of all responding stakeholders (54% - 180 out of 331), while 21% of all respondents (72 out of 331) found it ineffective. Views were nuanced among different stakeholder groups. 60% of **EU citizens** (104 out of 172) found the measure effective. 54% (6 out of 11) of responding **public authorities** also considered the measure effective. Half of responding **business stakeholders** also agreed with the effectiveness of the measure (50.4% - 53 out of 105), while only 18% (19 out of 105) found it ineffective and 31% (33 out of 105) were neutral about the measure. However, only 30% of **consumer organisations** (3 out of 10) considered it effective, while 70% (7 out of 10) found the measure to be very or rather ineffective. Similarly, 75% of responding **environmental organisations** (6 out of 8) considered the measure rather ineffective, while only 25 % (2 out of 8) considered it rather effective.

Policy option 2: Re-starting and extending the liability period within the SGD

The measures of **re-starting the liability period after repair** and **extending the liability period** showed similar trends in the responses. For both measures, the views among stakeholder categories diverged, with clear majorities of responding consumer organisations, environmental organisations, NGOs and citizens agreeing on the effectiveness of the measures in extending the use of purchased goods, while half of the business respondents were considering the measures ineffective. Public authorities largely agreed on the effectiveness of both measures with similar numbers (91%, 10 out of 11).



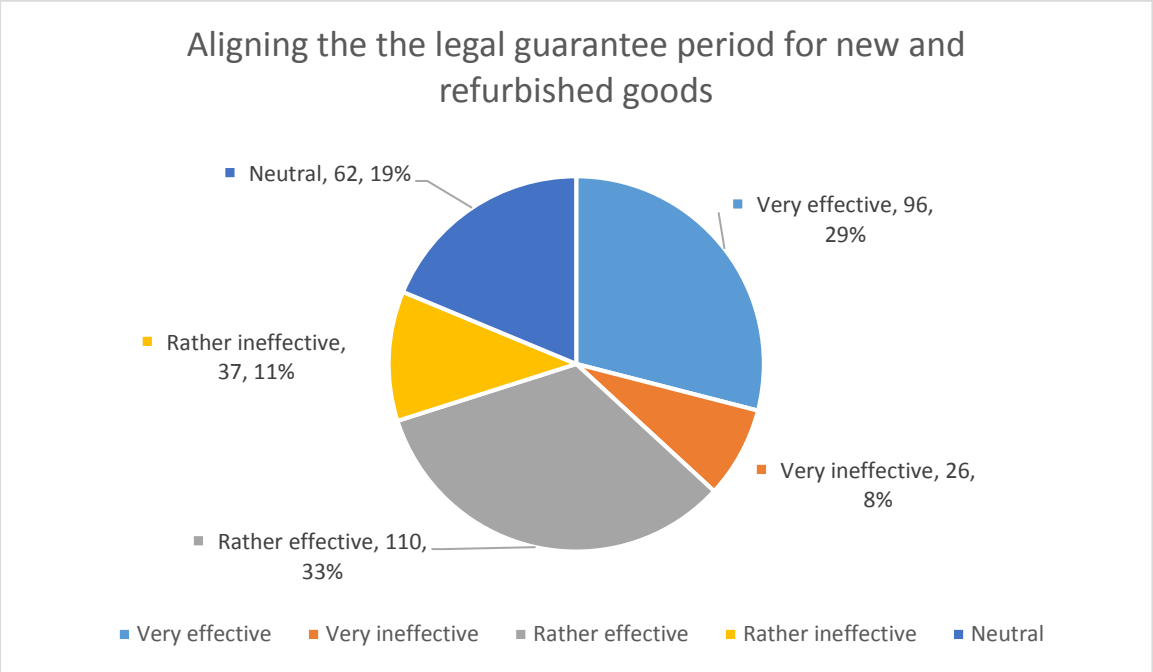
The overall responses showed that **re-starting the legal guarantee period after repair** was considered an effective measure in extending the use period of purchased goods, ranking the measure the second highest – after repair as the primary remedy - of all proposed measures (66% - 218 out of 331 effective and 21% - 71 out of 331 ineffective). All responding **environmental organisations** (100 % (62% - 5 out of 8 indicating it rather effective) and 85% (146 out of 172) of responding **EU citizens** considered the measure effective. Among **consumer organisations,** the measure was considered effective by 80% (8 out of 10) of the respondents (40% (4 out of 10) of those indicating it very effective). On the contrary, among responding **business stakeholders**, only 25% (26 out of 105) considered the measure effective, while the biggest share of business respondents (50%, 53 out of 105) considered it ineffective.



The measure of **providing a longer legal guarantee period** was found effective in extending the period of use for purchased goods by 64% of all respondents (134 out of 331) and 21% (69 out of 331) finding it ineffective. The strongest response came from responding **EU citizens**, 84% of whom (144 out of 172) found the measure effective. Likewise, the **responding consumer organisations** strongly agreed with the effectiveness of the measure (80% - 8 out of 10, with 70% very effective). Half of the responding **environmental organisations** (50% - 4 out of 8) also considered the measure effective. By contrast, **business stakeholders** did not find the measure as effective in extending the use period of purchased goods, with only 29% (30 out of 105) agreeing to its effectiveness, while half of them (50% - 52 out of 105) considered it ineffective.

Policy option 3: **Promoting second-hand and refurbished goods within the SGD**

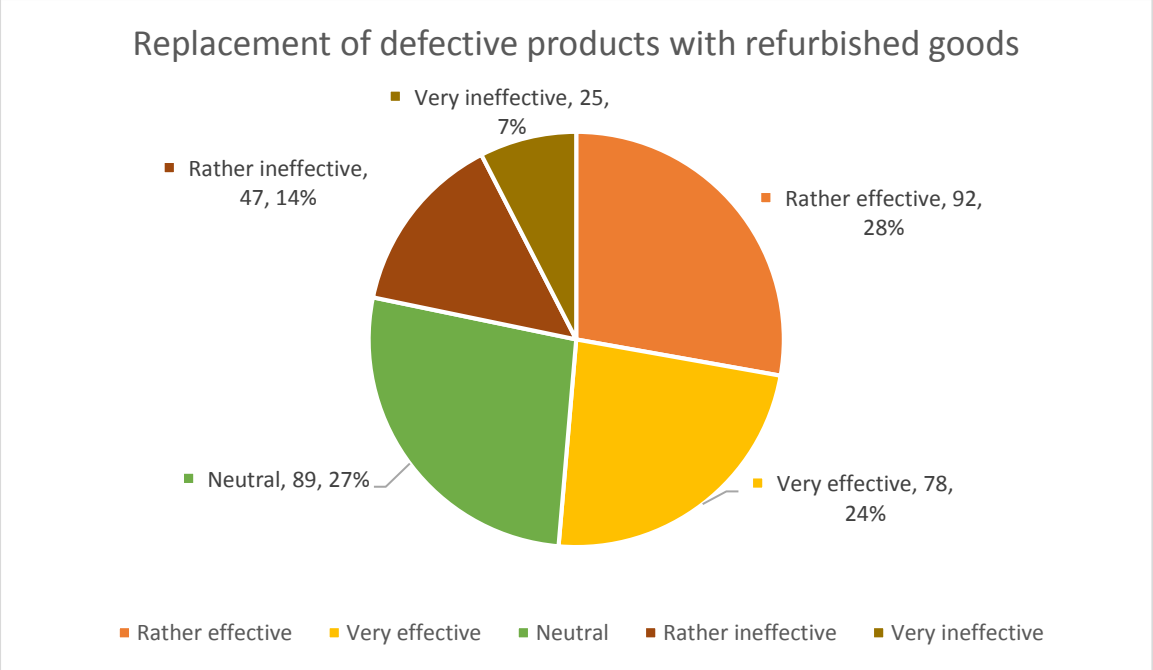
The measure of **aligning the legal guarantee period of new and refurbished goods** was also found effective in extending the use of goods purchased by consumers among all stakeholders, with 62% (206 out of 331) of responding stakeholders agreeing on its effectiveness. By contrast, respondents did not provide similar answers for offering the **same liability period for new and second-hand goods**, as less than half of all respondents (47% - 155 out of 331) considered the measure effective and a third of respondents agreed that such a measure would be ineffective (99 out of 331).



On providing the **same legal guarantee period for new and refurbished goods**, **EU citizens strongly** agreed on the effectiveness of the measure (79% - 136 out of 172). Similarly, responding **public authorities**, 72% (8 out of 11) found the measure effective. Also responding **consumer organisations** (70% - 7 out of 10) found the measure effective. **By contrast**, **business stakeholders** were equally split: 38% (40 out of 105) considered the measure effective, while the same share (38% - 40 out of 105) found the measure ineffective. Similarly, only 37% (9 out of 24) of **environmental organisations, NGOs and**

academic/research institutions agreed on the measure's effectiveness, while 58.3% (14 out of 24) were neutral.

The measure on **aligning the liability periods of new and second-hand goods** was not similarly found as effective as the measure on aligning the liability periods of new and refurbished goods by all respondents. A majority of responding **EU citizens** agreed on the effectiveness of (62% - 107 out of 172) this measure. Similarly, 60% of responding **consumer organisations** (6 out of 10) considered the measure effective in extending the use of period of goods, once purchased. On the other hand, only a quarter of **business stakeholders** found the measure effective (26%, 27 out of 105). Similarly, only a quarter of responding **environmental organisations, NGOs and academic/research** institutions (25% - 6 out of 24) found the measure effective, while 46% (11 out of 24) found it ineffective.



Concerning the measure of **replacing defective products with refurbished goods**, half of all respondents agreed on the effectiveness of such a measure (51% - 170 out of 331), while a quarter of all of the respondents (22% - 72 out of 331) found it ineffective. The largest agreement on the effectiveness of the measure in extending the use of purchased goods came from **environmental organisations and NGOs** of whom three out of four found the measure effective (76% - 16 out of 21). **EU citizens** had a more split view, with a slight majority finding the measure effective (53.4% - 92 out of 172). Half of responding **business stakeholders** considered the measure effective (48.4% - 51 out of 105), while a quarter (25% - 26 out of 105) considered it ineffective. Among responding **public authorities**, 45% (5 out of 11) were neutral about the measure. However, the majority of **consumer organisations** disagreed with the effectiveness of the measure (60% - 6 out of 10), while only 10% (1 out of 10) found it effective.

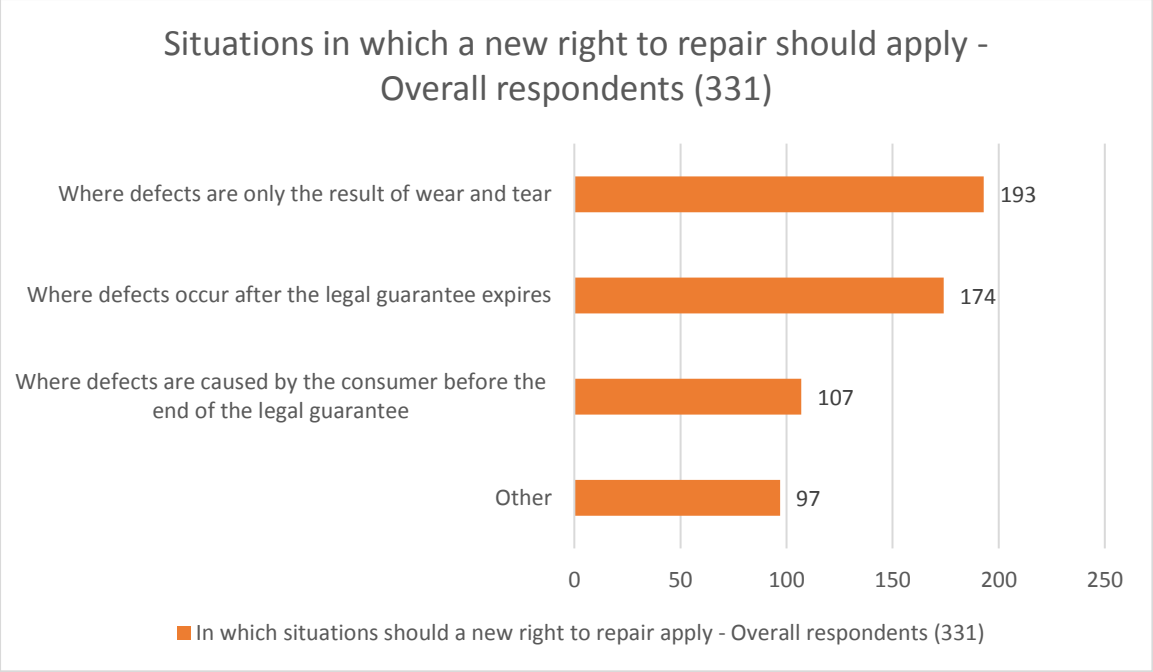
Other options: Measures promoting repair outside the scope of the SGD (right to repair)[184]

On the measure of **encouraging businesses to voluntarily commit to repairing goods and promoting second-hand/refurbished goods**, half of overall respondents (52.5% - 174 out of 331) agreed on the effectiveness of such a solution in extending the use period of purchased goods, while 28% (94 out of 331) found the measure ineffective. Among **business stakeholders** there was a slight majority considering this measure effective (52.5% - 55 out of 105). The majority of responding **environmental organisations** (75% - 6 out of 8) found the measure ineffective. Half of responding **consumer organisations** (50% - 5 out of 10) also found this measure ineffective. The views of **public authority** respondents were more split among neutral (36% - 4 out of 11) and ineffective (45% - 5 out of 11).

On the consultation section of **a possible right to repair**, the first question addressed which **product categories** should be covered by the right to repair. Categories addressed where electronics, large household appliances, all consumer products categories, vehicles, small household appliances, furniture, textiles and other. Approximately **half of all respondents** (54.3% - 180 out of 331) agreed that a possible new right should apply to all consumer product categories. 44% of all respondents (146 out of 331) agreed that electronics should be included and 42% (139 out of 331) agreed on including large household appliances. Small household appliances gathered some support from all respondents to be covered (38.6% - 128 out of 331). On the opposite end, only 17% of all respondents (56 out of 331) agreed that a possible new right to repair should apply to textiles.

All responding **environmental organisations** agreed that a possible new right to repair should cover all consumer product categories. A majority of responding **EU citizens** agreed that all consumer product categories should be included (68.6% - 118 out of 172). Among responding **consumer organisations**, more than half agreed that a new right to repair should apply to all consumer product categories (60% - 6 out of 10), electronics, large household appliances and small household appliances (60% - 6 out of 10). **Business stakeholders** had a different view. Half of business respondents agreed that a new right to repair should apply to product categories other than those mentioned in the consultation and 28.5% (30 out of 105) agreed that electronics should be included. Only 24% of business stakeholders (25 out of 105) agreed that a possible new right to repair should apply to all consumer product categories.

[184] The OPC, launched at an early stage of the process preparing for the initiative, did not include questions on all policy options considered in this IA.

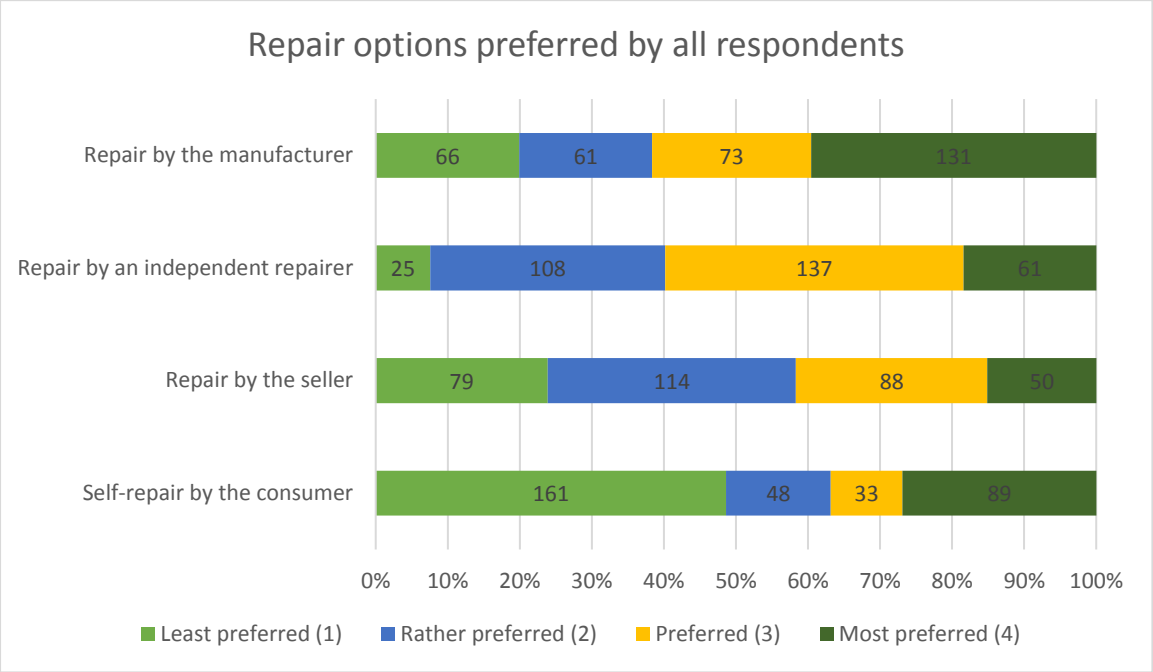


The consultation addressed **in which situations a possible new right to repair should apply**, listing following options as answer categories: where defects are not caused by the consumer but are the result of wear and tear, where defects occur after the legal guarantee expires, where defects are caused by the consumer before the end of the legal guarantee, and other situations. A slight majority of **all respondents** agreed that a possible new right to repair should apply where defects are not caused by the consumer but are the result of wear and tear (58.3% - 193 out of 331). Half of all respondents (52% - 174 out of 331) found that it should also apply where defects occur after the legal guarantee expires. Approximately a third of all respondents agreed that it should apply where the consumer causes defects before the end of the legal guarantee (32% - 107 out of 331).

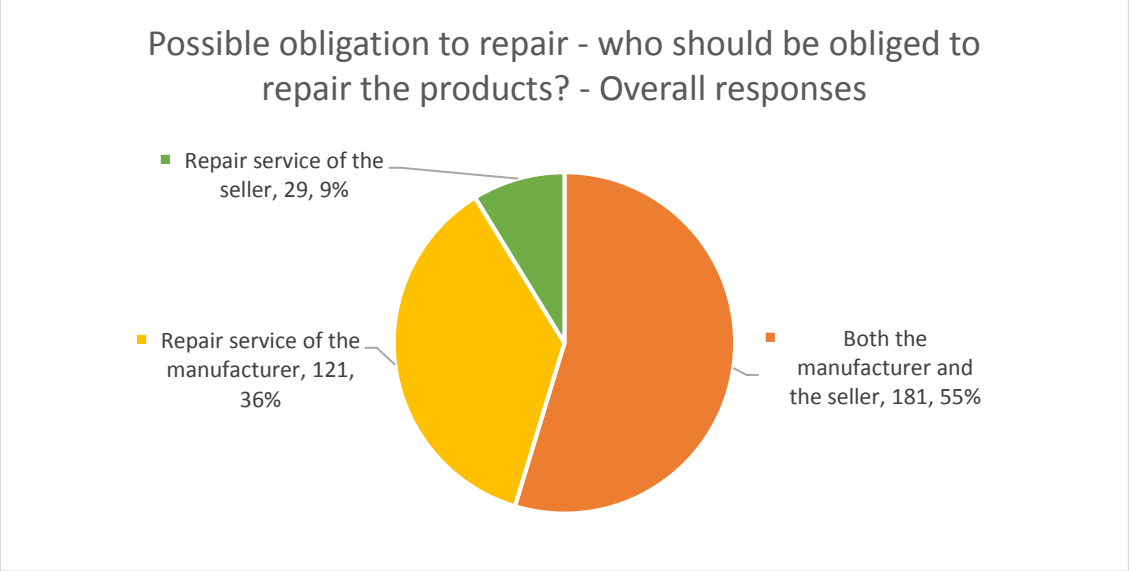
All responding **consumer organisations** agreed that a possible new right to repair should apply where defects occur after the legal guarantee expires. There was also strong support from consumer organisations for the right to repair to apply where defects are not caused by the consumer but are the result of wear and tear (90% - 9 out of 10) or where defects are caused by the consumer before the end of the legal guarantee (80% - 8 out of 10). Contrastingly, 52% of responding **business stakeholders** (55 out of 105) considered that a new right to repair should apply to other situations, while only 40% (42 out of 105) found that it should apply where defects are not caused by the consumer but are the result of wear and tear.

Another aspect of a possible new right to repair concerned the **period of time during which consumers could claim repair of goods**. As regards the duration of this period, 61% of all **respondents** (201 out of 331) agreed that the duration should depend on the type of product. A slight majority (52.5% - 174 out of 331) also agreed that a minimum duration should be set by law and longer periods should be a competing factor on the market. Only 17% of respondents (57 out of 331) found that the duration should differ based on the cause of the defect and only a tenth of respondents (9.3% - 31 out of 331) agreed that the duration should be the same fixed period for all consumer goods.

The responses of **business stakeholders** followed a similar trend. The most preferred options by **consumer organisations, environmental organisations and EU citizens** were also the first two options mentioned above, i.e. that the duration should depend on the type of product as well as a minimum duration should be set by law and longer periods should be a competing factor on the market.



Another question addressed **the repair options preferred by respondents**. The most preferred option among **all stakeholders** was repair by the manufacturer (39.5% - 131 out of 331 most preferred), while self-repair by the consumer only gathered 27% (89 out of 331) support as the most preferred option. Repair by independent repairers also gathered support from all respondents (19% - 61 out of 331 most preferred). Self-repair by the consumer was considered as the least preferred option by the biggest share of respondents (49% - 161 out of 331 least preferred). The most preferred option by **consumer organisations** was also repair by the manufacturer (80% - 8 out of 10). Most **business stakeholders** agreed that the most preferred option should be repair by the manufacturer (52.3% - 55 out of 105) and the least preferred option by business respondents was self-repair by the consumer (64.7% - 68 out of 105).



When asked **on whom an obligation to repair should be imposed**, a majority of all respondents agreed that both the manufacturer and the seller should be obliged to repair products (54.7% - 181 out of 331). More than a third of all respondents (37 % - 121 out of 331) instead considered that the repairs should be done by the manufacturer. A majority of **consumer organisations, environmental organisations and NGOs** agreed that both the manufacturer and the seller should be liable for the repair (77.4% - 24 out of 31). Half of responding **business stakeholders** (50.5% - 53 out of 105) agreed that both the manufacturer and the seller should be obliged to repair products.

The OPC also addressed **the reasonable price of repair** for consumers under a possible new right to repair. Almost a third of all respondents (32% - 106 out of 331) agreed that the price of repair should cover the cost of repair and include a reasonable margin of profit. Slightly less (30% - 99 out of 331) supported the idea that the price of repair should cover only the costs of the repair (e.g. labour costs, cost of spare parts). A majority of **business stakeholders** (62% - 65 out of 105) agreed that the price of repair should cover the cost of repair and include a reasonable margin of profit. On the other hand, almost a quarter of **consumer organisations, environmental organisations and NGOs** (22.6% - 7 out of 31) agreed that that the price of repair should cover only the costs of the repair, e.g. labour costs or cost of spare parts while only 6.5% (2 out of 31) agreed with the profit margin being covered).

C. Other consultation activities

Beside a consumer survey and a business survey run in the context of the supporting study and targeted bilateral meetings with stakeholders, the Commission published a call for evidence and organised a workshop with MS.

1. Feedback on the published call for evidence for an impact assessment

In total 325 stakeholders submitted feedback on the call for evidence during the feedback period between 11 January 2022 and 5 April 2022. The majority of responding stakeholders were EU citizens (64% - 209 out of 325). Business stakeholders were also largely represented (71 respondents). Several public authorities, NGOs and environmental organisations, as well as some

academic institutions and trade unions submitted feedback. One consumer organisation also participated. Most of the respondents to the call for evidence also provided their contributions in the OPC.

Stakeholders from different categories (business organisations/associations, companies, NGOs) supported the option of making repair the primary remedy. However, it was noted that repair is not always possible or may be too expensive. In this regard, stakeholders also supported the option of promoting repair where it is cheaper or at the same cost as replacement.

Some business stakeholders did not support extending the liability period as this would create additional costs for businesses, which would in turn lead to increased costs for products. It would also mean additional burdens, such as logistical burdens (spare parts storage etc.). Consequently, manufacturers and retailers would need to make allowances for a much higher volume of returns and requests for repair or replacement. One business organisation supported extending the liability period, allowing the seller to replace defective products within that period with refurbished goods instead of new goods.

The option of voluntary commitments found support among a majority of stakeholders. It was considered as a low intervention measure, still having the potential to facilitate circular economy and sustainability. Business stakeholders also mentioned that they often include into their business models and production lines practices that have low impact on the environment. However, there were also stakeholders who considered voluntary commitments insufficient in achieving the objective of a genuine right to repair and sustainable consumption of goods.

With regards to the option on the 'right to repair', business stakeholders underlined that granting repair for free beyond the legal guarantee and for cases of wear and tear and/or mishandling of products does not incentivise good care and maintenance practices by consumers and takes away space for repairers to operate. It also risks a rise in product prices in general, if the repair costs are added equally to all consumers, independently of how they treat and maintain their own products. Many stakeholders, in particular from the business sector, highlighted that a repair necessary for a defect falling outside the non-conformity legal guarantee should not be for free. This should encourage consumers to properly use the products they have purchased. Concerning the right to repair for a 'reasonable price', a majority of stakeholders highlighted that a proper definition of the measure would be needed before it could be applied in practice, especially for the 'reasonable price' requirement.

There was wide support for the option of allowing the replacement of defective products with refurbished goods instead of new goods. Stakeholders, especially business respondents, underlined that especially in situations where the product is replaced after a long period of use, it is unreasonable to demand the seller to provide a completely new product. However, it was mentioned that replacement with refurbished goods should not be mandatory and should be applicable on a case-by-case basis.

2. Workshop with Member States

In the workshop with MS on 7 April 2022, some MS did not express their clear positions yet, while others conveyed only their preliminary observations.

Need for EU action

A majority of MS **did not yet have a position** on the need for EU action. Many MS however shared the view that it is important to address the negative impacts on the environment caused by excessive consumption and that consumers might have a role to play in this context. A few MS (4 out of 20 MS who took the floor) expressed concerns about the timing of the initiative, as the SGD has just recently been transposed and started to apply in MS.

Prioritising repair within the remedies system of the SGD

One cluster of measures discussed concerned prioritising **repair within the remedies system of the SGD**. As some of the MS supported both variants, a slight majority of 11 MS (out of 20 which took the floor) showed support for prioritising repair within the remedies system of the SGD. 8 MS (out of 20 which took the floor) did not have a position yet. Only 1 MS (out of 20 which took the floor) was reluctant to support either of the two variants.

Among the MS supporting prioritising repair, 6 MS supported the variant of simply **making repair the primary remedy** without giving a choice. Among those MS, a few mentioned that there should be certain safeguards introduced in favour of the consumer. 7 MS (7 out of 20) supported the other variant discussed, i.e. **repair as the consumer's remedy when the repair cost is less than or equal to the replacement cost**. Two MS (out of 20) expressed their concerns about such measure, noting that there should be clear criteria in order to avoid fragmentation when applying such a test. Some MS also pointed out that the proportionality test might be problematic in practice, as the seller does not have similar knowledge about the repair costs as the manufacturer.

Several of the MS without a position mentioned that possible changes should not reduce the rights of the consumers.

The measures prioritising repair within the remedies system of the SGD were generally more supported than measures providing other kind of incentives to consumers to choose repair (such as an extension of the liability period after repair, see below).

Extending the liability period within the SGD

Another cluster of measures concerned promoting repair by providing incentives to consumers. One of the measures discussed was an **extension of the liability period of the good if repair is chosen as the remedy for a lack of conformity**. A limited number of MS (3 out of 19 MS who took the floor) were supportive towards this measure. One of these MS has already introduced partly similar measures in its national legislation. Several MS (6 out of 19) were against or doubtful about this measure. One of these MS opposed the extension of the liability period for the goods as such, but expressed that the extension should be limited to the defect in question. One of the opposing MS expressed concerns that an extension would be too burdensome for those MS who have already used the possibility provided in the SGD to extend the liability period over 2 years.

Several MS (5 out of 19) mentioned that their position will depend on the conditions under which this extension will be done. These MS were particularly concerned about price increases after any extension of the legal guarantee period, and they were doubtful that

consumers would actually make their decisions on remedies based on the lengths of the liability periods. One MS did not have a position yet.

Promoting second-hand and refurbished goods within the SGD

The first measure discussed was about allowing sellers to use **refurbished goods as replacements** when available. A few MS (3 out of 20 which took the floor) were supportive of this option. In addition, 6 MS (out of 20) showed some support for this option, however with reservations, such as that this option should be considered only if the replacement with refurbished goods is approved by the consumer and that certain safeguards should be put in place (such as to prevent the use of refurbished goods with defects which may not be obvious). 3 MS were reluctant towards the measure; 8 MS did not have a position yet.

The MS also discussed the option of **aligning the liability period of second-hand goods to that of new goods** (the workshop questions did not distinguish between refurbished goods and second-hand goods). Several MS (5 out of 19 who took the floor) were supportive for this option. Three of these supporting MS do not differentiate between new and second-hand goods in their national legislation. 9 MS (out of 19) did not support such alignment. 4 of these MS were not supportive because their national legislations currently allow sellers to agree with the buyer on a liability period shorter than 2 years. These MS argued that aligning the liability periods could possibly have a discouraging effect on the sellers' interest to market second-hand goods. 5 MS (out of 19) did not have a position yet.

Other options: Measures promoting repair outside the scope of the SGD (right to repair)

Measures imposing an obligation on the producer/seller to repair for a reasonable cost outside the scope of the SGD or an obligation on the producer/seller/repairer to issue a quote for repair outside the scope of the SGD were discussed.

A majority of MS (10 out of 16 who took the floor) did not support imposing any **obligations to repair**. Some of them argued that an obligation would be an excessive burden and would likely increase costs of the goods.

Only one MS (out of 16) fully supported this measure, as this MS has already introduced an obligation on the producer to provide technical service and spare parts during 10 years from manufacturing the product in its national legislation. In addition, one MS (out of 16) showed some support, but also pointed out that repair costs should not be increased due to this obligation and that the producer has the responsibility of repair, not the seller.

4 MS (out of 16) did not express their positions on this measure.

On the measure on imposing an obligation **to issue a quote for repair** outside the scope of the SGD, a majority of MS (12 out of 16 who took the floor) did not have a position. 2 MS supported such a measure while 2 MS showed reluctance to support such a measure.

Annex 3: Who is affected and how?

PRACTICAL IMPLICATIONS OF THE INITIATIVE

Consumers would be positively affected by the initiative. In particular, the preferred policy option covering the period beyond the legal guarantee will bring availability and transparency of repair services as well as enhance consumer confidence and trust in the quality of repair services, consequently facilitating consumers' possibilities to repair their defective products. The preferred policy option will also increase consumer awareness of options to purchase refurbished goods. The options proposed will help to achieve consumer savings as a result of prolonging the useful life of goods once purchased.

The preferred option on the realm of the legal guarantee period will not have a direct positive impact on consumers' decision-making process. This is because there will not be additional possibilities provided for consumers; the choice between repair and replacement will be limited in some cases compared to the existing situation under the legal guarantee. However, in the longer term, the option envisioned is likely to make repair more accepted by consumers, as they will become better aware and used to repair practices in the context of the legal guarantee.

Overall, consumers will benefit from the preferred policy option. Consumer welfare will increase because of savings achieved due to the possibility to repair products under economically favourable conditions and avoiding the need to purchase new products.

The impacts of the preferred policy option would be positive also on the **environment**. More repaired goods means a longer lifespan of products and less new replacement products produced and purchased. This will lead to more sustainable consumption, benefiting the environment in form of a substantial positive impact on the level of CO2 emissions, use of resources and waste production. The environmental impact of the preferred option needs to be seen in comparison and together with other initiatives under the Green Deal. For instance concerning CO2 savings, the preferred option of this initiative would produce CO2 savings of 18.4 million tons CO2-eq, the ECGT will save 0.33-0.47 million tons and the ESPR 471 million tons. While the ESPR CO2 savings are naturally much higher since the ESPR is aiming for far-reaching changes in product manufacturing, the preferred option would save much more CO2 compared to the ECGT. It is however much more important to see the impact of the present initiative together with all other Commission initiatives in the green transition. This initiative is one building stone of the overall environmental impact all the respective initiatives taken together are aiming to achieve, contributing to tackle a problem which is far too comprehensive to be dealt with by one or two separate initiatives.

The impact on **sellers and producers** varies depending on the measure. For the measures covering the legal guarantee period, the preferred policy option leads to gains for producers and sellers, in particular due to cost savings concerning the remedies offered to consumers. Measures promoting repair and replacement outside the legal guarantee lead to forgone sales of new products, negatively affecting producers and sellers in the EU[185]. Some losses of producers will be offset by increased earnings from

[185] Later referred to as 'EU producers' and 'EU traders'.

the repair services they offer. Moreover, the preferred policy option will help sellers to market their refurbished products and create competition in this sector.

The repair/refurbishment sector will be positively impacted by the preferred policy option, as a result of increased demand for repair services. Increased repair will contribute to competition and benefit various repair service providers, including independent repairers and SMEs. The beneficial effect concerns also producers and traders offering spare parts and repair services, gaining additional income from this line of business.

Public authorities are not expected to encounter considerable enforcement costs. For the measure under the legal guarantee, public authorities will not confront considerable costs as authorities are already familiar with the SGD. The moderate enforcement costs concerning the measures outside the legal guarantee include the competent authorities' familiarisation with the new rules, and enforcement actions like inspections. Implementation costs are particularly relevant for option 5B, i.e. costs for IT development and ongoing maintenance of the platform, as well as awareness raising campaigns.

SUMMARY OF COSTS AND BENEFITS[186]

I. Overview of Benefits (total for all provisions) – Preferred Option		
Description	***Amount***	***Comments***
Direct benefits		
Consumer savings	EUR 176.5 billion	Main beneficiaries: consumers
Environmental benefits	CO2 savings: 18.5 million tons CO2-eq = EUR 3.3 billion Resource savings: 1.8 million tons CO2-eq = EUR 1.1 billion Waste savings: 3 million tons CO2-eq = EUR 493.5 million Total monetised: EUR 4.9 billion	Main beneficiaries: society
Total cost savings in production costs	EUR 15.6 billion	Main beneficiaries: EU producers
Indirect benefits		
-		
Administrative cost savings related to the 'one in, one out' approach*		
-		

II. Overview of costs – Preferred option								
		Citizens/Consumers		**Businesses**		**Administrations**		
		One-off	**Recurrent**	**One-off**	**Recurrent**	**One-off**	**Recurrent**
PO1A: Prioritisi	Direct adjustment costs	-	-	EUR 104.2 million	EUR 758.1 million (15	-	-

[186] All figures stem from the IA Study. All benefits and recurrent costs are calculated and expressed for 15 years.

ng repair whenever it is cheaper than replacement					years)		
	Direct administrative costs	-	-	-	-	-	-
	Direct regulatory fees and charges	-	-	-	-	-	-
	Direct enforcement costs	-	-	-	-	EUR 0.5 million	EUR 27.7 million
	Indirect costs	-	-	-	-	-	-
PO5A: Obligation to inform where to repair	Direct adjustment costs	-	-	EUR 106.6 million	EUR 160 million	-	-
	Direct administrative costs	-	-	-	-	-	-
	Direct regulatory fees and charges	-	-	-	-		
	Direct enforcement costs	-	-	-	-	EUR 1.1 million	EUR 11.2 million
	Indirect costs	-	-	-	-		
PO5B: Platform with information on available repair services (national level)	Direct adjustment costs	-	-	-	-	-	-
	Direct administrative costs	-	-	-	-	-	-
	Direct regulatory fees and charges	-	-	-	-	-	-
	Direct enforcement costs	-	-	-	-	EUR 8.6 million	EUR 23.4 million
	Indirect costs	-	-	-	-	-	-
PO6A: Voluntary commitments to an EU common "easy repair standard"	Direct adjustment costs	-	-	-	-	-	-
	Direct administrative costs	-	-	-	-	-	-
	Direct regulatory fees and charges	-	-	-	-	-	-
	Direct enforcement costs	-	-	-	-	EUR 1 million	EUR 1.5 million
	Indirect costs	-	-	-	-	-	-
PO6B: Obligation to issue a repair quote on	Direct adjustment costs	-	-	EUR 475.4 million	EUR 5.9 billion	-	-
	Direct administrative costs	-	-	-	-	-	-

price and conditions for repair in a standardised form	Direct regulatory fees and charges	-	-	-	-	-	-
	Direct enforcement costs	-	-	-	-	EUR 1.1 million	EUR 25.4 million
	Indirect costs	-	-	-	-	-	-
PO6C: Producer's obligation to repair goods that are subject to reparability requirements under EU law (against a price)	Direct adjustment costs	-	-	EUR 45.0 million	EUR 582.1 million	-	-
	Direct administrative costs	-	-	EUR 69.8 million	-	-	-
	Direct regulatory fees and charges	-	-	-	-	-	-
	Direct enforcement costs	-	-	-	-	EUR 1.1 million	EUR 3.4 million
	Indirect costs	-	-	-	-	-	-
PO7: Promoting refurbished goods on an online platform via a functionality under PO5B	Direct adjustment costs	-	-	-	-	-	-
	Direct administrative costs	-	-	-	-	-	-
	Direct regulatory fees and charges	-	-	-	-	-	-
	Direct enforcement costs	-	-	-	-	EUR 0.7 million	EUR 3.2 million
	Indirect costs	-	-	-	-	-	-
Costs related to the 'one in, one out' approach							
Total	Direct adjustment costs	-	-	EUR 731.26 million	EUR 7.39 billion		
	Indirect adjustment costs	-	-	-	-		
	Administrative costs (for offsetting)	-	-	EUR 69.82 million	-		

RELEVANT SUSTAINABLE DEVELOPMENT GOALS

III. Overview of relevant Sustainable Development Goals – Preferred Option(s)		
Relevant SDG	**Expected progress towards the Goal**	**Comments**
SDG no. 12 – Responsible consumption and production	The initiative is expected to lead to an increase of repair of defective viable consumer goods within	

	and beyond the legal guarantee, as well as to an increased use of refurbished goods beyond the legal guarantee. Consequently, the initiative will contribute to more sustainable consumption, as there will be a reduced amount of waste stemming from discarded products and less demand for resources used in manufacturing new products.	
SDG no. 13 – Climate action	The initiative is expected to lead to CO2 savings, resource savings and waste savings, therefore contributing to the climate change mitigation.	

Annex 4: Analytical Methods[187]

I. IMPACT ASSESSMENT OF EFFECTIVENESS

The assessment of effectiveness is based on two aspects: first, how options affect consumers and sustainable consumption choices in the form of repair or purchase of refurbished goods; second, how options affect the environment.

1. Effectiveness with respect to consumers decisions on sustainable consumption choices

The consumer aspect is assessed based on two sub-criteria: A) consumer decision-making process and B) consumer trust and protection. These criteria are also the key factors that influence consumer decisions towards more sustainable consumption choices, which ultimately contribute to the sustainable consumption objective.

1.1. Consumer decision-making process: options are assessed considering their influence on consumer decisions to avoid new purchases or repair more / buy more refurbished goods as a means to achieve the sustainable consumption objective. This criterion is quantified based on the projected take-up of options and number of avoided purchases of new goods or additionally repaired products as a result of each option. The avoided number of purchases indicator is used for the purpose of comparing the consumer impacts of Cluster I options. The additional number of repaired products is used for the purpose of comparing the consumer impacts of Cluster II options (see below explanation of indicators).

a. Assumed take-up rate of options and projected increase in repair or use of refurbished goods as a result of each option

The assumed increase in "take-up rate" of repair as a result of the policy options takes account of several variables:

- % of consumers who are likely to be affected or make use of a policy option;
- % of businesses who would be willing to or be obliged to make use of each policy option;
- Number of consumers who are likely to avoid new purchases as a result of remedies under the legal guarantee, decide to repair their products or buy refurbished goods as a result of each option.

[187] All figures stem from the IA study. See on methodology, IA Study, Annex 3.

The assumed increase in take-up rates of repair as a result of each option has been estimated separately, based on available evidence on the impacts of the option on consumers and business. Relevant data has been derived from the evidence base collected in the IA Study, namely by means of the consumer and business surveys and the two experiments on the SGD and the 'right to repair'. Data from the open public consultation has been taken into account where relevant. The take-up rates also reflect the percentage of consumers who are likely to be affected by the option and respectively repair or purchase refurbished goods. The data also reflects the differences in impact of mandatory options (e.g. PO1A and PO1B) and voluntary options (PO5B, 5C and 6A), which will depend on take-up by both business and consumers.

b. Discount rate of impacts over 15 years

A separate calculation was performed to obtain the take-up rate figure over a period of 15 years. Conservative assumptions were introduced for the take-up of options in Cluster I and II. An impact realisation profile was included, meaning that it would take 1-2 years for consumers to familiarise themselves with the measures. Thus, the assumption is made that the impact of all measures will be limited in the first two years of application. With respect to Cluster I, while the options will apply immediately, they will apply only to newly concluded sales contracts (i.e. concluded after the transposition date). That is why a conservative approach is followed, assuming that the number of new contracts concerned by the options would increase progressively during the first two years of application, before reaching the full projected numbers of transactions concerned in the third year. With respect to Cluster II options, it was assumed that it would take two years for consumers to become familiar with the new measures and take full advantage for the new rights and opportunities for repair contracts. Respectively, the number of repair contracts concerned would increase progressively in the first two years and would reach its full potential only in the third year. For these reasons, the projected take-up rate was set at 33% for the first year and at 67% in the second. The discounted take-up rates in the first two years result in a discounted overall take-up rate for the period of 15 years, compared to the projected full take-up rate for options which is expected to remain relevant from year 3 onwards. This conservative assumption has also been factored in all estimates of economic, social impacts and environmental impacts which are presented for the time-span of 15 years.

In the context of assessment of impacts, it is also relevant to mention that a discount rate has been also applied to the projected market failure within the next 15 years.

The estimate of the annual scale of the market failure (EUR 5.1 billion per year) translates into a market failure of minimum EUR 62 billion over 15 years with a yearly discount rate of 3%. The scale of the market failure for 15 years is discounted based on the 'net present value factor'.

c. Data robustness and representativeness

The findings from the two behavioural experiments (SGD and 'right to repair') in the IA Study developed for the purpose of this impact assessment deliver robust and representative

data. The methodological approach to data collection and the set up of behavioural experiments was verified and approved by experts from the Commission Joint Research Center, taking account of best practices in the EU and at international level.

On representativeness: The overall sample of behavioural experiments (8,000 participants for 10 EU countries with an overall population of 360 million inhabitants) compares well to best practices at EU and world level[188]. The sample was selected to cover a broad variety of socio-demographic profiles in terms of age, gender, region, with additional monitoring of soft quotas on factors like education and income within each country. The achieved sample is representative for the general population 18 years and older in each of the countries. **On robustness:** The behavioural experiments included 10, 000 participants in total. For example, the right to repair experiment tested 4 different policy options regarding the specification of conditions for the right to repair. With 10,000 participants in total, and each participant being exposed to one treatment, there are 2,500 participants per treatment, each participant making two decisions whether to repair or not. This sample size and number of treatments ensure that if there is a difference of 5% in take-up rate between treatments, then this difference is identified at the 5% significance level with probability of at least 95% (power of the study). This compares very favorably with the standard recommended minimum 80% power for experiments in social sciences. Finally, on the external validity of the behavioural experiments, the study was carried out by simulating as much as possible – given the constraints of budget and time – the situations that consumers would face in their real life.

On product sample: The analysis of economic impacts is carried out based on a product sample of 7 consumer goods, then extrapolated to the whole of the economy (see detailed description of product sample and extrapolation approach in Section II on Assessment of economic impacts).

The product sample in the behavioural experiments includes refrigerators, smartphones and shoes. This sample is sufficiently representative for the purpose of and within the constraints of a behavioural experiment. The selected popular consumer products comprise a variety of product characteristics which may play a role for consumer decisions to repair. Two products are relevant for the ecodesign framework and reparability requirements under EU law (refrigerators and smartphones). These products fall in the group of electr(on)ic goods that consumers are more likely to repair and their relatively high modularity also results in relatively high technical reparability. Fridges cannot be moved easily and normally require technicians to perform repair at the consumer's house, whereas smartphones and shoes are easily moveable items. On the other hand, shoes are a non-electronic product with relatively low modularity, representing a group of items that consumers are more likely to consider replacing rather than repairing. Finally, in terms of price, a fridge is a high-value item, shoes are a relatively low value item and smartphones on average rank in-between.

[188] The European Eurobarometer survey is based on a large country sample size of 1,000 observations, because of the two-fold reason that it often aims at exploring issues of general relevance (e.g., trust in EU) and at investigating cross-country differences. The World Value Survey is based on a similar sample size, but even for the largest countries (China or USA) the minimum sample size is 1,500 observations.

d. Number of avoided purchases of new goods/production of units

This indicator is derived from the increase in take-up rate of repair and reflects the projected impact of each option in terms of new product purchases that may be avoided as a result of the options. Options in Cluster I lead to avoided consumer purchases of new products by encouraging consumers to repair their own products, while options on refurbished goods encourage consumers to purchase refurbished products instead of new goods. The indicator is comparable for all options in Cluster I and is indicative of the differences in magnitude of their impacts. It has been used also as an input value for consumer decision-making for Cluster I options under the sub-criterion under 'effectiveness' in the MCA.

e. Number of additionally repaired products

This indicator shows the number of products that would be additionally repaired as a result of consumer decisions to repair their products beyond the legal guarantee. In this scenario the consumer is the ultimate decision-maker determining the numbers of additionally repaired products, because the consumer is the party paying for repair. The value of this indicator therefore entirely depends on the increase in take-up rate of repair by consumers as a result of Cluster II options. This indicator is particularly relevant for the estimates of consumer savings as a result of Cluster II options in a given year, following the consumer decision to repair their defective goods (or alternatively buy refurbished goods). That is why this indicator is also used as an input value for consumer decision-making sub-criterion for Cluster II options under 'effectiveness' in the MCA.

The values of both indicators (number of avoided purchases and number of additionally repaired products) for each policy option is influenced also by the scenarios in which an option applies as well as its scope. Even though some options have the same take-up rate (e.g. PO5B and PO5C), the scope of application of the options is different as they affect a different range of goods (e.g. PO5B covers all goods while PO5C covers only energy-labelled and ecodesign goods). Similarly, some options (e.g. PO2B) apply in a very narrow scenario and are relevant for a small number of cases in absolute terms. Finally, some options concern a different range and number of economic operators (e.g. PO6B concerns repairers of all consumer goods, PO6D concerns producers of all consumer goods, while PO6C concerns only producers of consumer goods subject to reparability requirements). Therefore, for some options even with a relatively higher take-up rate, the avoided number of purchases or number of additionally repaired products may be relatively small compared to other options, as less cases are concerned in absolute terms.

Take-up of policy options and avoided number of purchases

Policy option	Projected take-up rate	Take-up rate for 15 years	Number of products additionally repaired for 15 years	Number of potentially avoided purchases of new goods for 15 years	Assumptions and evidence on expected take-up rates of options
PO1A	**74.26%**	**69.31%**	1,487,868,610	170,480,857	As this measure will require businesses by law to offer repair whenever it is cheaper, 100% compliance rate by companies is assumed. However, some replacements will take place because repair is more expensive than replacement or because the product is technically impossible to repair. Therefore the assumed 100% compliance rate is discounted by the average % of 'end of life' products, which were not repaired because it was not possible or worth it. The data has been collected by the repair community in the framework of an EU funded Sharepair project for the period 2014-2021.[189] This results in a take-up rate of 74%. This rate is further discounted to 69.42% for a 15 year period based on the conservative assumptions for the take-up in years 1 and 2. The business survey data in the IA Study has been used as an additional source to cross-check the robustness of the data. It confirms the assumption, suggesting that around 12% of products are replaced because repair is more costly.[190] This percentage is lower than the figure on the end of life goods, because the latter also includes goods that are impossible to repair. The number of affected purchases is high because the overwhelming majority of non-conformity defects appear during the liability period of 2 years. Moreover, consumers are most likely to deal with these defects under this scenario, because products are relatively new and remedies under the legal guarantee are for free.
PO1B	**74.26%**	**69.31%**	1,487,868,610	170,480,857	The take-up rate is assumed on the same basis as for PO1A. Although PO1B being the more intensive option than PO1A, it can be expected that many sellers will offer consumers a replacement product anyway if such replacement is cheaper for them and that consumers will agree to that. Due to this likely practice, the difference between the take-up of PO1A and PO1B is expected to be only minimal. As the concrete

[189] Interreg North-Weste Europe, Sharepair project, Version of 21 October 2022, EU specific data extracted by Yoko Dams.

[190] The 12% stems from the business survey where it is indicated that 29% of products were replaced. Other data from the business survey suggests that 41% of respondents agreed that costs are a reason for not repairing it. Multiplying 29% of replaced goods by 41% (meaning that in these cases costs might have been the reason for replacement) leads to 12%.

					take-up rate of PO1B could not be assessed, it was assumed that the take-up of PO1B is at least as high as PO1A and that at least as many new goods could be avoided as under PO1A.
PO2A	**12.0%**	**11.22%**	250,462,692	28,698,162	The take-up figure is based on the results of the behavioural experiment among consumers (SGD experiment in IA Study). It compares the effect of the condition that consumers can benefit from a restart of the guarantee period after a repair against the likelihood to repair under the condition that such a restart is not offered. The percentage figure represents the average increase in the effect sizes. The results are explained in detail in the section 3.1 of the SGD experiment annex.
PO2B	**21.0%**	**19.63%**	48,170,404	5,146,385	The take-up figure is based on the results of the behavioural experiment among consumers (SGD experiment in IA Study). Under the condition that the legal guarantee period is extended for repairs only, but not for replacements, the likelihood of consumers to have their product repaired increases by this magnitude compared to the likelihood to repair under the condition that the legal guarantee period is not extended and thus neither repair nor replacement would be covered. The results are explained in detail in the section 3.2 of the SGD experiment annex. Despite this take-up rate, the number of affected purchases is low, because the number of non-conformity defects which are likely to manifest themselves in the extended liability period (year 3) is minimal (around 4%).
PO3A	**42.5%**	**39.73%**	97,487,723	10,415,303	Of all the measures tested in the business survey, this option is perceived to have a relatively high potential compared to the other measures (42-43% of manufacturers and sellers consulted said it had high to very high potential). While the take-up percentage by business is relatively high, this option would come into play in a very limited scenario and would concern a very small number of cases, because of the minimal number of defects that may occur in year 3.
PO3B	**42.5%**	**39.73%**	219,347,376	23,434,433	While the assumed take-up rate is the same as for PO3B, the number of replacements with refurbished goods under PO3A is higher, because it covers the second year of legal guarantee - a period when more defects are likely to arise (as more non-conformity defects manifest themselves in year 2 compared to year 3).
PO4	**13.45%**	**12.57%**	269,497,856	30,897,222	The take-up figure is based on the results of the behavioural experiment among consumers (SGD experiment in IA Study). Overall, three products were tested and revealed considerable price differences. The average increases in willingness to pay under the condition of an aligned, two-year guarantee period for highly refurbished products were the following: for a smartphone 33%, for a refrigerator 31%, and for shoes 20% (average across all three products: 26.5%). These are the relative increases in the amounts that consumers are willing to pay when highly refurbished products of these categories come with a guarantee period of 2 years instead of 1 year. The results are explained in detail in the section 3.4 of the SGD experiment annex. However, the assumed take-up figure is discounted to take account of the fact that this option will only benefit consumers in 14 MS where the liability period for refurbished goods can be lower than 2 years. As a result, this option will not impact all consumers in the EU, but only consumers in MS with shorter liability periods for refurbished goods. Therefore, its positive impacts on take-up rates affect a smaller number of purchases.

PO5A	**2.0%**	**1.87%**	229,727,847	25,061,632	Consumers' willingness to take up repairs as a result of this measure was not tested in the experiments. However, it is assumed that its effectiveness would be the lowest compared to the other four measures proposed outside the legal guarantee. In absence of other data, the behavioural experiment findings on the quote (PO6B) are taken as a basis to estimate the likely take-up rate of other options that pursue similar objectives. The quote provides transparency on all key decision-making factors for consumers for repair: price display, repair location, comparability of offers and general repair conditions. On the other hand, PO5A informs consumers solely on the repair location and thus addresses only the barrier regarding "how to get the product repaired". As it tackles only one factor for the decision to repair, it will influence less consumers and will not influence consumers who are held back from repair by other factors.
PO5B	**6.7%**	**6.26%**	769,588,286	83,956,466	This figure is based using a similar approach as for PO5A – i.e. based on the results of the Right to repair experiment for the quote combined with the insights from an existing platform in France. The platform will address fewer convenience barriers than the issuing of a quote, but more than the provision of information under PO5A. It will provide information on where to repair, but also on the general conditions of repair. By centralising the information on a platform, it will make it easier to find a suitable repair offer. The platform will also inform consumers about repair prices to some extent. On the other hand, the reach of the platform in the population might be limited and will depend on the quality of the platform and the reach of the communication campaigns. As mentioned above, a similar platform already exists in France. It has approximatively 127,000 repair services registered. Considering that in 2019, there were 145,696 repair services available in France[191], approximatively 87% of repair services were subscribed to the platform. The take-up rate will depend on the awareness campaigns carried out to engage businesses on the platform, as well as resources invested to keep the platform up to date.
PO5C	**6.7%**	**6.26%**	60,323,885	17,410,692	While the assumed take-up rate is the same as under PO5B, the range of products covered is much more limited due to the limitations in the scope of the platform under PO5C to energy-labelled and ecodesign goods. Respectively, the number of affected purchases is smaller in absolute terms.
PO6A	**4.0%**	**3.74%**	459,455,693	50,123,264	For the take-up rate by consumers, the behavioural experiment data for PO5 is taken as a point of reference. Both measures are meant to improve transparency and consumers' knowledge of repair conditions. While PO6B covers all key decision-making factors for repair, PO6A only addresses the quality of the repair service. Therefore, it tackles only one factor for the decision to repair: concerns about the quality of the

[191] See Eurostat, NACE Rev. 2 under S95 - Repair of computers and personal and household goods.

					service. While there is not sufficient data to estimate consumer willingness to repair as a result of this measure, it can be assumed that the measure could nudge those consumers that currently do not repair because they do not trust the quality of repair[192], but not those consumers who are deterred by other factors, such as price, or lack of information on location of providers, or specific information on conditions of repair. Respectively, the take-up rate for this option is assumed to be lower compared to 6B, as it only covers a part of relevant factors for the decision to repair: estimated at 4.0% (or 30% of the willingness to take up under the conditions of PO6B). The results of the OPC suggest that 52% of businesses would favour such a measure. Based on the results of perceived effectiveness of the measure, it is assumed that between 30 and 50% of businesses for which this measure would be relevant would adhere to the voluntary commitment. It should be noted that consumers' take-up of repair as a result of this measure would depend on various factors (i.e., the take-up of businesses, label presentation and content, etc.).
PO6B	**13.4%**	**12.53%**	1,539,176,573	167,912,933	This figure is based on the results of the behavioural experiments ('Right to repair', IA Study). This option addresses a range of convenience related barriers to the take-up of repair: difficulty to estimate the price of repair, availability of repair services, difficulty to find information on how to get the product repaired. It represents the increase in the share of consumers that would commission a repair when the prices for repair quotes are provided at no additional costs to consumers or are capped at a maximum of 5% of the product value. The details are documented in the R2R experiment Annex, Section 3.2. Businesses take-up among repairers is assumed to be at 100% as this will be legal obligation. The take-up rate assumption does not take into account a possible price threshold for the obligation to provide a quote.
PO6C	**12,.1%**	**11.31%**	108,943,135	31,443,190	This take-up figure is derived from a behavioural experiment ('Right to repair experiment', IA Study). It compares the preference of consumers to have their product repaired under the condition of an obligation to repair against the average likelihood of consumers to have a defective product repaired when an

[192] According to the consumer survey results, together with price, trust in the quality of repair is the most important aspect that refrains consumers from repairing (8.2 out of 10). Business costs for the following options could not be quantified and are presented qualitatively in Annex 5: PO5B – Platform with information on available repair services - national; PO5C – Platform with information on available repair services - Europe; PO6A – Voluntary commitments to an EU common "easy repair standard".

					obligation to repair is absent. The overall product sample in the experiment includes refrigerators, smartphones and shoes. However, the take-up rate for this option has been refined to cover only a fridge and smartphone[193], because of the more limited scope of PO6C, which concerns products covered by reparability requirements under EU law. This sample is sufficient for the purpose of and within the constraints of a behavioural experiment. The two products included cover the various product characteristics relevant for this product group: different price ranges, varying complexity modularity, different ease of transportation for repair, different lifetime, which may play a role for consumer decisions to repair. The relative increase of the repair rate represents the increase under a conservative yet realistic scenario including the following conditions for the obligation to repair: the need to bring the product to the shop for the smartphone, while for fridges it was assumed that a mechanic would go to the consumer's house; a repair price of 20% of the original price of the product; the producer as the party responsible for the repair; a duration of the repair of four weeks. The details are documented in Section 3.3 of the R2R experiment annex. It is assumed that all businesses (manufacturers) will take up this measure as they will be required to do so by law. The four week duration of repair is deemed realistic in view of certain eco-design requirements that require spare parts to be provided within 2-3 weeks.
PO6D	**15.2%**	**14.21%**	1,745,931,635	190,468,401	Like for PO6C, this take-up figure is derived from the behavioural experiment ('Right to repair eriment', IA Study). In view of the broader scope of this option, the product sample includes both products ch are subject to reparability requirements under EU law (fridge and smartphone) under the baseline and a duct that is not (shoes). Thus, all considerations expressed above about the experiment apply also to PO6D. This option results in a slightly higher increase in take-up compared to PO6C in view of the broader scope and respectively more diverse product sample used for this option. By adding shoes to the product sample the following aspects are captured: on average lower modularity, lower value, lower lifetime, non-electronic goods.
PO7	**0.63%**	0.59%	72,364,272	7,894,414	The consumer willingness to take up was not tested specifically for this PO. The take-up rate was assumed based on other available data related to the platform already existing in France. It was assumed that 5.5%

[193] Smartphones are assumed to be part of the ecodesign baseline and a product subject to reparability requirements. Even though smartphones are not yet subject to ecodesign EU rules, a proposal for a draft regulation for this product group has been published for public consultation in September 2022, Designing mobile phones and tablets to be sustainable – ecodesign (europa.eu).

					of consumers visit the repair platform and a percentage between 50%-65% of those consumers would not find a repair solution. As a next step, it was assumed that 15-25% of those consumers who did not find a repair solution would be attracted by the refurbishment function of the platform and buy refurbished goods as a replacement, resulting in the indicated take-up.

1.2. **Consumer protection and trust**: options are assessed considering the extent to which they decrease or strengthen consumer rights in trust. The assessment is based on the set-up of the option (described in Section 5) and assessment of the impacts (Section 6). The qualitative assessment considers criteria such as scope of the option, its binding or voluntary nature and to what extent it restricts consumer rights (in the case of PO1A) or strengthens and creates new rights (e.g. PO6C) and new opportunities for consumers (e.g. PO5B).

2. **Effectiveness with respect to environmental impacts**

Three sub-criteria have been used to measure the environmental impacts: efficient resource use, waste, CO2 emissions.

Environmental impacts are considered highly relevant sub-criteria to measure the effectiveness in achieving the sustainable consumption objective. The impacts of each option can be quantified based on key environmental indicators used to illustrate the environmental impacts capture the whole life cycle of goods:

- CO2 savings in tons and monetised
- Resource savings in tons and monetised
- Waste savings in tons and monetized

The environmental impacts of all options are positive, because all options contribute to sustainable consumption by way of repair or use of refurbished goods. The environmental impacts have been calculated based on the estimated avoided purchases of new goods as a result of each option. It is assumed that reduced purchases will translate into reduced sales and production of new goods. This in turn will have positive environmental impacts linked in particular to the production process (including use of resources and CO2 emissions) and waste disposa

Environmental impacts of the POs (part 1):

The indicator of CO2 savings is relevant and has been used also in related initiatives, notably ESPR and ECGT. The indicator may give a general indication of the magnitude of impacts of each initiative, but is not fully comparable because of the different scope of the initiatives and respectively different scope of assumptions used to make projections on their future impacts. The CO2 savings for the purpose of this impact assessment have been calculated taking into account the number of avoided purchases as a result of the policy options assessed and the most relevant dynamic indicator for the scope of this initiative, projected increase in repair rates. This estimate is based on historic data on repair rates over 10 years collected by the repair community under the Sharepair project.

IA results for - total of products - conservative scenario	**Number of products whose purchase can potentially be avoided [pieces]**	**CO2 savings [tons CO2-eq]**	**Monetisation of CO2 savings [EUR]**	**Resource savings [tons]**	**Monetisation of resource savings [EUR]**
PO1A	170,480,857	5,322,067.34	957,972,120.67	661,597	341,732,597.69
PO1B	170,480,857	5,322,067.34	957,972,120.67	661,597	341,732,597.69
PO2A	28,698,162	895,898.54	161,261,736.54	111,371	57,526,091.78
PO2B	5,146,385	143,272.11	25,788,979.17	15,785	9,187,735.89
PO3A	10,415,303	289,955.45	52,191,981.65	31,946	18,5494,227.41
PO3B	23,434,433	652,399.77	117,431,958.70	71,879	41,837,011.66

PO4	30,879,222	963,986.83	173,517,628.52	119,835	61,898,074.75
PO5A	25,061,632	745,650.87	134,217,155.70	76,305	44,902,632.35
PO5B	83,956,466	2,497,930.40	449,627,471.60	255,622	150,423,818.36
PO5C	17,410,692	1,752,543.18	315,457,771.94	89,625	99,410,396.94
PO6A	50,123,264	1,491,301.73	268,434,311.40	152,610	89,805,264.,69
PO6B	167,912,933	4,995,860.80	899,254,943.20	511,244	300,847,636.72
PO6C	31,443,190	3,165,040.66	659,707,319.48	161,859	179,532,209.40
PO6D	190,468,401	5,666,946.57	1,020,050,383.33	579,919	341,260,00.83
PO7	7,894,414	234,880.02	42,278,404.05	24,036	14,144,329.19

Environmental impacts of the POs (part 2):

IA results for - total of products - conservative scenario	Waste savings [tons]	Monetisation of waste savings [EUR]
PO1A	1,046,344	170,554,097.34
PO1B	1,046,344	170,554,097.34
PO2A	176,138	28,710,490.96
PO2B	26,772	4,363,900.46
PO3A	54,182	8,831,703.32
PO3B	121,910	19,871,332.47
PO4	189,524	30,892,488.27
PO5A	134,596	21,939,084.37
PO5B	450,895	73,495,932.63
PO5C	100,972	16,458,459.09
PO6A	269,191	43,878,168.73
PO6B	901,791	146,991,865.26
PO6C	182,353	29,723,485.82
PO6D	1,002,927	166,737,041.19
PO7	42,398	6,910,811.58

II. IMPACT ASSESSMENT OF EFFICIENCY

1. ECONOMIC IMPACTS

- **Product sample and extrapolation**

The analysis of the impact assessment covers the whole of the consumer goods segment of the economy. It is based on a step-by step approach: first, an in-depth assessment of a product sample of popular consumer goods; second - extrapolation of common trends and findings for the product sample for the whole of the consumer goods segment of the economy, based on an extrapolation factor (see below).

The product sample was selected based on a preliminary analysis of 17 product types, which were then narrowed down to 8 product groups. The sample of 8 product groups enabled a more granular analysis, taking account of product specific characteristics, as well as deriving common trends for different consumer product groups. The sample was selected based on several screening criteria: the limited useful (average) time, economic and social impacts, scale of the product stream and representativeness for category. Eventually 8 product groups were retained from the broader range of products screened: mobile phones/smartphones, televisions, laptops, refrigerators, clothing, shoes/footwear, wooden furniture, cars. It was considered that the 8 products sample is sufficiently representative and robust also in view of the heterogeneous characteristics of the 8 products included based on a number of factors relevant for repair of consumer goods (price, technology, lifetime, modularity, size and ease of repair, etc.). Importantly, the sample covers the key product types and characteristics that may influence consumer decisions to repair, as confirmed by findings in the consumer survey of the IA study.

The data collection methods under the IA study have collected specific data for each of the product groups included in the sample of 8 consumer goods. This product specific data helped identify specificities and refine the analysis in view of consumer repair behaviour for different product groups, such as electr(on)ic goods (mobile/smartphone, laptop, television, refrigerator) and non-electr(on)ic goods (shoes/footwear, clothing, wooden furniture) and cars. On the other hand, common trends were also identified for all product groups. On this basis, the sample data was extrapolated for the whole of the economy for the purpose of the analysis of all economic, social and environmental impacts.

At the same time, product specificities were taken into account where a product specific approach was warranted. In particular, this relates to the estimate of the market failure, which excludes cars. The market failure estimate is based on conservative approach that only considers failed repair attempts within a year by the consumer segment of reluctant replacers (9.2% of consumers) - namely consumers who ended up replacing a defective product because they could not repair it. Such cases are rare for cars because this is an expensive product with a relatively long life-time, which consumers repair the most compare to other product groups. Therefore, cars can be seen as an ‘outlier’ product category in view of the high rates of repair. Thus, cars are excluded from the quantification of the market failure

(EUR 5.1 billion per year) to avoid overestimates. However, also when repairing cars consumers may not get their preferred choice and repair outcomes as regards repair price and conditions, due to market obstacles and frictions. In this sense, cars are still a relevant product category in view of the problems and drivers this initiative tackles.

All key analytical steps were carried out based on an in-depth analysis of this product sample data. For the purpose of the estimates, the sample was reduced to 7 products by excluding cars, because they are an outlier as regards consumer repair behaviour. Where relevant, cars were included in the extrapolated estimates - namely the estimates of all economic, environmental and social impacts of options. Therefore, cars are included in the assessment of impacts, because car repairs would benefit from all measures of the initiative. For instance, the quote (PO6B) would be helpful for comparing offers of repair of cars, where repair are relatively costly and consumers may be more likely to shop around for repair offers. In addition, consumers could also look for car repairers on the repair platform (PO5B/C) and may prefer repairers adhering to a quality standard for repair.

The same sample of 7 products was used as a basis for the extrapolation. Subsequently, the results for the product sample were extrapolated to give an indication of impacts on the whole of the economy when it comes to consumer goods. The extrapolation was done by a factor of 5.74 , taking account of the share of the product sample in the overall consumer goods segment, excluding goods irreparable by their nature (e.g. foods, feed, water, medicines). The extrapolated data therefore provides estimates on the whole consumer goods segment, covering all consumer goods that could potentially be repaired or refurbished (including cars). The analysis of economic impacts focuses on an assessment of costs and benefits for key stakeholders affected by the initiative: businesses and consumers and society as regards impacts on jobs. The most relevant sub-indicators to quantify the costs and benefits have been selected below in view of the stakeholder groups affected.

- **Successful repair rates**

The indicator reflects successful repair rates from a technical perspective (as % of goods successfully fixed by repairers), based on data collected and made available by the repair community. In particular, the data was collected by repair cafés in the framework of an ongoing EU financed project (Sharepair), which will be completed in March 2023. DG Justice requested and obtained an EU specific extract from the project database. The data presented in the table below is therefore based on preliminary findings as of 28 October 2022. Given that the project publication time is planned for the same month as the adoption of the proposal, which this IA report supports, it was not possible to use the final data from the project for the purpose of this impact assessment.

The data covers 40 popular consumer goods including electr(on)ic and non-electr(on)ic products. The statistics suggest that repair rates have been growing over the time covered by the project data (2014-2021).

Sharepair project - Preliminary data on successful repair rates between 2014 and 2021 in the EU

Extract as of 28 October 2022.

Year	products that could be 'fixed'
2014	54,74%
2015	55,34%
2016	59,45%
2017	53,43%
2018	54,42%
2019	52,83%
2020	54,22%
2021	57,72%
Projected annual growth rate	**0,28%**

The purpose of the indicator is to enable a projection of future repair rates for the purpose of a dynamic baseline. It is factored into all estimates of economic, environmental and social impacts over the time-horizon of 15 years for all options.

The annual average repair growth rate based on these successful repair rates between 2014 (54.74%) and 2021 (57.72%) is 0.28%. To make the estimations dynamic, the assumption for our baseline period of 15 years (until 2037) is that repair rates will keep increasing each year by 0.28 percentage points.

The assumption on projected future growth of repair rates is also supported by the likely impact of the legislative developments under the eco-design framework which will make repair increasingly easier from a technical perspective (e.g. through reparable eco-design, spare parts).[194] The projected repair rate growth is conservative, as professional repairers are likely to have even higher repair rates, for instance, due to the broader access to spare parts and repair information from manufacturers under eco-design rules. For example, according to data collected by APPLiA, Home Appliance Europe, 'By the Numbers: The Home Appliance Industry in Europe', 2020-2021 indicates that 91% requests to repair to manufacturers resulted in successful repair in 2018. However, in the absence of systematic data collection from professional repairers, more comprehensive data on repair rates by professional

[194] See Annex for relevant extracts from IA.

repairers (including manufacturers providing repair services) was not available at this stage, for the purpose of this impact assessment.

On the basis of available data and considering the qualitative assessment on the expected positive impacts of eco-design legislation which will increase the technical reparability of key consumer goods, the IA assumes that repair rates will continue to grow also in the future.

The dynamic baseline takes into account the change in the repair rate over the period 2023 to 2037, which means that by 2037 the repair rate will have increased by 4.57 percentage points (from 57.72% in 2021 to 62.29% in 2037, in view of the projected repair rates explained in the response to point 1).[195]

Other indicators, such as durability of goods and (potentially longer) useful consumption and absolute lifetimes of consumer goods that may be achieved as a result of ESPR in the future have been considered, but they could not be factored in due to the uncertainty about the actual product groups that will be covered by ESPR in the next 15 years.

It should be noted that this indicator is applied and relevant of all impacts - economic, social and environmental ones.

1.3. Business

Three types of key stakeholders have been identified among businesses. Notably, the impacts of the initiative are not the same on different types of businesses and respectively the costs and benefits have been assessed for all separately. The key types of businesses include producers in the EU[196], traders in the EU[197] (including importers, retail and wholesale sellers) and EU repairers (including all providers of repair services: independent repairers, as well as producers and sellers who offer repair services). All options examined encourage either repair or the use of refurbished goods and respectively trigger less purchases of new products. The following indicators have been selected to indicate all key costs and benefits impacts on business:

1.3.1. Growth and investment in Europe (traders, producers, repairers, including SMEs)

The key business indicators below show the projected positive or negative impacts on business by various measures.

Turnover for producers:

[195] See Annex for relevant extracts from IA.

[196] Later referred to as 'EU producers'.

[197] Later referred to as 'EU traders'.

- Sales of new products: the figure indicates projected impacts on sales of new goods (that are likely to decrease as a result of repair or use of refurbished goods).

- Sales of returned products: this indicator is relevant only for some options and refers to potential sales of returned defective products under the legal guarantee that may subsequently be resold at a lower price for refurbishment.

Change in turnover for traders (at retail margin): indicates the turnover for retailers, wholesalers and importers. For the distribution network (importers, wholesalers, retailers) the turnover presented in the figures is not the total sales revenue but the margin they get over the cost of goods sold (i.e. the sales revenue minus the cost of goods sold). An average surplus of 50% between producer prices and final retail prices is assumed.

Change in turnover for repairers: indicates the impacts for the repair industry, including independent repairers, producers and sellers offering repair services.

Gross Value Added (GVA) and Gross Operating Surplus (GOS): these indicators relate to sales of new products and are linked to the changes in turnover and are presented for all types of businesses affected (producers, traders and repairers). However, the ratio between turnover and GVA is not the same for different types of businesses (producers, traders and repairers) and this has been factored into the estimates.

1.3.2. Total costs savings (competitiveness)

Total costs savings: This indicator is relevant for producers under some options. It relates to cost savings that can be achieved where new products are not provided as replacement for free, as a result of increased repair or use of refurbished goods under the legal guarantee. This indicator is based on the following formula: *savings from avoiding additional replacements - financing additional repair (or providing refurbished goods as a replacement)=total cost savings.* Increased cost savings contribute to competitiveness.

The quantified data on key sub-indicators for business is presented below. The data also includes third country producers, who are particularly affected by the initiative as the manufacturers of a large share of new goods consumed in the EU.

Economic impacts Part 1 (all producers):

Policy Options		All producers					
	Production/purchases avoided (units)	Savings from avoiding replacement products	Financing additional repair	TOTAL COST SAVINGS	Sales from returned products	Sales from new products/parts	CHANGE IN TURNOVER
PO1A	170,480,857	57,195,883,386	-12,871,720,600	44,324,162,786	-28,603,823,566	0	-28,603,823,566
PO1B	170,480,857	57,195,883,386	-12,871,720,600	44,324,162,786	-28,603,823,556	0	-28,603,823,556
PO2A	28,698,162	9,617,631,020	-2,175,245,567	7.,442,385,454	-1,755,217,661	-1,171,998,689	-2,927,216,350
PO2B	5,146,385	0	-349,051,358	-349,051,358	0	-164,831,612	-164,831,612
PO3A	10,415,303	0	-706,417,319	-706,417,319	0	-333,586,600	-333,586,600
PO3B	23,434,433	7,064,268,505	-1,589,460,414	5,474,808,091	0	0	0
PO4	30,879,222	119,224,263	-2,331,063,916	-2,211,839,653	1,861,983,958	-1,261,068,663	600,915,294
PO5A	25,061,632	0	0	0	0	-848,725,901	-848,725,901
PO5B	83,956,466	0	0	0	0	-2,843,098,453	-2,843,098,453
PO5C	17,410,692	0	0	0	0	-2,471,487,181	-2.471.487.181
PO6A	50,123,264	0	0	0	0	-1,697,417,942	-1,697,417,942

PO6B	167,912,933	0	0	0	0	-5,685,816,417	-5,685,816,417
PO6C	31,443,190	0	0	0	0	-4,463,222,344	-4,463,222,344
PO6D	190,468,401	0	0	0	0	-6,449,466,759	-6,449,466,759
PO7	7,894,414	0	0	0	0	-267,352,311	-267,352,311

Economic impacts Part 2 (EU producers):

Policy options		**EU producers**							
	Production/ purchases avoided (units)	**Savings from avoiding replacement products**	**Financing additional repair**	**TOTAL COST SAVINGS**	**Sales from returned products**	**Sales from new products or parts**	**CHANGE IN TURNOVER**	**Change in GVA (relates to sales from new products/parts)**	**Change in GOS (relates to sales from new products/parts)**
PO1A	170,480,857	20,76,065,221	-4,517,949,486	15,558,115,736	-10,039,887,746	0	-10,039,887,746	0	0
PO1B	170,480,857	20,076,065,221	-4,517,949,486	15,558,115,736	-10,039,887,746	0	-10,039,887,746	0	0
PO2A	28,698,162	3,372,825,145	-766,203,406	2,606,621,739	-615,540,589	-386,784,394	-1,002,324,982	-95,302,979	-29,527,090
PO2B	5,146,385	0	0	0	0	-57,543,007	-57,543,007	-13,481,896	-4,284,149

PO3A	10,415,303	0	0	0	0	-116,455,678	-116,455,678	-27,284,691	-8,670,269
PO3B	23,434,433	2,572,928,139	-578,908,831	1,994,019,308	0	0	0	0	0
PO4	30,879,222	41,732,699	-818,212,995	-776,480,296	652,915,064	-416,179,424	236,735,641	-102,545,859	-31,771,104
PO5A	25,061,632	0	0	0	0	-256,724,560	-256,724,560	-62,191,481	-19,380,890
PO5B	83,956,466	0	0	0	0	-859,995,221	-859,995,221	-208,333,378	-64,923,444
PO5C	17,410,692	0	0	0	0	-548,390,402	-548,390,402	-108,157,764	-36,701,186
PO6A	50,123,264	0	0	0	0	-513,440,978	-513,440,978	-124,380,909	-38,761,135
PO6B	167,912,933	0	0	0	0	-1,719,898,975	-1,719,898,975	-416,643,690	-129,839,652
PO6C	31,443,190	0	0	0	0	-990,343,399	-990,343,399	-195,322,606	-66,279,016
PO6D	190,468,401	0	0	0	0	-1,950,902,290	-1,950,902,290	-472,603,721	-147,278,593
PO7	7,894,414	0	0	0	0	-80,869,115	-80,869,115	-19,590,538	-6,105,050

Economic impacts Part 3 (EU traders and EU repairers):

Policy options		EU traders			EU repairers		
	Production/purchases avoided (units)	Change in turnover (retail margin)	Change in GVA	Change in GOS	Change in turnover	Change in GVA	Change in GOS
PO1A	170,480,857	-21,452,867,667	-5,792,274,270	-2,145,286,767	12,871,720,600	4,964,336,209	1,798,824,217
PO1B	170,480,857	-21,452,867,667	-5,792,274,270	-2,145,286,767	12,871,720,600	4,964,336,209	1,798,824,217
PO2A	28,698,162	-2,694,488,115	-727,511,791	-269,448,811	2,166,410,584	835,541,646	302,761,860
PO2B	5,146,385	-203,142,070	-54,848,359	-20,314,207	349,051,358	137,002,394	51,300,056
PO3A	10,415,303	-411,120,856	-111,002,631	-41,112,086	706,417,319	277,268,235	103,822,080
PO3B	23,434,433	0	0	0	1,589,460,414	623,861,785	233,602,666
PO4	30,879,222	-86,320,590	-200,179,175	-74,140,428	2,331,063,916	899,045,087	325,772,523
PO5A	25,061,632	-1,061,467,352	-286,596,185	-106,146,735	1,855,762,660	722,634,857	262,807,487
PO5B	83,956,466	-3,555,915,628	-960,097,220	-355,591,563	6,217,234,588	2,420,989,818	880,460,679
PO5C	17,410,692	-2,804,502,428	-757,215,656	-280,450,243	3,834,387,730	1,298,688,950	350,023,332
PO6A	50,123,264	-2,122,934,704	-573,192,370	-212,293,470	3,711,634,453	1,445,311,127	525,629,096

PO6B	167,912,933	-7,111,831,257	-1,920,194,439	-711,183,126	12,435,695,449	4,842,444,932	1,761,079,990
PO6C	31,443,190	-5,064,847,669	-1,367,508,871	-506,484,767	6,925,427,747	2,345,611,984	632,190,488
PO6D	190,468,401	-8,067,151,873	-2,178,131,006	-806,715,187	14,106,535,982	5,493,064,504	1,997,691,344
PO7	7,894,414	-334,362,216	-90,277,798	-33,436,222	584,553,467	227,625,513	82,782,835

1.3.3. Adjustment costs have been calculated for each option, indicating the costs businesses incur to put the option into practice. The costs are relevant for different types of businesses depending on the option: for instance, some options generate costs for producers, while others for repairers.

- One-off adjustment costs for introducing the option in the first year of its application
- Ongoing adjustment costs: including compliance costs where business obligations are introduced or costs for voluntary application, where options are voluntary.

1.3.4. Administrative costs have been calculated for options which create information requirements. However, in some cases these costs overlap with adjustment costs and have not been presented separately to avoid overlaps and double counting. Both one-off and ongoing administrative costs were considered where relevant.

Business adjustment and administrative costs Part 1 (Cluster I):

Type of cost	Business stakeholder affected*	PO1A	PO1B	PO2A	PO2B	PO3A	PO3B	PO4
Business adjustment costs								

One-off	Producers (manufacturers) - EU	69,429,972	52,260,804	52,260,402	26,130,402	44,732,766	44,732,766	28,195,789
	Traders (wholesale, retail, importers)	34,746,486	35,358,113	35,358,113	17,679,056	105,900,323	105,900,323	63,088,179
	Repair services	-	-	-	-	-	-	-
	TOTAL	**104,239,458**	**87,618,917**	**87,618,917**	**43,809,458**	**150,633,089**	**150,633,089**	**91,283,968**
Ongoing (15 years)	Producers (manufacturers) - EU	226,859,415	226,859,415	865,163,860	839,927,375	28,435,327	63,979,486	3,503,569
	Traders (wholesale, retail, importers)	531,296,829	531,206,829	1,177,582,366	133,680,769	49,483,644	111,338,199	133,691,382
	Repair services	-	-	-	-	-	-	-
	TOTAL	**758,066,244**	**758,066,244**	**2,042,746,226**	**973,608,144**	**77,918,971**	**175,317,685**	**137,194,951**
Business administrative costs								
One-off	Producers (manufacturers) - EU	0	0	0	0	0	0	0
	Traders (wholesale, retail, importers)	0	0	0	0	0	0	0
	Repair services	-	-	-	-	-	-	-
	TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ongoing (annual)	Producers (manufacturers) - EU							

	Traders (wholesale, retail, importers)	0	0	0	0	0	0	0
	Repair services	0	0	0	0	0	0	0
	TOTAL	-	-	-	-	-	-	-

Business adjustment and administrative costs Part 2:

Type of cost	Business stakeholder affected	PO6C	PO6D	PO6B	PO5A
Business adjustment costs					
One-off	Producers (manufacturers) - EU	7,106,581	505,679,064	-	60,915,788
	Traders (wholesale, retail, importers)	37,904,648	168,766,299	-	45,707,583
	Repair services	-	-	475,389,670	-
	TOTAL	**45,011,229**	**674,445,362**	**475,389,670**	**106,623,372**
Ongoing (15 years)	Producers (manufacturers) - EU	582,104,346	3,261,834,396	-	91,373,682
	Traders (wholesale, retail, importers)	0	0	-	68,561,375
	Repair services	-	-	5,892,824,854	-
	TOTAL	**582,104,346**	**3,261,834,396**	**5,892,824,854**	**159,935,057**

Business administrative cost					
One-off	Producers (manufacturers) - EU	2,907,681	68,928,673	-	-
	Traders (wholesale, retail, importers)	66,910,529	92,861,765	-	-
	Repair services	-	-	0	-
	TOTAL	**69,818,210**	**161,790,438**	**0**	**0**
Ongoing (15 years)	Producers (manufacturers) - EU	0	0	-	-
	Traders (wholesale, retail, importers)	0	0	-	-
	Repair services	-	-	-	-
	TOTAL	**0**	**0**	**0**	**0**

Business adjustment and administrative costs Part 3:

Type of cost	Business stakeholder affected	PO5B	PO7	PO5C	PO6A	Combined (PO1A, PO6C, PO6B, PO5A, PO5B, PO6A)
Business adjustment costs						
One-off	Producers (manufacturers) - EU	-	-	-	-	137.515.342

	Traders (wholesale, retail, importers)	-	-	-	-	118.358.718
	Repair services	-	-	-	-	475,389,670
	TOTAL	**0**	**0**	**0**	**0**	**731.263.729**
Ongoing (15 years)	Producers (manufacturers) - EU	-	-	-	-	900.337.443
	Traders (wholesale, retail, importers)	-	-	-	-	599.768.204
	Repair services	-	-	-	-	5,892,824,854
	TOTAL	**0**	**0**	**0**	**0**	**7.392.930.501**
Business administrative costs						
One-off	Producers (manufacturers) - EU	-	-	-	-	2,907,681
	Traders (wholesale, retail, importers)	-	-	-	-	66,910,529
	Repair services	-	-	-	-	0
	TOTAL	**0**	**0**	**0**	**0**	**69,818,210**
Ongoing (15 years)	Producers (manufacturers) - EU	-	-	-	-	0

	Traders (wholesale, retail, importers)	-	-	-	-	0
	Repair services	-	-	-	-	0
	TOTAL	**0**	**0**	**0**	**0**	**0**

1.4. Consumers

Consumer savings take account of the average share of defects product owners experienced and the share of repaired products in each product category included in the sample of 7 products. These figures are then extrapolated for the whole economy. They are also linked to the willingness of consumers to take up the policy options and the projected impacts as a result of increased repair or use of refurbished goods. The calculations of consumer savings reflect the different set-up and effects of policy options in Clusters I and II. Thus, two different methods[198] are used for each cluster: avoided purchases/production (units) and products additionally repaired (units).

The indicator of avoided number of purchases/production in units is used for the purpose of comparison of policy options in cluster I as regards their impacts on consumer savings. Cluster I options that result in consumer savings achieve this by offering consumers remedies for a defect for a longer liability period. Thus, consumers avoid purchases of new goods and the associated costs in an extended liability period, thanks to the free remedies that they get (in the form of repair or refurbished goods). The consumer savings come from not buying a new product and obtaining a repaired or a refurbished product from the seller within the liability period instead. In the case of PO4 the price difference for refurbished products is considered. Some Cluster I options do not result in any consumer savings because they do not extend the liability period, but change the type of remedy that consumers would receive within the same period (i.e. repair instead of replacement with new goods or replacement with refurbished products instead of replacement with new goods).

Applying the indicator of number of avoided purchases was not considered sufficiently accurate for Cluster II options. As this indicator and calculation approach links consumer savings to the length of the life-time extension of goods as a result of repair, it presents consumer savings in a long term perspective with a delayed effect. This causes a mismatch in view of the market failure, which is estimated with an immediate effect for every year and is particularly relevant for cluster II options, because the large majority of defects appear beyond the legal guarantee (and are tackled by cluster II options). While consumer detriment occurs immediately as a result of failed repair every year, consumer benefits under this approach are estimated to occur only in the long term as a result of longer use of repaired goods. In practice though, repair gives immediate positive impacts on consumer savings,

[198] The relationship between the two methods is: The estimated additional repair is based on the current repair rates for products in the sample (obtained from the consumer survey), then extrapolated to the whole economy, as well as the willingness to repair more due to the proposed measure. The number of avoided purchases is based on the number of additionally repaired products, but then the lifetime extension factor is applied (per product group in the sample, extrapolated for the whole economy). The lifetime extension after repair differs per product group (e.g. 1 year for mobile phone, 4 years for a fridge, 5 years for furniture). Applying the factor of lifetime extension results in a significant reduction of the number of avoided purchases/production in units compared to the number of additionally repaired products. Then, additionally, a discount with recurrent defect rates happening directly after repair is applied.

because consumers retain the saved amount from the avoided new purchase already at the point of repair and could spend it on other goods or invest it for other purposes.

Therefore, another indicator - number of additionally repaired products - was introduced for the purpose of comparison of policy options in cluster II as regards impacts on consumer savings. All Cluster II options result in consumer savings. Consumer savings are linked to the additional number of products that consumers decide to repair or in the case of PO7 - from the purchase of refurbished goods at lower cost compared to new goods. The approach to consumer savings in cluster II assumes that consumers save immediately by not buying new goods but repairing their acquired goods. Consumer savings result already at the point of repair from the difference between the price of new goods (not purchased) minus the cost of repair. Repair gives immediate positive impacts on consumer savings, because consumers retain the saved amount from the avoided new purchase already at the point of repair and could spend it on other goods or invest it for other purposes. By repairing their products at any point in time, consumers prolong their lifetime. Having made the investment in repair, consumers are expected to use their products longer and achieve significant savings as a result of longer use of their acquired products instead of buying new ones. This method better reflects the impacts of Cluster II options, where consumers repair at their own cost and their immediate savings directly result from the repair action. The calculations (except for PO7) also take account of the costs consumers would pay for repair (formula: change in consumer purchases (decrease) - repair costs for consumers = consumer savings). In the case of PO7 the price difference between new and refurbished goods is considered. The method for cluster II presents the full consumer savings for a given time-frame, reflecting savings for each year within the time-horizon of 15 years. Because the number of additionally repaired consumer goods is high, especially for a period of 15 years, consumer savings are also high.

The estimates of consumer savings under both approaches were also considered in the light of the market failure estimate. While the market failure cannot be lower than EUR 5 billion a year, it is probably rather in the range between EUR 5 and 25 billion/year, meaning that the NPV over 15 years would be between EUR 62.48 billion and EUR 307.4 billion overall. Consumer savings are plausible with respect to the order of magnitude of annual consumer expenditure and the scale of the market failure, as well as to the qualitative analysis of policy options. While the link between the market failure and consumer savings has not been explicitly modelled, the qualitative assessment suggests that the preferred options package effectively addresses the factors which cause the market failure. Therefore, also the consumer savings should be of a comparable order of magnitude to the avoided consumer detriment the market failure generates. The consumer savings estimated (EUR 176.5 billion for 15 years) fit in a plausible manner within this range. Moreover, it is more plausible also in view of the order of magnitude of consumer expenditure on consumer goods (the value of repairable consumer durables in a year is EUR 792 billion). While the EUR 176.6 billion estimate may appear a massive benefit, it results in **a yearly average consumer savings of EUR 25,** when accounting for the 15 year time-span, number of consumers in the EU and the numbers of repaired goods.

2. SOCIAL IMPACTS

The key social impact identified is the impact on employment. The employment figures relate to jobs - both as regards employment in companies and self-employed activities, notably by self-employed repairers.

The impacts on employment are linked to variations in turnover for different types of businesses and related impacts on personnel costs. For instance, a decrease in turnover for traders and producers is likely to result in cuts in personnel costs in these sectors. Conversely, an increase in turnover for repairers is likely to result in growth in jobs or self-employed activities in the sector. The estimation of employment impacts departed from modelled changes in turnover yielded (using structural business statistics from Eurostat on turnover, GVA, gross operating surplus and personnel costs for the sectors concerned). The calculated annual personnel cost changes in each sector have been translated into potential job losses or gains by using an average annual labour cost.

The estimated job loss is a stock indicator reflecting a one-off loss of jobs (assuming the impacts of the measures have fully unfolded) and are not aggregated. At the same time, the personnel cost savings are a flow indicator and should be aggregated over the 15-year time period.

15-year personnel costs

Employment – personnel cost				
Policy options	**EU producers**	**EU traders**	**EU repairers**	**TOTAL**
PO1A	0	-3,646,987,503	3,164,402,062	-482,585,441
PO1B	0	-3,646,987,503	3,164,402,062	-482,585,441
PO2A	-65,686,823	-458,062,979	532,592,983	8,843,181
PO2B	-9,183,589	-34,534,152	85,666,028	41,948,287
PO3A	-18,585,768	-69,890,546	173,372,670	84,896,356
PO3B	0	0	390,093,774	390,093,774
PO4	-70,678,921	-126,038,727	573,071,564	376,353,916
PO5A	-42,704,209	-180,449,450	459,631,690	236,478,032
PO5B	-143,053,610	-604,505,657	1,539,873,559	792,314,292
PO5C	-71,102,703	-476,765,413	948,109,480	400,241,364
PO6A	-85,407,023	-360,898,900	919,290,658	472,984,735
PO6B	-286,091,562	-1,209,011,314	3,080,053,626	1,584,950,750
PO6C	-128,404,630	-861,024,104	1,712,417,035	722,988,301
PO6D	-324,516,997	-1,371,415,818	3,493,885,650	1,797,952,834

PO7	-13,451,976	-56,841,577	144,781,040	74,487,488

Jobs

Employment – jobs				
POs	**Producers in the EU**	**Traders in the EU**	**EU repairers**	**TOTAL**
PO1A	0	-9,725	8,438	-1,287
PO1B	0	-9,725	8,438	-1,287
PO2A	-175	-1,222	1,420	24
PO2B	-24	-92	228	112
PO3A	-50	-186	462	226
PO3B	0	0	1,040	1,040
PO4	-188	-336	1,528	1,004
PO5A	-114	-481	1,226	631
PO5B	-381	-1,612	4,106	2,113
PO5C	-190	-1,271	2,528	1,067
PO6A	-228	-962	2,451	1,261
PO6B	-763	-3,224	8,213	4,227
PO6C	-342	-2,296	4,566	1,928
PO6D	-865	-3,657	9,317	4,795

PO7	-36	-152	386	199

4. IMPACTS ON PUBLIC ADMINISTRATION

The impacts on public administration concern enforcement and implementation costs. Enforcement costs have been calculated taking account of the type and number of economic operators concerned. For instance, some options concern sellers of consumer goods (PO1), other options concern only producers (PO5A, PO6C and PO6D), while others concern repairers (PO6B). The various enforcement and implementation activities that have been considered are presented in the tables below. The costs have been calculated for all options, focusing on an annual average calculated for a period of 15 years.

1. Enforcement and implementation costs for PO1A, 1B, 2A, 2B and PO4:

Category	**Cost items and assumptions**	**% based on Eurostat data**	**PO1A**	**PO1B**	**PO2A**	**PO2B**	**PO4**
Assumptions	FTE - per MS (inspections)		**2**	**2**	**2**	**2**	**2**
	Stakeholders affected:						
	Producers (manufacturers, importers) - all	**24%**					
	Producers (manufacturers, importers) - Ecodesign	**5%**					
	Sellers (traders) - all products	**68%**	**100%**	**100%**	**100%**	**100%**	
	Sellers (traders) - second hand	**1%**					**100%**
	Repair services	**2%**					
	Manufacturers/sellers that offer repair services	**57%**					

Enforcement (one-off)	No. of familiarisation hours		**8**	**8**	**8**	**8**	**8**
	Labour cost per hour (EU average) [EUR]		**29**	**29**	**29**	**29**	**29**
	Total familiarisation cost (per MS) [EUR]		464	464	464	464	464
	Total familiarisation cost (EU) [EUR]						
	Total familiarisation cost (total) [EUR]		**12,528**	**12,528**	**12,528**	**12,528**	**12,528**
Enforcement (ongoing)	Operational (inspections) - per FTE [EUR]		**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
	Yearly monitoring cost (EU level) [EUR]						
	Total enforcement cost (per MS) [EUR]		68,378	68,378	68,378	68,378	600
	Total enforcement cost (EU level) [EUR]		0	0	0	0	0
	Total enforcement cost [EUR]		**1,846,209**	**1,846,209**	**1,846,209**	**1,846,209**	**16,195**
Implementation costs	Platform development (one-off) [EUR]						
	Maintenance (ongoing) [EUR]						
	Awareness raising (one-off) [EUR]		**500,000**	**500,000**	**500,000**	**500,000**	**500,000**
	Total one-off costs (EU27 and EU level) - yearly average [EUR]		**512,528**	**512,528**	**512,528**	**512,528**	**512,528**
	Total ongoing costs (EU27 and EU level) [EUR]		**27,693,138**	**27,693,138**	**27,693,138**	**27,693,138**	**242,922**
	TOTAL (annual average all MS and EU) [EUR]		**28,205,666**	**28,205,666**	**28,205,666**	**28,205,666**	**755,450 €**

2. Enforcement and implementation costs for PO3A, PO3B, PO6C, PO6D, PO6B and PO7:

Category	Cost items and assumptions	% based on Eurostat data	PO3A	PO3B	PO6B	PO6C	PO6D	PO7
Assumptions	FTE - per MS (inspections)		**2**	**2**	**2**	**2**	**2**	
	Stakeholders affected:							
	Producers (manufacturers, importers) - all	**24%**					**100%**	
	Producers (manufacturers, importers) - Ecodesign	**5%**				**100%**		
	Sellers (traders) - all products	**68%**	**100%**	**100%**				
	Sellers (traders) - second hand	**1%**						
	Repair services	**2%**			**100%**			
	Manufacturers/sellers that offer repair services	**57%**			**100%**			
Enforcement (one-off)	No. of familiarisation hours		**8**	**8**	**32**	**32**	**32**	
	Labour cost per hour (EU average) [EUR]		**29**	**29**	**29**	**29**	**29**	
	Total familiarisation cost (per MS) [EUR]		464	464	1,856	1,856	1,856	
	Total familiarisation cost (EU) [EUR]							
	Total familiarisation cost (total) [EUR]		**12,528**	**12,528**	**50,112**	**50,112**	**50,112**	**50,112**

Enforcement (ongoing)	Operational (inspections) - per FTE [EUR]		**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	
	Yearly monitoring cost (EU level) [EUR]				**100,000**	**100,000**	**100,000**	
	Total enforcement cost (per MS) [EUR]		68,378	68,378	58,943	4,798	23,992	
	Total enforcement cost (EU level) [EUR]		0	0	100,000	100,000	100,000	
	Total enforcement cost [EUR]		**1,846,209**	**1,846,209**	**1,691,465**	**229,559**	**747,793**	**60,245**
Implementation costs	Platform development (one-off)							375,000
	Maintenance (ongoing)							150,000
	Awareness raising (one-off) [EUR]		**500,000**	**500,000**	**1,000,000**	**1,000,000**	**1,000,000**	**250,000**
	Total one-off costs (EU27 and EU level) - yearly average [EUR]		**512,528**	**512,528**	**1,050,112**	**1,050,112**	**1,050,112**	**675.112 €**
	Total ongoing costs (EU27 and EU level) [EUR]		**27,693,138**	**27,693,138**	**3,443,378**	**25,371,971 €**	**11,216,891**	**3.153.671 €**
	TOTAL (annual average all MS and EU level) [EUR]		**28,205,666**	**28,205,666**	**4,493,490**	**26,422,083**	**12,267,003**	**3.828.783 €**

3. Implementation and enforcement costs for PO5A, PO5B, PO5C and PO6A:

Category	**Cost items and assumptions**	**% based on Eurostat data**	**PO5A**	**PO5B**	**PO5C**	**PO6A**
Assumptions	FTE - per MS (inspections)		**2**	**2**		**2**

	Stakeholders affected:					
	Producers (manufacturers, importers) - all	**24%**	**100%**			
	Producers (manufacturers, importers) - Ecodesign	**5%**				
	Sellers (traders) - all products	**68%**				
	Sellers (traders) - second hand	**1%**				
	Repair services	**2%**		**100%**		**100%**
	Manufacturers/sellers that offer repair services	**57%**				
Enforcement (one-off)	No. of familiarisation hours		**32**	**32**		**32**
	Labour cost per hour (EU average) [EUR]		**29**	**29**	**29**	**29**
	Total familiarisation cost (per MS) [EUR]		1,856	1,856		
	Total familiarisation cost (EU) [EUR]				1,856	1,856
	Total familiarisation cost (total) [EUR]		**50,112**	**50,112**	**1,856**	**1,856**
Enforcement (ongoing)	Operational (inspections) - per FTE [EUR]		**50,000**	**50,000**		
	Yearly monitoring cost (EU level) [EUR]		**100,000**		**100,000**	**100,000**
	Total enforcement cost (per MS) [EUR]		**23,992**	2,231	0	0
	Total enforcement cost (EU level) [EUR]		**100,000**	0	100,000	100,000

	Total enforcement cost [EUR]		**747,793**	**60,245**	**100,000**	**100,000**
Implementation costs	Platform development (one-off) [EUR]			7,500,000	**500,000**	
	Maintenance (ongoing) [EUR]			1,500,000	**100,000**	
	Awareness raising (one-off) [EUR]		**1,000,000**	**1,000,000**	**1,000,000**	**1,000,000**
	Total one-off costs (EU27 and EU level) - yearly average [EUR]		**1,050,112**	**8,550,112**	**1,501,856**	**1,001,856**
	Total ongoing costs (EU27 and EU level) [EUR]		**11,216,891**	**23,403,671**	**3,000,000**	**1,500,000**
	TOTAL (annual average all MS and EU level) [EUR]		**12,267,003**	**31,953,783**	**4,501,856**	**2,501,856**

III. ASSESSMENT OF COHERENCE

Coherence has been assessed qualitatively for each option and respective qualitative scores have been awarded for the comparison of options below. Coherence has been considered at three levels:

- In terms of broader key EU priorities (such as the EU Green Deal, digital transition)
- Relevant initiatives: ESPR and Empowering consumers initiative
- Applicable EU legislation, notably EU consumer law.

Coherence of rules at national level as well as coherence of outcomes for consumers in the same situation have been also been taken into account where relevant.

IV. COMPARISON OF OPTIONS

The options are grouped in two clusters, which address the two different problems. The options are not mutually exclusive as each tackles different drivers and aspects of the problems. The comparison of options has been carried out based on a cost-benefit analysis (CBA), presented in section 7 of the IA report, as well as a multi-criteria analysis (MCA). Both the CBA and the MCA underpin the comparison of the impacts of policy options and respectively the selection of the preferred policy option package.

The CBA includes only monetised impacts (costs and benefits of the policy options), which can be directly summed up to obtain the net benefit of an individual option and of the preferred policy package as a whole (total benefits – total costs).

MCA is a more complex assessment tool than the CBA, as both quantitative and qualitative impacts can be considered by standardising the results and applying a weight scheme. The MCA includes all the costs and benefits considered in the CBA, plus other quantitative and qualitative impacts (coherence, consumer decision-making, consumer trust and protection). Almost all impacts reflected in the MCA could be monetised, to ensure robustness and comparability of the data. Only two sub-criteria under the assessment of effectiveness could not be quantified and are assessed qualitatively based on the legal assessment of these options: consumer trust and protection and coherence with other EU legislation. The consumer decision-making sub-criterion has been quantified based on the indicators used for the estimates of consumer savings: number of avoided purchases in Cluster I and number of additionally repaired products in Cluster II.

The MCA has three high-level assessment criteria:

- Effectiveness incorporates both qualitative and quantitative impacts.

- Efficiency incorporates only quantifiable impacts.

- Coherence with other EU legislation is assessed only qualitatively.

The MCA analysis presented in the main report is based on the scenario with a most balanced distribution of weights (indicated as the ‘selected scenario’ in the MCA tables). This scenario was also selected to ensure that all criteria and sub-criteria are covered and that costs and

benefits have equal weights.[199] The chosen scenario awards the same weight (33%) to all three criteria (effectiveness, efficiency, coherence)[200]. It also ensures a balanced distribution of weights among different stakeholder groups and sub-criteria: (i) under sub-criteria under effectiveness, it reaches a balances the weights awarded to consumers and society/ the environment[201]; (ii) under efficiency, it ensures balance between the sub-criteria related to consumers and business. The MCA avoids duplications of criteria in estimates of impacts on effectiveness and efficiency, by applying all environmental sub-criteria under the effectiveness criterion. In addition, only the sub-criteria producing significant impacts are included, with a focus on the quantified sub-criteria. A **sensitivity analysis** has been carried out additionally. It considered seven alternative scenarios, awarding different weights to the three criteria of effectiveness, efficiency and coherence and to the sub-criteria under them.[202] The purpose was to verify that the ranking of the options does not change significantly when the weights are modified. The results indeed confirm this.

[199] The sub-criteria corresponding to benefits under efficiency are consumer savings, savings in production costs, change in employment, and growth and investment (in Europe - GVA traders, producers, repairers), each of which has a weight of 12.5%. Thus, the overall weight of benefits under efficiency is 50%. Likewise, the sub-criteria corresponding to costs under efficiency are business adjustment costs, business administrative costs, and implementation and enforcement costs, each of which has a weight of 16.67%. Thus, the overall weight of costs under efficiency is 50.01%.

[200] This allocation of weights follows the recommendation in the BR Guidelines to give equal weights (33%) to the three high-level criteria of effectiveness, efficiency and coherence.

[201] The two consumer-related sub-criteria under effectiveness are consumer decision-making process and consumer trust and protection. In the scenario selected, each of these sub-criteria is awarded a weight of 25%. Thus, overall, the consumer-related sub-criteria under effectiveness have a weight of 50%. The three environment-related sub-criteria under effectiveness are resource savings, waste savings and CO2 savings. In the scenario selected, each of these sub-criteria is awarded a weight of 17%. Thus, overall, the environment-related sub-criteria under effectiveness have a weight of 51%.

[202] IA Study, Annex 3.3. Weights

The table below illustrates the weights given to all impacts criteria assessed under this study:

MCA weights

Weight scenarios for sensitivity analysis		Selected scenario	1	2	3	4	5	6	7
Effectiveness		**33%**	**33%**	**33%**	**33%**	**40%**	**40%**	**40%**	**40%**
Fostering the efficient use of resources (renewable & non-renewable) (resource savings in tons)	Society	17%	27%	20%	27%	27%	17%	20%	27%
Waste production, generation and recycling (waste savings)	Society	17%	27%	20%	27%	27%	17%	20%	27%
Contribute to fighting climate change (CO2 emissions savings)	Society	17%	27%	20%	27%	27%	17%	20%	27%
Consumer decision-making process	Consumers	25%	10%	20%	10%	10%	25%	20%	10%
Consumer trust and protection	Consumers	25%	10%	20%	10%	10%	25%	20%	10%
Efficiency		**33%**	**33%**	**33%**	**33%**	**40%**	**40%**	**40%**	**40%**
Consumer savings	Consumers	12,50%	12,50%	50,00%	71,17%	12,50%	12,50%	50,00%	71,17%
Savings in production costs for manufacturers	Businesses	12,50%	12,50%	8,33%	13,85%	12,50%	12,50%	8,33%	13,85%
Change in employment	Society	12,50%	12,50%	8,33%	1,60%	12,50%	12,50%	8,33%	1,60%
Growth and investment (in Europe - GVA traders, producers, repairers)	Businesses	12,50%	12,50%	8,33%	2,53%	12,50%	12,50%	8,33%	2,53%
Business adjustment costs	Businesses	16,67%	16,67%	8,33%	5,67%	16,67%	16,67%	8,33%	5,67%
Business administrative costs	Businesses	16,67%	16,67%	8,33%	0,14%	16,67%	16,67%	8,33%	0,14%
Implementation and enforcement costs	Public	16,67%	16,67%	8,33%	0,03%	16,67%	16,67%	8,33%	0,03%

	administration								
Coherence		**33%**	**33%**	**33%**	**33%**	**20%**	**20%**	**20%**	**20%**
Coherence with other EU legislation		100%	100%	100%	100%	100%	100%	100%	100%

MCA Results for sensitivity analysis

	Selected scenario	1	2	3	4	5	6	7
PO1A – Prioritising repair when it is cheaper than replacement	**2,19**	**2,74**	**2,48**	**3,13**	**2,29**	**1,63**	**1,98**	**2,76**
PO1B – Repair as the primary remedy	1,98	2,66	2,32	3,05	2,19	1,38	1,78	2,66
PO2A – Incentivise consumers with longer liability period	1,63	1,67	1,88	2,04	1,00	1,02	1,25	1,45
PO2B – extending the liability period for repair	1,62	1,51	1,73	1,78	0,81	0,95	1,08	1,14
PO3A - Replacement with refurbished goods in the extended liability period	1,25	1,22	1,38	1,46	0,66	0,72	0,86	0,96
PO3B - Replacement with refurbished goods from the second year of the liability period	1,18	1,30	1,31	1,48	0,76	0,62	0,77	0,98
PO4 - Aligning the liability period for refurbished goods with new goods	1,99	2,04	2,04	1,99	1,44	1,46	1,45	1,39
PO5A – Obligation to inform where to repair	**1,56**	**1,53**	**1,67**	**1,72**	**1,03**	**1,07**	**1,21**	**1,27**
PO5B – A matchmaking platform with information on available repair services at national level	**1,74**	**1,71**	**2,08**	**2,27**	**1,46**	**1,49**	**1,90**	**2,12**
PO5C – A matchmaking platform on repair at EU level	1,03	1,06	1,22	1,30	0,87	0,87	1,06	1,16
PO6A – Voluntary commitments to an EU common “easy repair standard”	**1,57**	**1,56**	**1,70**	**1,75**	**1,27**	**1,28**	**1,44**	**1,50**
PO6B – Obligation to issue a binding repair quote on price and conditions for repair in a standard form	**3,09**	**3,10**	**3,78**	**4,07**	**2,72**	**2,71**	**3,53**	**3,88**

PO6C – Producer's obligation to repair goods that are subject to reparability requirements under EU law (against a price)	**2,33**	**2,31**	**2,71**	**2,85**	**1,77**	**1,85**	**2,25**	**2,42**
PO6D – Producer's obligation to repair all products (against a price)	0,70	0,67	1,45	1,80	1,40	1,43	2,34	2,76
PO7 - Platform with refurbished goods via a functionality under PO5B or PO5C	**1,14**	**1,09**	**1,15**	**1,13**	**0,71**	**0,77**	**0,78**	**0,76**

The tables below provide a detailed overview of the MCA and CBA results for all POs, respectively in Cluster I and Cluster II.

Cluster I: MCA results

High-level criteria	Stakeholders affected	Sub-criteria / impacts	PO1A	PO1B	PO2A	PO2B	PO3A	PO3B	PO4
Coherence		Coherence with other EU legislation	5	5	5	5	4	4	5
Effectiveness	Consumers	Consumer decision-making process (number of avoided purchases)	170.480.857	170.480.857	28.698.162	5.146.385	10.415.303	23.434.433	30.879.222
Effectiveness	Consumers	Consumer trust and protection	-1	-3	1	2	1	-1	1

Effectiveness	Society	Fostering the efficient use of resources (renewable & non-renewable) (resource savings in tons)	661.597	661.597	111.371	15.785	31.946	71.879	119.835
Effectiveness	Society	Waste production, generation and recycling (waste savings)	1.046.344	1.046.344	176.138	26.772	54.182	121.910	189.524
Effectiveness	Society	Contribute to fighting climate change (CO2 emissions savings)	5.322.067	5.322.067	895.899	143.272	289.955	652.400	963.987
Efficiency	Businesses	Business adjustment costs	862.305.702	845.685.161	2.130.365.143	1.017.417.602	228.552.060	325.950.774	228.478.919
Efficiency	Businesses	Business administrative costs	0	0	0	0	0	0	0
Efficiency	Public administration	Implementation and enforcement costs	28.205.666	28.205.666	28.205.666	28.205.666	28.205.666	28.205.666	755.450
Efficiency	Businesses	Savings in production costs for manufacturers	15.558.115.736	15.558.115.736	2.606.621.739	0	0	1.994.019.308	-776.480.296
Efficiency	Consumers	Consumer welfare and detriment (consumer	0	0	5.388.976.229	406.284.140	822.241.712	0	1.518.275.8

		savings)							14
Efficiency	Society	Change in employment	-1.287	-1.287	24	112	226	1.040	1.004
Efficiency	Businesses	Growth and investment (in Europe - GVA traders, producers, repairers)	-827.938.061	-827.938.061	12.726.876	68.672.140	138.980.913	623.861.785	596.320.073

Cluster I: CBA

High-level criteria	Stakeholders affected	Sub-criteria / impacts	Source	Direction (benefit = 1, cost = -1)	PO1A	PO1B	PO2A	PO2B	PO3A	PO3B	PO4
Efficiency	**Businesses**	Savings in production costs for manufacturers	economic impacts	**1**	15.558.115.736	15.558.115.736	2.606.621.739	0	0	1.994.019.308	-776.480.296
Efficiency	**Businesses**	Growth and investment (in Europe - GVA traders, producers, repairers)	economic impacts	**1**	-827.938.061	-827.938.061	12.726.876	68.672.140	138.980.913	623.861.785	596.320.073
Efficiency	**Consumers**	Consumer savings	based on the economic impacts	**1**	0	0	5.388.976.229	406.284.140	822.241.712	0	1.518.275.814
Effectiveness	**Society**	Monetised resource savings	environmental impacts	**1**	341.732.598	341.732.598	57.526.092	9.187.736	18.594.227	41.837.012	61.898.075

Effectiveness	**Society**	Monetised waste savings	environmental impacts	**1**	170.554.097	170.554.097	28.710.491	4.363.900	8.831.703	19.871.332	30.892.488
Effectiveness	**Society**	Monetised CO2 emissions savings	environmental impacts	**1**	957.972.121	957.972.121	161.261.737	25.788.979	52.191.982	117.431.959	173.517.629
Efficiency	**Businesses**	Business adjustment costs	business costs assessment	**-1**	862.305.702	845.685.161	2.130.365.143	1.017.417.602	228.552.060	325.950.774	228.478.919
Efficiency	**Businesses**	Business administrative costs	business costs assessment	**-1**	0	0	0	0	0	0	0
Efficiency	**Public administration**	Implementation and enforcement costs	estimate of enforcement costs	**-1**	28.205.666	28.205.666	28.205.666	28.205.666	28.205.666	28.205.666	755.450
Efficiency	**Society**	Change in employment (measured as personnel costs)	economic impacts	**1**	-482.585.441	-482.585.441	8.843.181	41.948.287	84.896.356	390.093.774	376.353.916
NET BENEFIT					**14.827.339.680**	**14.843.960.222**	**6.106.095.535**	**-489.378.086**	**868.979.168**	**2.832.958.729**	**1.751.543.328**

Cluster II: MCA

High-level criteria	Stakeholders affected	Sub-criteria / impacts	PO5A	PO5B	PO5C	PO6A	PO6B	PO6D	PO7
Coherence		**Coherence with other EU legislation**	4	3	2	3	5	-3	3
Effectiveness	**Consumers**	Consumer decision-making process (number of additionally repaired products)	229.727.847	769.588.286	60.323.885	459.455.693	1.539.176.573	1.745.931.635	72.364.272
Effectiveness	**Consumers**	Consumer trust and protection	1	2	1	1	3	4	1
Effectiveness	**Society**	Fostering the efficient use of resources (renewable & non-renewable) (resource savings in tons)	76.305	255.622	89.625	152.610	511.244	579.919	24.036
Effectiveness	**Society**	Waste production, generation and recycling (waste savings)	134.596	450.895	100.972	269.191	901.791	1.022.927	42.398
Effectiveness	**Society**	Contribute to fighting climate change (CO2 emissions savings)	745.651	2.497.930	1.752.543	1.491.302	4.995.861	5.666.947	234.880
Efficiency	**Businesses**	Business adjustment costs	266.558.429	0	0	0	6.368.214.524	3.936.279.758	0
Efficiency	**Businesses**	Business administrative costs	0	0	0	0	0	161.790.438	0

Efficiency	**Public administration**	Implementation and enforcement costs	12.267.003	31.953.783	4.501.856	2.501.856	26.422.083	12.267.003	3.828.783
Efficiency	**Businesses**	Savings in production costs for manufacturers	0	0	0	0	0	0	0
Efficiency	**Consumers**	Cconsumer savings	10.515.988.406	35.230.996.001	21.728.197.134	21.032.595.233	70.468.940.877	79.937.037.233	1.948.511.557
Efficiency	**Society**	Change in employment	631	2.113	1.067	1.261	4.227	4.795	199
Efficiency	**Businesses**	Growth and investment (in Europe - GVA traders, producers, repairers)	373.847.191	1.252.559.221	433.315.530	747.737.848	2.505.606.802	2.842.329.778	117.757.177

Cluster II: CBA

High-level criteria	Stakeholders affected	Sub-criteria / impacts	Source	Direction (benefit = 1, cost = -1)	PO5A	PO5B	PO5C	PO6A	PO6B	PO6C	PO6D	PO7
Efficiency	**Businesses**	Savings in production costs for manufacturers	economic impacts	**1**	0	0	0	0	0	0	0	0
Efficiency	**Businesses**	Growth and investment (in Europe - GVA traders,	economic impacts	**1**	373.847.191	1.252.559.221	433.315.530	747.737.848	2.505.606.802	782.780.507	2.842.329.778	117.757.177

		producers, repairers)										
Efficiency	**Consumers**	Consumer welfare and detriment (consumer savings)	based on the economic impacts	**1**	10.515.988.406	35.230.996.001	21.728.197.134	21.032.595.233	70.468.940.877	39.244.090.565	79.937.037.233	1.948.511.557
Effectiveness	**Society**	Monetised resource savings	environmental impacts	**1**	44.902.632	150.423.818	99.410.397	89.805.265	300.847.637	179.532.209	341.260.006	14.144.329
Effectiveness	**Society**	Monetised waste savings	environmental impacts	**1**	21.939.084	73.495.933	16.458.459	43.878.169	146.991.865	29.723.486	166.737.041	6.910.812
Effectiveness	**Society**	Monetised CO2 emissions savings	environmental impacts	**1**	134.217.156	449.627.472	315.457.772	268.434.311	899.254.943	569.707.319	1.020.050.383	42.278.404
Efficiency	**Businesses**	Business adjustment costs	business costs assessment	**-1**	266.558.429	0	0	0	6.368.214.524	627.115.575	3.936.279.758	0
Efficiency	**Businesses**	Business administrative costs	business costs assessment	**-1**	0	0	0	0	0	69.818.210	161.790.438	0
Efficiency	**Public administration**	Implementation and enforcement costs	estimate of enforcement costs	**-1**	12.267.003	31.953.783	4.501.856	2.501.856	26.422.083	4.493.490	12.267.003	3.828.783
Efficiency	**Society**	Change in employment	economic impacts	**1**	236.478.032	792.314.292	400.241.364	472.984.735	1.584.950.750	722.988.301	1.797.952.834	74.487.488

		(measured as personnel costs)										
NET BENEFIT					**11.048.547.069**	**37.917.462.954**	**22.988.578.801**	**22.652.933.705**	**69.511.956.268**	**40.827.395.113**	**81.995.030.077**	**2.200.260.984**

V. PREFERRED OPTION

The combined impacts of the preferred option are shown in the following table. When combining impacts the following assumptions were taken:

Coherence: The whole set of measures is coherent with EU legislation and receives the highest value for coherence as the selected options have been specifically designed to ensure coherence with EU law. As most measures fall outside the SDG, filling for lack of current protection of consumers outside the legal guarantee.

Consumer decision-making process: The value of this indicator is quantified based on the overall number of avoided purchases of new products that the combined package will achieve.

Consumer trust and protection: PO1A might have a negative impact on consumer trust as it removes their right to choose for the remedy, in the case where the proportionality test shows that repair is cheaper than replacement and consumers actually prefer to have their product replaced. The negative effect is balanced out by the other measures within the package which shall improve consumer trust and protection outside the legal guarantee.

Business adjustment and administrative costs: Can be mostly added up. Small savings in costs between PO5A and PO6C can be achieved, as PO5A will inform consumers of the obligation to repair where it exists. PO6B can be fully added as different types of stakeholders are affected.

Implementation and enforcement costs: Most costs can be added up, but savings are achieved in awareness raising expenditure (a total of EUR 106 million by eliminating overlaps).

Environmental impacts, Consumer welfare, Employment, Growth and investment: Can be added up, as different types of stakeholders are affected by PO1A, PO6C and PO6B. PO6B, PO5B and PO6A affect the same categories of stakeholders. However, these measures are implemented independently and take-up of repairs might not entail overlaps. For instance, the platform targets consumers that search for repair information online, while the repair quote and voluntary commitments target consumers at large but overlaps are difficult to assess due to lack of data.

Impacts on third countries are presented in annex 6. They have not been included in the MCA. They concern mainly third country manufacturers and do not have a direct relevance for the assessment of impacts of options in the EU. Adding the impacts in most of the criteria is a choice that was made consistently, for the costs (e.g. adjustment costs), as well as for the benefits (consumer savings).

Preferred options: MCA

High-level criteria	Stakeholders affected	Sub-criteria / impacts	Weights	Preferred options Combined (PO1A, PO5A, PO5B, PO6A, PO6B, PO6C, PO7)
Coherence		**Coherence with other EU legislation**	33,33%	**5**
Effectiveness	**Consumers**	Consumer decision-making process	8,33%	4.594.760.145
Effectiveness	**Consumers**	Consumer trust and protection	8,33%	**2**
Effectiveness	**Society**	Fostering the efficient use of resources (renewable & non-renewable) (resource savings in tons)	5,56%	1.843.274
Effectiveness	**Society**	Waste production, generation and recycling (waste savings)	5,56%	3.027.567
Effectiveness	**Society**	Contribute to fighting climate change (CO2 emissions savings)	5,56%	18.452.732
Efficiency	**Businesses**	Business adjustment costs	5,56%	8.124.194.230
Efficiency	**Businesses**	Business administrative costs	5,56%	69.818.210
Efficiency	**Public administration**	Implementation and enforcement costs	4,17%	105.518.993
Efficiency	**Businesses**	Savings in production costs for manufacturers	4,17%	15.558.115.736
Efficiency	**Consumers**	Consumer savings	4,17%	176.492.611.081
Efficiency	**Society**	Change in employment	4,17%	8.872
Efficiency	**Businesses**	Growth and investment (in Europe - GVA traders, producers, repairers)	5,56%	4.834.593.508

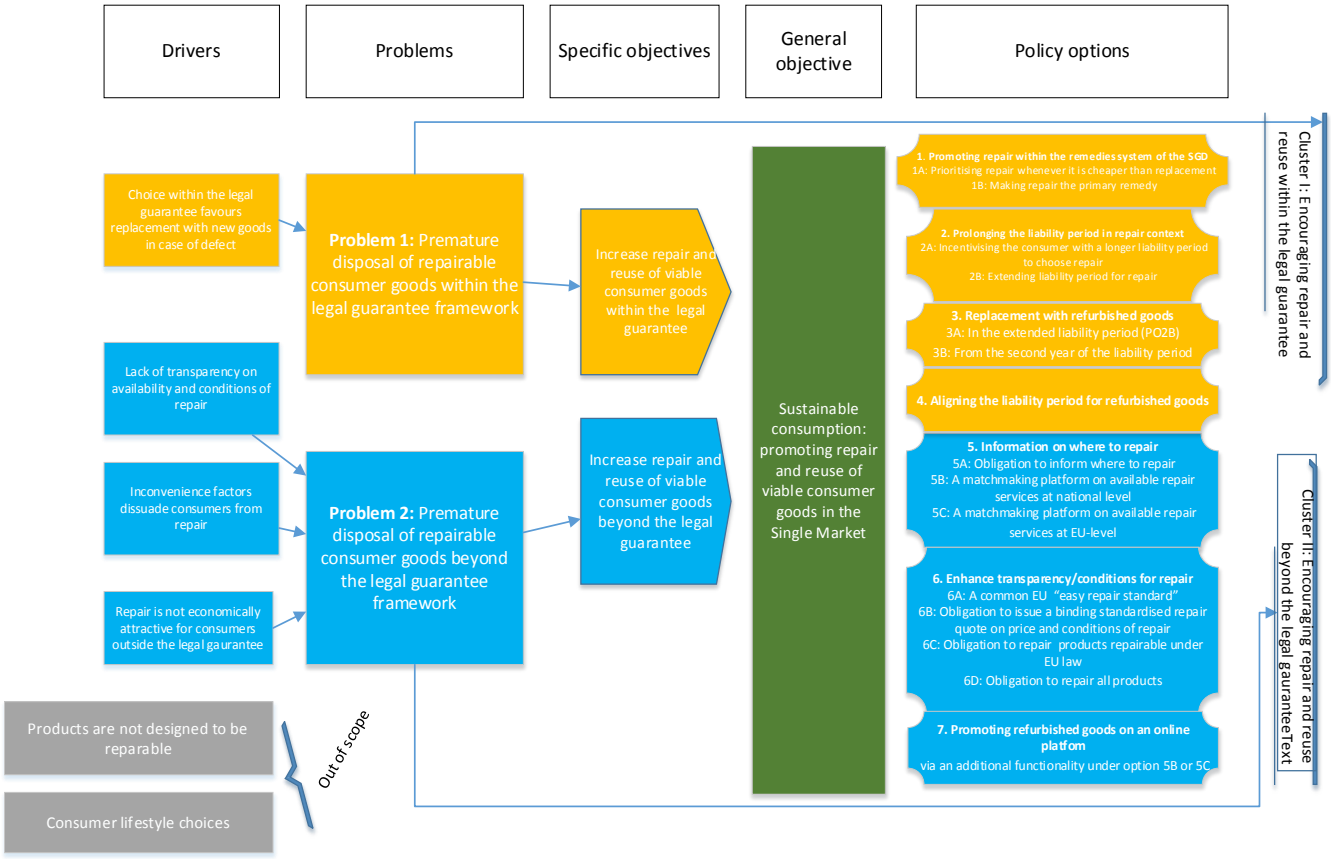
Preferred options: CBA

High-level criteria	Stakeholders affected	Sub-criteria / impacts	Source	Direction (benefit = 1, cost = -1)	Preferred options Combined (PO1A, PO5A, PO5B, PO6A, PO6B, PO6C, PO7)
Efficiency	**Businesses**	Savings in production costs for manufacturers	economic impacts	1	15.558.115.736
Efficiency	**Businesses**	Growth and investment (in Europe - GVA traders, producers, repairers)	economic impacts	1	4.834.593.508
Efficiency	**Consumers**	Consumer savings	based on the economic impacts	1	176.492.611.081
Effectiveness	**Society**	Monetised resource savings	environmental impacts	1	1.121.388.488
Effectiveness	**Society**	Monetised waste savings	environmental impacts	1	493.493.446
Effectiveness	**Society**	Monetised CO2 emissions savings	environmental impacts	1	3.321.491.726
Efficiency	**Businesses**	Business adjustment costs	business costs assessment	-1	8.124.194.230
Efficiency	**Businesses**	Business administrative costs	business costs assessment	-1	69.818.210
Efficiency	**Public administration**	Implementation and enforcement costs	estimate of enforcement costs	-1	105.518.993
Efficiency	**Society**	Change in employment (measured as personnel costs)	economic impacts	1	3.327.130.669
NET BENEFIT					**196.849.293.221**

Annex 5: Detailed description of the Policy Options

The options within and between the clusters are complementary, while the sub-options within each option are alternatives.

Figure 1: Intervention logic



CLUSTER I: Options to promote repair and reuse of goods within the legal guarantee

viii. Option 1: Prioritising repair within the remedies system of the SGD

For prioritising repair within the remedies system of the SGD, there are two sub-options with different degrees of intervention:

Sub-option 1A: Prioritising repair whenever it is cheaper than replacement

In order to promote repair, this sub-option would limit the consumer choice of the remedy by leading to repair instead of replacement in all cases where repair is cheaper than or as costly as replacement. It will allow the consumer to request replacement only if repair is more expensive than replacement. This is different from the current rule in the SGD where the consumer can request replacement even if repair is cheaper, as long as the difference between the costs of the remedies is not disproportionately high.

The refrigerator example in Section 1.2. of the Impact Assessment report explains the situation under current rules. Under sub-option 1A, the consumer can only request replacement, if for instance the replacement of the fridge costs EUR 400 and repair costs are EUR 420. However, if costs for replacement are EUR 400 and costs for repair are EUR 380, the consumer can only request repair of the fridge. This is different from the current rule in the SGD which would allow consumers in the latter case to request replacement even if it is more expensive than repair (as long as the cost difference is not disproportionately high).

Sub-option 1B: Making repair the primary remedy

In this sub-option, repair would be the primary remedy for the consumer from the outset. Only if repair is not possible at all or causes disproportionately high costs *in absolute terms* for the seller could the consumer request replacement. That means that as long as the costs for repair have not reached the benchmark of *being disproportionate in absolute terms*, the seller would be obliged to repair the product even if it is not the economically more favourable option for the seller. This is different from the current system, which has a lower benchmark allowing replacement already when repair is disproportionately more costly *compared to replacement*.

In the refrigerator example (purchase price of the refrigerator: EUR 400), under sub-option 1B the consumer could only request replacement of the refrigerator if the repair costs are excessively high, e.g. EUR 800. However, if repair costs were lower, e.g. EUR 500, the consumer could only request repair. This is different from the current rule in the SGD which would allow the consumer in the latter case to request replacement as the costs of repair (EUR 500) are disproportionately high compared to replacement (EUR 400).

Both sub-options 1A and 1B take the costs for repair as the benchmark for replacement. This is the current SGD approach, balancing the interests of consumers (freely choosing between repair and replacement) and sellers (who shall not be economically overburdened by that choice). While following the same approach, the sub-options have different effects on whether the consumer can choose replacement. Sub-option 1B has a higher threshold: the remedy of replacement can only be chosen if repair is excessively more costly. Compared to this, sub-option 1A sets the hurdle lower. The remedy of replacement can already be chosen when repair is more costly, including a relatively minor difference in costs.

However, for both sub-options, the possibility of the parties to agree on replacement remains unaffected.[203]

ix. Option 2: Prolonging the liability period in the context of repair

Option 2 links the remedy of repair with an extension of the liability period. There are two sub-options with a different approach of extending the liability period in the context of repair. For those MS that foresee a limitation period instead of a liability period[204] the extension would apply to that period.

Sub-option 2A: Incentivising the consumer with a longer liability period to choose repair

In this sub-option, once a defect present at the time of delivery becomes apparent and the consumer chooses repair, the liability period for the repaired product would be extended. The expectation of an additional liability period should incentivise the consumer to choose repair instead of replacement. The extension of the liability period could be done in different ways:

Variant 1 extends the liability period by one year, added to the existing liability period. In the additional liability period, if a defect occurs again, the consumer would be entitled to request repair only (if repair is impossible or too costly in absolute terms, the other remedies would not apply). This does not prevent the parties to agree on replacement, which is likely to happen in cases where repair is more expensive than replacement or businesses want to keep their customers.

In the refrigerator example, a defect of the cooling system becomes apparent after 1.5 years. If the consumer chooses repair, the liability period would be extended by one year, leading to an overall liability period of three years from delivery. If then a defect of the door becomes apparent after 2.5 years, the consumer can request the seller to repair the door.

For those MS[205] that provide for longer liability periods (e.g. three years instead of the two years foreseen by the SGD) one year would be added to that period (e.g. an additional fourth year where the consumer can only request repair).

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[203] Article 21(1) SGD allows the seller and the consumer to agree on a different solution after the lack of conformity becomes apparent.

[204] For instance DE, IE. The liability period is the period after the delivery during which the defect has to appear. In the following, whenever the liability period is mentioned, this also applies to the limitation period, if MS foresee a limitation period instead of (Article 10(5) SGD) or combined with (Article 10(4) SGD) the liability period. A limitation period is the period within which the consumer has to exercise the remedy, e.g. bring a law suit.

[205] For instance ES, SE: 3-year liability period; IE: 6-year limitation period.

Variant 2 prolongs the liability period by restarting it again after the consumer has chosen repair. The liability period would start anew[206] with all available remedies counting from the moment the consumer received the repaired product from the seller.

In the refrigerator example, a defect of the cooling system becomes apparent after 1.5 years. If the consumer chooses repair, the liability period of two years would start anew, leading to an overall liability period of 3.5 years. If a defect of the door becomes apparent after 3 years, the consumer can request the seller to repair the door or replace the defective refrigerator with a new one (replacement only if it is not disproportionately costly compared to repair).

Depending on when the lack of conformity becomes apparent, restarting the liability period could lead to a significantly longer liability period, in particular in those MS that already foresee a longer liability period.

In both variants, the liability period would only be respectively added or restarted once to avoid continuous prolongation, which would lead to legal uncertainty and would be too burdensome for the seller. While the first variant leads to a liability period of three years (or more depending on a MS regime) and is limited to repair as a remedy, the second variant can lead to a liability period between 2 and 4 years (or more depending on MS regimes) allowing the consumer to exercise all available remedies during that time.

Sub-option 2B: Extending the liability period for repair

This sub-option does not aim at incentivising consumers to choose repair, but extends the liability period, e.g. by one year, in all cases, independent from the consumer choosing repair when a defect occurs. However, the extension applies only to repair as a remedy, i.e. if a lack of conformity becomes apparent in the extended liability period, the consumer can only request repair (if repair is impossible or too costly in absolute terms, the other remedies would not apply). As above, this does not prevent the parties to agree on replacement, which is likely to happen in cases where repair is more expensive than replacement or businesses want to keep their customers.

In the refrigerator example, a defect of the cooling system becomes apparent after 2,5 years. Under sub-option 2B the consumer can request the seller to repair the cooling system.

[206] A restart of the liability/limitation period applies currently in BE, CY, EE, DE, HU, IT, PL, SK, ES and SE. It applies to both repair and replacement in BE, CY, EE, DE, IT and PL. HU, SK and ES have a liability restart for replacements; SE for replaced parts.

While both sub-options 2A and 2B extend the liability period, they follow a different approach: sub-option 2A only applies when the consumer chooses repair as it aims at incentivising consumers to choose repair instead of replacement by rewarding them with an additional liability period. Sub-option 2B, on the other hand, grants an extension of the liability period to all consumers in all situations, i.e. even if the consumer has chosen replacement in the first two years.

Finally, both sub-options 2A and 2B could be combined with sub-option 6A that allows replacement with refurbished goods in the additional liability period (see further below).

x. Option 3: Replacement with refurbished goods

Refurbished goods are a specific category of second hand goods that have been tested, if necessary, repaired and certified before they are sold. It would depend on MS whether and to what extent refurbishment schemes, e.g. testing, repairing and certification would be created and whether this would be done by regulation or left to the market. The proposed measures would only apply if refurbished goods exist in the case at hand.

Under the current SGD, if consumers choose replacement as a remedy for a lack of conformity of their purchased goods, the sellers have to replace them with new goods. To increase the use of refurbished goods, the SGD could be adapted allowing those sellers that have refurbished goods available to offer replacement with refurbished goods.

Sub-option 3.A: Replacement with refurbished goods in the extended liability period

This sub-option envisages a combination with the measure on prolonging the liability period in context of repair (PO 2A[207] and PO 2B). The replacement with refurbished goods would be an alternative remedy to repair in cases where repair is impossible or causes excessive costs. This sub-option would only apply in the additional liability period going beyond the minimum liability period of two years (or more depending on MS regime). This option would not apply in the first two years of the liability period as the consumer may expect as fair replacement only the replacement with new goods during that period. After two years, replacement with refurbished goods – where available – could be justified as the goods have already been in use for a considerable time.

Sub-option 3B: Replacement with refurbished goods from the second year of the liability period

To boost the use of refurbished goods even more, this option would allow sellers to offer refurbished goods as a replacement from the second year of the liability period. When one year has passed, many products are likely to show signs of wear and tear. It could thus be

[207] Replacement with refurbished goods could be an alternative remedy in both variants of PO 2A.

considered as fair to grant the seller the additional possibility of replacing the defective product with a refurbished one, if available.

xi. Option 4: Aligning the liability period of refurbished goods with new goods

To encourage consumers to buy refurbished goods, this measure would align the liability period for refurbished goods with the liability period for new goods (i.e. minimum two years). It would remove MS' current possibility to provide that sellers and consumers can contractually agree to a shorter liability for refurbished goods. For those MS[208] that made use of this option in their national laws this would mean that they could keep their current rule for second hand goods in general, but they need to exclude refurbished goods from the possibility to agree on a shorter liability period.

Aligning the liability period for refurbished goods and new goods would influence consumers' choice to buy more refurbished goods. They would not be discouraged by quality concerns due to the shorter liability period and could rely on quality assurances as for new goods.

CLUSTER II: Options to facilitate and encourage repair and reuse of goods beyond the legal guarantee

xii. Option 5: Information on where to repair

Sub-option 5A: Obligation to inform where to repair

The purpose of this option is to inform consumers on available repair services.

Producers should inform on their website whether they themselves provide repair services and to what extent, e.g. for which specific products/models. If combined with PO6C or PO6D on the obligation to repair, producers should also inform to what extent the obligation to repair applies for specific goods they produce. This information can be provided when new products are placed on the market and updated only where changes occur.

Sub-option 5B: A matchmaking platform on repair at national level

This sub-option entails the creation of an online platform with a search engine, matchmaking consumers with repairers for key consumer goods at national level. The purpose is to facilitate the search of suitable repair services and provide more transparency on conditions of repair in order to incentivise consumers to choose repair. This would be an independent comparison tool helping end-users to assess the merits of different repair providers by means of standardised information facilitating comparison of prices and quality parameters.

[208] Austria, Belgium, Croatia, Cyprus, Czech Republic, Germany, Hungary, Italy, Lithuania, Poland, Slovakia and Spain.

A national level platform could be modelled on the "success story" of such a platform sponsored by the French authorities.[209] It would include a full range of popular consumer goods (e.g. energy-related products, textiles, shoes, furniture, jewellery) and provide matchmaking for consumers and service providers operating in their area. In addition, it would include general information on repair conditions offered by the respective repairer (e.g. average duration of repair, cost range, availability of a replacement product, pick-up/transportation service) but not relating to a concrete problem. MS could decide whether to make the platform accessible only to professional repairers, where professional qualifications are required under national law, or also to non-professional repairers (for those types of goods where there are no safety concerns). However, the providers registered on the platform would not be limited only to high quality providers, in order to guarantee a wide choice and free competition for all who legally offer repair services. National platform should allow also online/distant repair services to offer their services. Where the market has created such platforms, which meet the quality criteria, or a relevant national platform already exists, MS should not create new ones.

The national platforms could be interconnected at EU level with EPREL,[210] which could sign-post to them under 'repair'. It could potentially be listed as 'assistance services' under the Single Digital Gateway, managed by the Commission, facilitating access to such services across the EU through the single-entry point of the Single Digital Gateway and information on Consumer Rights on Your Europe Portal. More synergies with the Your Europe Portal could be achieved by including there a reference to 'where to repair' and sign-posting to national matchmaking platforms.

Sub-option 5C: A matchmaking platform on repair at EU level

This sub-option entails the creation of a single online platform at EU level with a search engine matchmaking consumers with repairers for key consumer goods. As in PO5B, the purpose is to facilitate the search of suitable repair services and provide more transparency on conditions of repair in order to incentivise consumers to choose repair.

The most efficient implementation would be adding new functionalities to the EPREL portal for energy labelled products.[211] This could be done by adding a search engine, matching consumers with repair services for key consumer goods within the scope of EPREL.[212] For efficiency reasons, the repair information would be limited to the product categories already

[209] Annuaire des réparateurs (artisanat.fr): The platform developed in France provides a brand "Répar'acteurs" and included in May 2022 127,580 repair providers. It enables search for repair services for a wide range of consumer products and facilitates the search of suitable repairers in a given area.
[210] EPREL - European Product Registry for Energy Labelling, EPREL Public website (europa.eu).
[211] EPREL Public website (europa.eu).
[212] EPREL currently covers 25 product groups.

included in EPREL or regulated under the Ecodesign Directive/ESPR. The EPREL portal requires producers to include product related information when placing a product on the market to facilitate market surveillance. Consumers could easily access the portal by scanning the energy label on their product (e.g. a refrigerator) and identify repairers nearby. The take-up is likely to increase as a result of this feature, even among consumers not yet aware of the EPREL portal. Repairers too could benefit by easy access to product information (including on specific models) when approached with a repair request. A platform at EU level could also enable more cross-border repair, especially in cross-border regions or for items that can be shipped at acceptable cost. This would broaden the choice of repair for consumers and promote competition in the Single Market.

More detailed overview of functionalities of PO5B and PO5C:

Sub-option	**PO5C: A matchmaking platform on repair at EU level - Extending functionalities of EPREL portal**	**PO5B: A matchmaking platform on repair at national level**
Implementation and management	EU level	Member States level
Scope	Energy labelled goods	Consumer goods
Eligibility to register on platform	Registration in principle open to all repair actors (in the national platform MS have some possibilities to determine the scope)	
Population of database	Open to registration by repairers themselves Possible function to extract data from existing national databases where available	
Conditions to register on platform	Self-authentication via EU Login Identity management (i.e. eIDAS) Cost free	Potential fee covering the costs of platform management to be determined by MS
Features / search criteria	Display data on a map, including an automatic matchmaking function of consumers with repairers based on pre-defined search criteria for a given product (see below).	
Search location	Country of repair provider + postal code/show all repairers who offer their services in a given area	
Search for product	Product type and brand (e.g. washing machine of a specific brand)	
Search for conditions	Indicated duration, availability of temporary replacement goods, pick-up or mobile repair services	
Search for quality assurances	Availability of voluntary guarantees on repair; potential display of quality labels where available (e.g. European standard for repairers,	

	French label Répar'acteurs)	
Registration requirements	EU Login identification may be necessary to report problems to avoid abuse Identity management (eIDAS) Require company data	MS discretion how to populate portal - self-registration or extraction from existing data-bases with consent of repairer
Data protection	Only request company data. If personal data (e.g. "sole trader" artisans), ask for consent and put in place compliant procedures	MS to ensure data protection according to applicable law
Interoperability **With other platforms**	Link to Single Digital Gateway Link to relevant national platforms where available	Accessibility through national websites connected to the Single Digital Gateway
Maintenance /Up-dates	Every 3 months general up-date Renewal of registration by each repair actor (e.g. on annual basis)	MS discretion
Communication campaigns	Raising consumer awareness of platform via EPREL and Your Europe portal	MS campaigns

xiii. Option 6: Enhance transparency/conditions for repair

Sub-option 6A: Voluntary commitments to an EU common "easy repair standard"

This option involves a voluntary commitment to observe a European standard of quality in repair services. The rationale is to boost consumer trust in repair services across the EU and avoid market barriers for business. The standard would be applicable to all repair service providers. In terms of **content,** it would cover key aspects of repair services, which are important "convenience" factors for consumer decisions on repair, in particular: reasonable duration of the repair service, availability of a temporary replacement product, availability of pick-up/transportation service and any additional voluntary guarantee on the quality of repair. The commitment would set a standardised minimum level of quality on each aspect.

As to the **form,** the standard[213] could be negotiated as an industry code of conduct establishing minimum standards of repair, agreed by representative business associations at EU level. Consumer organisations and civil society representatives would be involved to ensure that their legitimate interests are taken into account. The Commission would facilitate negotiations and help to provide publicity. The code would be open to all types of repair service providers across the EU (including independent repairers and producers). To ensure visibility and consumer recognition, a standardised **"easy repair" label** could be made available to all subscribers. Enforcement of the code would be monitored by the stakeholder group that negotiated the code. One year after enacting the code, the group would take stock of its implementation, to be repeated possibly annually. This will be conducive to consumer confidence, as consumers across the EU could trust that providers with this label address consumer concerns about repair in an effective manner.

Alternatively, the standard could be developed by a European Standardisation Organisation (CEN – European Committee for Standardisation) according to Regulation (EU) 1025/2012 on European standardisation. The European Standardisation Organisation would ensure an appropriate representation and effective participation of all relevant stakeholders, including SMEs, consumer organisations and environmental stakeholders in their standardisation activities (Article 5 of Regulation (EU) 1025/2012).

Sub-option 6B: Obligation to issue a binding repair quote on price and conditions for repair in a standardised form

This sub-option would introduce an obligation to issue a binding repair quote to the consumer in a standardised form, once the consumer expresses interest in obtaining a repair service. The obligation would apply to producers, sellers and independent repair service providers, i.e. everybody who offers repair, to allow for competition. The option draws on experience in sectorial EU law to facilitate consumer choices by standardised comparable pre-contractual information.[214] This requirement relates to pre-contractual information to be provided before the conclusion of an after-sales repair service contract, and not to pre-contractual information to be provided before the purchase of the product itself.

[213] If the content and modalities of the standard qualify it as an industry standardisation agreement subject to the Horizontal Block Exemption Regulations and Guidelines on horizontal co-operation agreements, which are currently under review, it should comply with their requirements. https://ec.europa.eu/competition-policy/public-consultations/2022-hbers_en

[214] Key information document for packaged retail and insurance based investment products (PRIIPs) under Commission Delegated Regulation (EU) 2017/653; Contract summary template under Directive (EU) 2018/1972 establishing the European Electronic Communications Code (Recast).

The repair quote would provide the consumer interested in repair with the relevant information on costs and key conditions of repair such as the price or maximum price,[215] duration of repair, any voluntary commitment on quality of repair/duration of functioning of the product after repair on top of available legal remedies for non-performance of services contracts, availability of a temporary replacement product during the time of repair and transportation.[216] A **standardised form** on a durable medium would allow the consumer to make an informed decision as well as easily compare offers. As far as the price for the quote is concerned, the consumer should only be obliged to pay the direct costs incurred and necessary to issue the quote.

Sub-option 6C: Producer's obligation to repair goods that are subject to reparability requirements under EU law (against a price)

This sub-option would introduce a producer's obligation to repair, which would cover defects that are outside the legal guarantee, i.e. that were not present at delivery or became apparent after the liability period has elapsed. As far as the scope is concerned, the obligation to repair would apply to **products for which reparability[217] requirements in EU law** exist or will be adopted, e.g. in context of the ecodesign framework. In this way, the producer's obligation to repair will be limited in scope but be possible in practice, thanks to the legal instruments on the supply side, which establish the range of spare parts to be made available and the minimum periods of their availability for specific product categories. The obligation to repair would apply against producers as they are also addressees of existing reparability requirements under EU law and have generally the necessary spare parts, expertise and equipment to implement repair.[218] Making this right enforceable against other repair actors, such as independent repairers and potentially sellers, could be problematic, as they may not have access to the spare parts or may not possess the necessary know-how, software and equipment to fulfil this obligation.

The consumer would have the right to have the product repaired for a **price**, taking into account labour costs, costs for spare parts, costs for operating the repair facility (e.g. tools, rent) and a profit for the producer. The price would not be regulated, but agreed in the contract between the consumer and the producer, done under the competitive pressure of

[215] The information on price in the quote will complement the Consumer Rights Directive, which creates an obligation to inform about the price or the manner it is calculated (e.g. hourly rate), applicable also to repair service contracts or a service contract whose objective is merely to estimate the cost of repair. The information on price will be combined with the content of the service, bringing transparency to what the price includes. Furthermore, the price estimate is likely to be given following an individual diagnostic of the defect.

[216] The IA study consumer survey results that all these elements influence consumer decisions to repair to different degrees.

[217] Except where technically not feasible.

[218] APPLIA, Home Appliance Europe, 'By the Numbers: The Home Appliance Industry in Europe', 2020-2021): 91% requests to repair to manufacturers resulted in successful repair in 2018.

independent repairers, therefore benefitting consumers and the repair sector.[219] Consumers could seek other repair opportunities in order to be able to compare offers. They would likely approach also local independent repairers or the seller before reaching out to producers which may be located at a greater distance.

Exemptions would need to be formulated for defects which are impossible to repair, for instance, where goods are damaged in a manner which makes repair technically unfeasible. The SGD (and its predecessor) already excluded the remedy of repair when it is impossible. National implementation law and related national and European case law applying it have already created elements allowing to assess when repair is impossible.

Option 6D: Obligation to repair all products for a reasonable price

This option has the same rationale as option 6C, but a broader scope. It envisages a producer's **obligation to repair all products which are reparable by nature.** It would cover defects that are outside the legal guarantee. Unlike goods that are subject to reparability requirements under EU law, not all products are reparable by design. Therefore, PO6D would include an exception linked to the actual possibility to repair the product. Producers could invoke this exception when repair is not technically feasible, notably when products are not reparable by design. The assessment of the actual reparability would largely depend on the producer. The choice of whether to request repair will remain with the consumer. The price of repair would be determined like in PO6C.

xiv. Option 7: Adding a functionality on refurbished goods in the matchmaking platform for repair (PO5B and PO5C)

To encourage supply and demand for refurbished goods, this option adds a functionality to the matchmaking platform suggested under PO5B and 5C to match-make consumers not only with repairers but also with sellers of refurbished consumer goods and purchasers of defective goods for refurbishment. The purpose is to facilitate the search for refurbished goods as a sustainable alternative to buying new products outside the legal guarantee period. It also facilitates arrangements between businesses that may wish to dispose of defective repairable goods and service providers that are looking for such goods for refurbishment. PO7 would provide synergies with the functionalities of the repair platform. When the repair possibilities identified through the platform are not available or not satisfactory for the consumers' needs, they may use the same platform to identify replacement products that are refurbished.

While national level platforms would in practice mainly provide matchmaking for consumers and sellers of refurbished goods/purchasers of goods for refurbishment operating in their

[219] If the price were to be regulated, all the repair demand would be channelled to the producer and the independent repairers would be foreclosed.

area, the access to such sellers and purchasers from other MS should also be open. The platform would function based on sellers' and purchasers' self-registration. As PO7 would be implemented as a functionality of the match-making platform for repair, the main technical characteristics would be similar to those of PO5A and PO5B, as they work on the same matchmaking principle. If combined, they would be more cost efficient and produce synergies.

Options for instruments

The options set out above could be delivered via different legal instruments, depending on the nature of the option, including amendments to existing EU legislation, the adoption of new legal instruments or codes of conduct.

In particular, the options in cluster I could entail amendments to the SGD or a new directive. The option for a European matchmaking platform (PO5C) would necessitate a regulation, a Commission decision or an amendment to relevant existing legal instruments. The option concerning voluntary commitments (PO6A) can be delivered via a code of conduct or a Commission mandate for a repair standard to standardisation bodies.

The concrete choice of instruments will be discussed in the context of the preferred option.

Options discarded

i. Extending the liability period in general

The option extending the current minimum liability period of 2 years to 3 years has been discarded. Extending the liability period for both repair and replacement has a detrimental effect because, given the choice, consumers would prefer replacement. This would not serve the purpose of promoting repair but rather have a negative impact on sustainability, contributing to increased waste and use of resources.

ii. Aligning the liability period according to product's durability/lifespan

The liability period could be extended in a flexible manner by linking it to any minimum durability/lifespan requirements introduced under the ecodesign framework. However, this approach has been discarded.

Firstly, the purpose of liability periods is to provide legal certainty for all market participants. That is why almost all Member States have chosen one single period for all goods. If liability periods are defined according to the lifespan of different products, this would lead to a high number of different liability periods for different products (e.g. dozens of liability periods only in one product sector) instead of one period for all goods which is much easier to handle in practice. This would not create legal certainty, neither for consumers not for businesses.

Secondly, the durability of goods also depends on the intensity and duration of use; durability requirements are defined thus in terms that account for the intensity of use[220]. The definition of 'durability' in the ESPR proposal[221] explicitly presumes the possibility that a durable product may still have to be repaired. Aligning the liability with the envisaged lifespan of a product (leading to repair over its whole lifespan) would contradict the ESPR approach and lead to incoherence. That is why, in order to provide legal certainty, the liability period in sales law starts from the moment of purchase and runs for a number of years, not factoring in intensity of use.

Thirdly, aligning the liability with the envisaged durability of a product would pre-empt other tools to achieve sustainable consumption. Under the present SGD, businesses can offer commercial durability guarantees. This means they have an interest to produce durable goods and use this durability as a competitive advantage. Aligning the liability with the lifespan of specific products could lead to producers and sellers of durable products to lose such competitive advantage. They would no longer have the incentive to produce and sell durable products.

Finally, this option would entail a significant increase in costs for businesses, because they would need to repair a wider range of defects (also wear and tear) and for a longer period. This would penalise producers and sellers of durable products as they will have to repair them for free. This could discourage the development of durable products in the market, contrary to the objectives of the Circular Economy Action Plan.

iii. Extension of the period of reversal of the burden of proof

The SGD foresees that any lack of conformity which becomes apparent within one year after delivery shall be presumed to have existed at the time when the goods were delivered. Instead of the one-year period MS may maintain or introduce a period of two years. Extending the period for the reversal of the burden of proof was discarded. Extending the reversal of the burden of proof does not promote repair, as it would also apply to replacement. In addition, the SGD legislative process has shown that finding an agreement on the current rule has been very difficult. It is highly unlikely that the necessary majority in the legislative process for adopting a change to the reversal of the burden of proof rule could be found.

iv. Suspension of the liability period during repair

An option that the liability period would be suspended during the time of repair has been discarded. Suspension means that the period of time for repair would be added to the liability period. For instance, if the seller needs three weeks to repair a product, these three weeks

[220] EU Ecodesign requirements for vacuum cleaners for instance establish a minimum operational motor lifetime of 500 hours; minimum durability of the hose (if any): still usable after 40 000 oscillations under strain.
[221] Article 2(21).

would be added to the applicable liability period, i.e. if the period is two years the suspension would lead to a period of 2 years and three weeks.[222] Due to the insignificant extension of the liability period in most cases, this option was not considered an incentive for the consumer to choose repair.

v. Regulating the conditions for repair outside the legal guarantee

The contract about repair is a service contract. Regulating conditions for repair, such as the period or guarantee for repair would mean regulating service contracts at EU level. This is different from the obligation to repair as it would concern all service contracts for repair concluded voluntarily. This option is likely to interfere strongly with traditional structures of national private law and would likely be very controversial, while the benefits in terms of promoting repair would be uncertain. It has therefore been discarded.

vi. Aligning the liability period for second-hand goods with new goods

Aligning the liability period for second hand goods with new goods has been limited to refurbished goods (see PO 4). Removing the option to reduce the liability period for second hand goods altogether has been discarded due to concerns of MS against such option during the public consultation. Moreover, concerns were also raised among business stakeholders. Almost half of them found the measure to be ineffective. Some mentioned that such a measure would lead to a disruption in the market for such goods. Hence, it is unlikely that the necessary majority in the legislative process for aligning the liability period for second hand goods in general with new goods would be found.

[222] A suspension of the liability period applies currently in some MS, such as Belgium, Cyprus, Czech Republic, Italy, Portugal, Slovakia, Spain. It applies to both repair and replacement e.g. in Belgium and Cyprus. The suspension applies only to repair e.g. in the Czech Republic and Portugal.

Annex 6: Detailed assessment of efficiency of policy options[223]

I. CLUSTER I: PROMOTING REPAIR AND REUSE OF GOODS WITHIN THE LEGAL GUARANTEE

1. Impacts of Option 1: Promoting repair within the remedies system of the SGD

For most of the following criteria the indicated figures are the same for PO1A and PO1B. The reason is that for PO1B the take-up rate of PO1A has been taken into account as the minimum take-up. Hence, all the following figures need to be seen as minimum figures as far as PO1B is concerned.

PO1A Prioritising repair if cheaper than replacement	**PO1B Making repair the primary remedy**
ECONOMIC IMPACTS (EU economic operators): Both POs lead to considerable gains for businesses, in particular producers/traders due to cost savings because of a decrease in the production of replacement products that would be given to consumers for free and for repairers due to additional repair activities relating to defective goods under legal guarantee. Sellers are the addressees of the obligation to carry out the remedies under the SGD. In practice, sellers will aim to exercise their right to redress against the producer as far as possible. However, this will in the end depend on the contract between the seller and the producer. The economic burden for the repair will thus be placed on the contractually weaker party in this contract. For the sake of simplicity of the presentation, benefits in this context refer to producers in the EU, but in practice they are shared by sellers and producers via their B2B agreements.	
Benefits for business	
Value added and turnover	
Producers in the EU[224] will achieve considerable overall cost savings as they will have to provide less new products for free as a replacement of returned defective goods under the legal guarantee. They will still incur some costs for the repair of defective goods under the legal guarantee, but these costs are lower than the gains from avoided replacement, resulting in significant cost savings of EUR 15.6 billion (avoiding replacement products minus financing additional repair).[225] Both producers and traders in the EU[226] will face lower costs for stocking replacement goods, although these benefits are partly balanced out by expenses of stocking spare parts. EU repairers: Repairers, including independent repair service providers, will gain due to the increased demand for repair of defective goods. This includes in particular independent or other repairers who may be subcontracted to repair defective goods under the legal guarantee. EUR 12.9 billion additional turnover = EUR 5 billion GVA increase due to additional repair	

[223] All figures presented stem from the IA Study. All benefits and costs are calculated and expressed for 15 years (with the exception of one-off costs specifically indicated).

[224] 'Producers in the EU' are further referred to as 'EU producers'.

[225] See all economic impacts in table in Annex 4 and IA Study, Section 5.2.3.

[226] 'Traders in the EU' are further referred to as 'EU traders'.

activities under the legal guarantee.	
Costs for business	
Losses	
EU producers will lose EUR 10 billion in turnover from missed resales of returned products for refurbishment.[227] EU traders: will lose EUR 21.5 billion in turnover = EUR 5.8 billion in GVA.	
Adjustment and administrative costs (EU producers and traders)	
One-off adjustment costs: EUR 104.2 million for familiarising with new rules, adjusting company procedures/relationships/forms Ongoing adjustment costs for 15 years: EUR 758.1 million for commissioning and managing additional repairs Administrative costs: None	One-off adjustment costs: EUR 87.6 million for familiarising with new rules, adjusting company procedures/relationships/ forms Ongoing adjustment costs: EUR 758.1 million commissioning and managing additional repairs including delivery Administrative costs: None
Additional costs (e.g. SME, third countries)	
Third country producers will have losses in sales of returned products amounting to EUR 28.6 billion.	
Costs and benefits for consumers	
Both POs aim at increasing the choice of repair as a remedy in order to ensure more sustainable consumption. Both POs somewhat restrict consumer rights by limiting the choice between repair and replacement under the legal guarantee. PO1B, which makes repair the primary remedy, restricts consumer rights more than PO1A.	
SOCIAL IMPACTS: Both POs could lead to an increase in jobs in the repair sector and to a loss of jobs in EU production and trade, which results in a limited net loss over 15 years.	
Employment in the EU (costs and benefit)	
Net loss of jobs= -1,287 Jobs producers= 0 Jobs traders= -9,725 Jobs repairers= +8,438	
IMPACT ON PUBLIC ADMINISTRATION: Both PO1A and PO1B are not expected to incur more than moderate enforcement costs as authorities are already familiar with the SGD. Costs could be linked to their familiarisation with changes brought to the SGD by this measure and to compliance verification of sellers in those MS which rely on public enforcement. Implementation costs include awareness raising of new rules.	
Enforcement and implementation costs:[228]	

[227] As most defective products under the legal guarantee are returned relatively early, they are particularly suitable for refurbishment and can be resold at a lower price. As a conservative estimate, it is assumed that half of returned products are resold for refurbishment.

[228] The estimated costs regarding 'Enforcement and implementation costs' refer to the 'total average costs for all Member States and the EU' for all POs, including both the one-off costs and the ongoing costs over the period

The estimated costs in both PO1A and PO1B amount to EUR 28.2 million.

2. Impacts of Option 2: Prolonging the liability period in the context of repair

PO2A Incentivising the consumer with a longer liability period to choose repair Variant 1: Additional year for repair only Variant 2: Restarting the liability period for all available remedies	**PO2B Extending the liability period for repair**
ECONOMIC IMPACTS (EU economic operators): Both POs lead to some costs for EU producers and EU traders, in particular due to financing additional repair services and loss of consumer sales. In the context of PO2B these costs are however very limited, as the overwhelming majority of defects dealt with in the SGD appear already during the first two years after delivery, so PO2B concerns only a minimal share of defects. Due to an increase of repair activities, repairers are able to grow their business to a certain extent. Consumers will achieve some consumer savings. Repairers will gain due to the increased demand for repair of defective goods.	
Benefits for business	
Value added and turnover	
EU producers will achieve moderate overall cost savings as they will have to provide less new products for free as a replacement of defective goods under the legal guarantee, as they will repair more instead. They will still incur some costs for the repair of defective goods, but the overall costs are lower than the gains from avoided replacement. - EUR 2.6 billion total costs savings (EUR 3.4 billion due to avoided replacement products in the liability period minus EUR 766.2 million for financing additional repair). EU repairers: EUR 2.2 billion increase in turnover = EUR 835.5 million GVA increase due to additional repair services under the legal guarantee which are outsourced to independent repairers or done in-house repair at producers or sellers.	EU repairers: EUR 349.1 million increase in turnover = EUR 137 million GVA increase due to additional repair services under the legal guarantee which are outsourced to independent repairers or done in-house repair at producers or sellers). EU producers and traders do not have any benefits (savings) under this option as there is an additional liability period requiring producers/traders to provide repair which currently does not exist.
Costs for business	
Losses (including annual turnover, GVA) (EU actors)	
EU producers: - EUR 1 billion decrease in turnover (due to less sales from new and returned products in context of replacement, which could have	EU producers: - EUR 57.5 million decrease in turnover (due to less sales from new products)= EUR 13.5 million GVA loss

of 15 years. As one-off costs occur in the beginning, overall costs then are higher and decrease over time, being limited to ongoing costs in the subsequent years.

been resold for refurbishment albeit at a lower price) = EUR 95.3 million GVA loss EU traders: EUR 2.7billion loss in turnover = 727.5 million GVA loss due to lost consumer sales	EU traders: EUR 203.1 million decrease in turnover = 54.8 million GVA loss due to lost consumer sales
Administrative and adjustment costs (EU producers and traders)	
Adjustment costs: One-off: EUR 87.6 million for familiarising with new rules, adjusting company procedures/relationships/ forms/websites Ongoing adjustment costs: EUR 2 billion for calculating individualised extensions of liability for each case, commissioning and managing additional repairs or all remedies (depending on variant) during extended liability period (including compliance costs for recording individual cases, and keeping track of the individual extended liability periods). Administrative costs: None	Adjustment costs: One-off: EUR 43.8 million for familiarising with new rules, adjusting company procedures/relationships/forms/websites Ongoing adjustment costs: EUR 973.6 million for commissioning and managing repair in the additional liability period Administrative costs: None
Additional costs (third countries)	
Third countries: Non-EU producers' sales of new products/parts would decrease. Third country producers will have losses in sales of new products amounting to EUR 785.2 million under PO2A, being outbalanced by cost savings from avoiding replacement products of EUR 6.2 billion. Under PO2B the losses in sales for new products amount to EUR 107.3 million and the additional costs to EUR 349.1 million.	
Benefits for consumers	
Consumer savings: EUR 5.4 billion	Consumer savings: EUR 406.3 million
Consumer detriment is reduced during the extended liability period as consumers can use products longer and are not forced to buy new goods if their products break down in the additional liability period. PO2A gives a choice related to the extended liability period for the consumer.	Consumer detriment is reduced during the prolonged liability period as consumers can use products longer and are not forced to buy new goods if their products break down in the third year. Under PO2B all consumers benefit as they receive an additional liability independent from the condition of choosing repair before.
SOCIAL IMPACTS: The social impact of both POs in terms of employment at EU level would be very minimal. As the number of avoided purchases is rather small in the scenarios covered by this option, the impacts on turnover of producers and retailers are also small. This means that the implications for possible reduction of personnel costs due to decreased turnover will translate in virtually no job losses at EU level. Employment in the repair sector (in-house or third party) could increase due to additional repairs, but minimally.	
Employment in the EU (costs and benefits).	
Net gains of jobs= 24 Jobs producers= -175 Jobs traders= -1,222 Jobs repairers= +1,420	Net gains of jobs= 112 Jobs producers= - 24 Jobs traders= -92 Jobs repairers= +228
IMPACT ON PUBLIC ADMINISTRATION: The one-off and ongoing enforcement and	

implementation costs include familiarization with the new rules of competent authorities and enforcement actions, including inspections as well as awareness raising campaigns.
Enforcement and implementation costs: Both PO are not expected to generate considerable enforcement costs as authorities are already familiar with the SGD. As under PO 1 the estimated costs amount to EUR 28.2 million.

3. Impacts of option 3: Replacement with refurbished goods

PO3A only during the extended liability period (PO2B)	**PO3B from the second year of the liability period**
ECONOMIC IMPACTS: PO3B would bring limited cost savings for EU producers and traders, as they would have the possibility to replace with a refurbished product during the second year of the liability period. PO3A causes a minimal decrease in GVA for EU producers and traders, as less new products would be bought. The repair and refurbishment sector would have limited increase in GVA under both POs.	
Benefits for business	
Value added and turnover	
EU repair and refurbishment sector: Increase in turnover EUR 706.4 million = EUR 277.3 million p.a. increase in GVA.	EU producers and traders: Total cost savings of EUR 2 billion over 15 years, as they would not have to replace defective goods with new products from the second year of the liability period. Producers would also benefit from increased sales of additional spare parts, necessary for refurbishment. EU repair and refurbishment sector: Increase in turnover EUR 1.6 billion = EUR 623.9 million p.a. increase in GVA.
Costs for business	
Losses (EU actors)	
EU producers: Decrease in turnover of EUR 116.5 million (taking into account the reduced sales of new products), translating into a decrease of EUR 27.3 million in GVA. EU traders: Decrease in turnover of EUR 411.1 million = EUR 111 million decrease in the GVA, resulting from the decrease in sales of new products because the liability period is extended.	EU producers: No changes in the turnover or the GVA. EU traders: No changes in the turnover or the GVA.
Administrative and adjustment costs (EU producers and traders)	
Adjustment costs: One-off: EUR 150.6 million for familiarising with new rules; updating and aligning internal procedures and rules; making agreements with repair shops, setting out terms and conditions for repair and refurbishment, Ongoing: EUR 77.9 million for checking whether products fit the definition of refurbished goods and ensuring storage	Adjustment costs: One-off: EUR 150.6 million for familiarising with new rules; updating and aligning internal procedures and rules; making agreements with repair shops, setting out terms and conditions for repair and refurbishment, Ongoing: EUR 175.3 million for checking whether products fit the definition of refurbished goods and ensuring storage capacity, evaluating in

capacity, evaluating in each case whether use of refurbished goods is allowed and whether such goods are available Administrative costs: None	each case whether use of refurbished goods is allowed and whether such goods are available Administrative costs: none
Additional costs (third countries)	
Third countries: Non-EU sellers would need to comply with the new rules and ensure that the refurbished products they commercialise within the internal market fit into the definition of refurbished goods. Third country producers will have less sales from new products which amount to EUR 217.1 million under PO3A. Additional costs under PO3A: EUR 706.4 million while PO3B would bring cost savings of EUR 3.5 billion.	
Benefits for consumers	
Consumer detriment is reduced because consumers have a prolonged liability period. Consumer savings: EUR 822.2 million	No reducing effect on consumer detriment or consumer savings.
SOCIAL IMPACTS: PO3 could lead to a marginal increase in jobs in the repair and refurbishment industry. Impacts are likely slightly bigger in PO3B, as the amount of refurbished products under this PO is larger than in PO3A. PO3A would have negligible negative impacts on the employment of traders and producers due to reduced production and sales of new goods.	
Employment in the EU (costs and benefits)	
Net gains of jobs= 226 Jobs producers= -50 Jobs traders= -186 Jobs repairers= +462	Net gains of jobs= -1,040 Jobs producers= 0 Jobs traders= 0 New jobs repairers= +1,040
IMPACT ON PUBLIC ADMINISTRATION: PO3 is not expected to generate more than moderate enforcement costs as authorities are already familiar with the SGD (as under PO1 and PO2). The familiarisation with the concept of refurbished goods causes some minor enforcement costs.	
Enforcement and implementation costs: The estimated costs amount to EUR 28.2 million.	

4. Impacts of option 4: Aligning the liability period for refurbished goods

All the numbers below take into account that only approximately half of the internal market would be affected by PO4.

PO4 Aligning the liability period for refurbished goods
ECONOMIC IMPACTS: PO4 leads to medium losses for EU traders due to additional costs for performing remedies over an extended liability period, as well as decrease in their sales of new goods. EU producers will consequently have a small loss of GVA. PO4 will increase revenues of the repair/refurbishment sector, as many to-be-refurbished products are also defective and need to be repaired and their functionality need to be verified.
Benefits for business
Value added and turnover (EU actors)

Repair and refurbishment sector: Estimated increased turnover for the sector, including all actors offering repair services of EUR 2.3 billion = GVA increase of EUR 899 million. However, the positive impact on the repair and refurbishment sector depends on the amount of defective to-be-refurbished products that need repair/refurbishment, as well as on the traders' willingness to offer refurbished goods.
Costs for business
Losses (EU actors)
Producers: GVA losses to the amount of 102.5 million EUR and reduction of cost savings of EUR 776.5 million for financing additional repair. Producers' sales of repaired products would increase, therefore setting-off part of the negative effects. Traders: Decrease in turnover of EUR 741.4 million = EUR 200.2 million decrease in GVA, due to diminished sales of new products. However, traders can compensate this by an increased sales of refurbished goods. Also, traders' overall costs of performing remedies during the legal guarantee period would increase by the new product category falling under the regular guarantee period.
Administrative and adjustment costs (EU producers and traders)
Adjustment costs: One-off: EUR 91.3 million. For familiarisation with new rules, updating and aligning internal procedures and rules. Ongoing: EUR 137.2 million for checking whether products fit the definition of refurbished goods and ensuring storage capacity Administrative costs: None
Additional costs (third countries)
Third countries: Non-EU producers' losses in sales of new products/parts would be EUR 844.9 million, but the loss would be set-off by sales of returned products resulting in total profit of overall EUR 364.2. million. Third country traders would need to comply with the new rules and ensure that the refurbished products they commercialise within the internal market fit into the definition of refurbished goods.
Costs and benefits for consumers
Consumers would benefit from PO4 by having more fully functional products with extended liability period, but most likely with reduced prices, to choose from. This would result in consumer savings of EUR 1.5 billion.
SOCIAL IMPACTS: To-be-refurbished products usually need to undergo some quality checks and possible repairs, so PO4 would have a positive impact on the demand for repair and refurbishment services and therefore employment in this sector. On the other hand PO5 would lead to minor losses of jobs in production and sales due to avoided consumer purchases of new goods.
Employment in the EU (costs and benefits)
Net gains of jobs: 1.004 Jobs producers= -188 Jobs traders= -336 (this figure does not take into account the positive effect on employment caused by the extended work on executing the remedies) Jobs repairers= +1.528
IMPACTS ON PUBLIC ADMINISTRATION: PO4 is not expected to generate considerable enforcement costs as authorities are already familiar with the SGD. However, a minor increase of enforcement costs is assumed, because the enforcement authorities need to

familiarise themselves with the concept of refurbished goods. |
Enforcement and implementation costs: The estimated costs amount to EUR 0.8 million.

II. CLUSTER II: ENCOURAGING REPAIR AND REUSE OF GOODS BEYOND THE LEGAL GUARANTEE

5. Impacts of Option 5: Information on where to repair

<table>
<tr><th>PO5A: Obligation on producers to inform where to repair</th><th>PO5B: Match-making platform on repair at national level</th><th>PO5C: Matchmaking platform on repair at EU level</th></tr>
<tr><td colspan="3">ECONOMIC IMPACTS (EU economic operators)
All options will help to achieve considerable consumer savings as a result of prolonging the useful life of goods consumers purchased. The scale of consumer savings will depend on the take-up of POs by businesses and consumers. As a result of the prolonged life span of repaired products, less new replacement products will be bought and respectively sold and produced. This results in forgone sales of new products affecting EU producers and traders, translating into a decrease in annual turnover and GVA. The adjustment and administrative costs relating to the options will affect SMEs more relative to their turnover than large enterprises. The losses will not be evenly spread across all producers and traders, as those focusing on ecodesign products may gain a competitive advantage and bigger market share because consumers are increasingly likely to prefer sustainable products that can be repaired. EU traders will lose more than EU producers, as many of the goods they are selling are not produced in the EU, but by third country manufacturers. The EU repair sector, including independent repair services, will gain as a result of increased demand for repair services. This also includes producers and traders offering spare parts and repair services, who could gain additional income from this line of business and adapt their business models accordingly, giving more prominence to repair.</td></tr>
<tr><td colspan="3">Benefits for business</td></tr>
<tr><td colspan="3">Value added and turnover</td></tr>
<tr><td rowspan="2">EU repairers: increase in turnover of EUR 1.9 billion = EUR 722.6 million GVA increase. The gains are not evenly spread, as they benefit only those professional repairers (including independent repairers, producers and traders offering repair services) who are part of producers' repair networks.</td><td>EU repairers: increase in turnover of EUR 6.2 billion = EUR 2.4 billion GVA increase.
The gains are evenly spread for all repairers as the option applies to all sectors. Also non-professional repairers could benefit, if MS allow them to register.</td><td>EU repairers: increase in turnover EUR 3.8 billion = EUR 1.3 billion GVA increase.
The gains are not evenly spread and only repairers of energy labelled products/ eco-design goods benefit, because only repair services within the scope of the EPREL platform will be eligible to register on it. Also non-professional repairers could benefit.</td></tr>
<tr><td colspan="2">EU repairers who register on the platform will gain visibility and potentially new clients and increased revenue. Both platforms options would include a function filtering professional repairers, so that consumers can identify qualified repairers particularly for</td></tr>
</table>

	repair of products, where safety is a concern (e.g. electric and electronic appliances).	
Costs for business		
Losses (including annual turnover, negative change in GVA)		
EU producers: decrease of EUR 256.7 million in turnover (due to less sales of new products/parts) = EUR 62.2 million decrease in GVA. EU traders: lose EUR 1 billion in turnover (retail margin) = decrease of EUR 286.6 million in GVA. The losses are relevant for producers and traders in all sectors.	EU producers: decrease of EUR 860 million in turnover (due to less sales of new products/parts) = EUR 208.3 million in GVA. EU traders: lose EUR 3.6 billion in turnover (retail margin) = decrease of 960 million EUR in GVA. The losses are relevant for producers and traders in all sectors.	EU producers: decrease of EUR 548.4 million in turnover (due to less sales from new products/parts) = EUR 108.2 million decrease in GVAEU traders: lose EUR 2.8 billion in turnover (retail margin) = decrease of EUR 757.2 million in GVA The losses are relevant for energy labelled and ecodesigned goods (estimated for simplicity for eco-design goods)
Administrative and adjustment costs for business		
EU producers and traders will have one-off adjustment costs: EUR 106.6 million, for adjusting company documentation/web-site to provide information on professional repair networks. Ongoing adjustment/ administrative costs for EU producers and traders: EUR 159.9 million. They will relate to up-dating information on existing repair network annually. No administrative costs.	PO5B and PO5C create negligible business adjustment and administrative costs, as registration on the platform would be voluntary and would be covered by the current costs for running a business by interested companies. No administrative costs.	
Additional costs (third countries)		
Limited losses for third country producers due to a decrease in sales of new products which amount to EUR 592 million. Those who do not have repair networks in all MS would have difficulties to comply effectively.	Reduced volume of imported goods into the EU for some third-country producers; losses due to a decrease in sales of new products which amount to EUR ~2 billion under PO5B and EUR ~1.9 billion under PO5C.	
Benefits for consumers		

Consumer savings EUR 10.5 billion, relevant for all sectors of consumer goods.	Consumer savings: EUR 35.2 billion, relevant for all sectors of consumer goods	Consumer savings: EUR 21.7 billion, relevant for energy labelled and eco-design goods (for simplicity estimated for eco-design goods)
SOCIAL IMPACTS: All POs are likely to have an overall net limited positive impact on employment in the repair sector in the next 15 years. Minimal jobs would be lost in production in the EU due to a decrease in demand for new goods by consumers to replace defective goods that would be repaired. More jobs would be lost in trade, because EU traders would see a decrease in sales also of goods imported from third countries. Increased demand for repair would secure and create more jobs in repair. This will also benefit local communities, as many repairers are SMEs' operating their business locally. New local employment in the repair sector could benefit job seekers irrespective of age group or gender. Especially for repair activities that do not require long-term specialised training, short-term training courses could offer inclusive opportunities to job-seekers of various backgrounds. The increased economic activity will have indirect positive benefits on local communities.		
Employment in the EU (costs and benefits)		
Net gains of jobs= -631 Jobs producers= -114 Jobs traders= -481 Jobs repairers= +1,126	Net gains of jobs= 2,113 Jobs producers= -381 Jobs traders= -1,612 Jobs repairers= +4,106	Net gains of jobs: 1,067 Jobs producers= -190 Jobs traders= -1,271 Jobs repairers= +2,528
IMPACTS ON PUBLIC ADMINISTRATION: Public administration would incur moderate enforcement and implementation costs for monitoring compliance with PO5A, as the PO only concerns producers. Medium implementation costs for national competent authorities for IT development and ongoing costs for maintenance and updates and awareness raising would be necessary for PO5B. Similar costs are rather minimal for PO5C as it concerns only one platform at EU level.		
Enforcement and implementation costs:[229]		
	The PO entails one-off implementation costs of EUR 8.6 for all MS and EU to finance the IT development of the platform web-site and communication campaigns for awareness raising. Ongoing implementation will relate to maintenance, including back-office monitoring of the platform	The PO entails one-off implementation costs of EUR 0.5 million to add a search engine interface for repair providers to an existing EU web-site. Further one-off costs of EUR 1 million are estimated for communication campaigns for awareness raising. Ongoing implementation costs will be necessary for maintenance, including back-office monitoring of the platform up-dates, of EUR 3.0

[229] The fact that PO5B is a national measure and PO5C one at the European level was taken into account. They create costs both for MS and EU level except for ongoing enforcement costs which will be borne by the MS for PO5B and by the EU for PO5C.

	and up-dates of software and business processes of EUR 23.4 million. Limited enforcement costs will be linked to monitoring activities on the platform by competent authorities and reacting to consumer alerts. The total estimated implementation and enforcement costs amount to EUR 32 million.	million. Limited enforcement costs will be linked to monitoring activities on the platform by competent authorities and reacting to consumer alerts. The total estimated implementation and enforcement costs amount to EUR 4.5 million.

6. Impacts of Option 6: Enhance transparency/conditions for repair

PO6A: Voluntary commitments of business at EU-level	**PO6B: Obligation to issue a repair quote on price and conditions for repair in a standardised form**	**PO6C: Obligation to repair goods that are subject to reparability requirements under EU law (against a price)**	**PO6D: Obligation to repair all products (against a price)**
ECONOMIC IMPACTS: All sub-options will have similar economic impacts as under option 5, but their magnitude will be greater, depending on the take-up of each PO, increasing progressively from PO6A. This leads to significant losses for EU traders and producers under PO6D while repairers will have substantial gains. Especially PO6C and PO6D would lead to very large consumer savings			
Benefits for business			
Value added and turnover			
EU repairers: increase EUR 3.7 billion in turnover = EUR 1.4billion in GVA. The gains will not be evenly spread, benefitting only those repairers who subscribe to the voluntary commitments. Producers and traders providing spare parts and repair services may gain additional customers.	EU repairers: increase EUR 12.4 billion in turnover = EUR 4.8 billion in GVA. The gains will be evenly spread among all repair actors in all sectors, as the quote will be a mandatory requirement applicable to all repair actors.	EU repairers: increase EUR 6.9 billion in turnover = EUR 2.3 billion in GVA. The gains will not be evenly spread: they will benefit only repairers of goods subject to reparability requirements under EU law. Producers will need to invest in repair services or subcontract. Producers are likely to benefit from additional repair revenues and gain a competitive advantage compared to independent repairers.	EU repairers: increase EUR 14.1 billion in turnover = EUR 5.5 billion in GVA The gains will not be evenly spread. Similarly to option 6C, producers are likely to benefit from additional repair revenues and gain a competitive advantage compared to independent repairers in all sectors.
Costs for business			

Losses			
EU producers: decrease of EUR 513.4 million in turnover (due to less sales from new products/parts) = decrease of EUR 124.3 million in GVA EU traders: decrease of EUR 2.1 billion in turnover = decrease of EUR 573.1 million in GVA	EU producers: decrease of EUR 1.7 billion in turnover (due to less sales from new products/parts) = decrease of EUR 416.6 million in GVA EU traders: decrease of EUR 7.1 billion in turnover = decrease of 1.9 billion in GVA	EU producers: decrease of EUR 990.3 million in turnover (due to less sales from new products/parts) = decrease of EUR 195.3 million in GVA EU traders: decrease of EUR 5 billion in turnover = 1.4 billion EUR in GVA	EU producers: decrease of EUR 1.9 billion in turnover (due to less sales from new products/parts) = EUR 472.6 million in GVA EU traders: decrease of EUR 8 billion in turnover= EUR 2.1 billion GVA
Adjustment and administrative costs			
The repairers that subscribe to the voluntary commitments quality standard will incur one-off adjustment costs for negotiations on the content of the code. Adjustments will concern internal company procedures, adaptations to the minimum standard of the label, possibly increasing quality of services and adapting company information to indicate that the repairer adheres to the standard and what this means. The costs cannot be estimated as they will depend on the content of the voluntary commitments negotiated by industry. In any case, the costs will be acceptable, as only then repairers will subscribe to the standard. Small ongoing adjustment costs will relate to the periodic review of the code based	EU repairers will incur costs (including producers and traders who offer repair services). One-off adjustment costs: to adapt (e.g. website) to present information in the format of the quote = EUR 475.4 million Ongoing adjustment costs for implementing the option: EUR 5.9 billion. These costs reflect the overall costs for providing information on all quotes that may be requested. The cost relates to up-dating information as regards evolving prices and conditions for repair services. The above costs however do not take into account the reduction in form of the price for the quote: i.e. that	One-off adjustment costs for EU producers of goods subject to reparability requirements under EU law and traders of these products will incur one off adjustment costs: EUR 45 million. Adjustments will be necessary to adapt to the requirement to offer repair services beyond the legal guarantee. This includes introducing internal repair services infrastructure at producers where not available, alternatively sub-contracting independent repairers. The costs would be smaller in scale for producers who already provide repair services (e.g. under the legal guarantee based on B2B agreements with sellers) and have the equipment. Ongoing annual adjustment costs for implementing the measure will relate to storage of spare parts, equipment, software to service products over a	The one-off adjustment costs for EU producers and traders are estimated at EUR 674.4 million. They will impact particularly those producers who do not have repair infrastructure in place, as they will have to make significant investments to comply with this requirement. If an exception is introduced for producers which do not have repair facilities, the option will be substantially weakened. There will also be a distortion of competition among producers as those with repair facilities would need to comply with the obligation to repair, while others would be exempt. The one-off costs can therefore not be avoided. Ongoing adjustment and compliance costs for implementing the option will be 3.3 billion. The

on the commitments on the standard of the repair service (e.g. quality guarantee) and to answering consumer queries about the meaning of the quality label. Administrative costs: none. .	businesses may provide the quote against a price and ongoing costs in particular would thus be covered by the overall price paid for the repair transaction. Businesses could also decide to offer the quote for free as a way to attract more customers. Administrative costs: none	predefined period of time; ensuring available spare parts exist for different models placed at the market. The costs will affect EU producers: 582.1 million. The costs do not take into account that the repair services will be provided for a price, which will cover the ongoing costs for providing the service for ensuring availability of spare parts and technical expertise to repair models placed on the market over a specific period, handling repair requests from consumers. Administrative costs: One-off costs for EU producers and traders of EUR 69.8 million will relate to updates of the web-site.	costs will relate to ensuring availability of spare parts and technical expertise to repair models placed on the market over a specific period and handling repair requests from consumers. Administrative costs: One-off costs for EU producers and traders of EUR 161.8 million. Thecosts will relate to updates of the web-site.
Additional costs (for producers in third countries)			
A decrease in sales of new goods in the EU will affect producers in third countries. The losses for third country producers will be limited for PO6A (EUR 1.6 billion), medium for PO6B (EUR 5.6 billion), significant for PO6C (EUR 4.4 billion) and most significant for PO6D (EUR 6.4 billion).			
No direct obligations on third country manufacturers, as options only concern EU repairers. Additional costs will therefore not apply to third country manufacturers if they do not offer repair services in the EU.		The legal obligation to repair applies to producers of goods subject to reparability requirements under EU law, including third country producers placing those goods on the EU market. This obligation entails at least the same adjustment costs for repair arrangements (via importers or by sub-contracting independent repairers in the EU).	The legal obligation to repair applies to all producers, including third country producers placing goods on the EU market. This obligation entails at least the same adjustment costs for repair arrangements (via importers or by sub-contracting independent repairers in the EU).
Benefits for consumers: As more consumers will repair their products, they will make savings due to avoided purchases of new goods that would have replaced the repaired ones.			

Consumer savings: EUR 21billion Consumer trust in repairers with the quality label will increase, as it will reassure them about the ease of repair and quality of the service.	Consumer savings: EUR 70.5 billion Consumer trust in repair services will increase, as they would be better informed in advance of the price and key conditions for repair before concluding a repair contract. Thus, consumers could choose the most suitable conditions of repair. The PO is relevant for all sectors of consumer goods.	Consumer savings: EUR 39.2 billion Consumer confidence will increase as a result of a new legally enforceable consumer right as regards goods subject to reparability requirements. The new consumer right will make repair more attractive and more accessible for consumers, as it will also ensure reasonable prices through increased transparency on repair price.	Consumer savings: EUR 79.9 billion Consumers will benefit from the obligation to repair in more cases and will make more savings from avoided purchases as they would use their repaired products longer. However, some producers will not be able to respect the obligation to repair for technical reasons (e.g. not all products are reparable and spare parts may not be available for all products). Therefore, flexible exceptions to the obligation under this sub-option will be necessary. As producers will have to invoke them in more cases (compared to PO6C), this may undermine consumers overall trust in the "right to repair", that they cannot always rely on.
SOCIAL IMPACTS (costs and benefits) All POs lead to loss of jobs in EU trade and production, but bigger employment gains in the repair sector, which result in a net benefit for employment in the next 15 years. The negative impact is higher in trade due to a larger decrease in sales of new products by EU traders, who largely sell goods from third countries. Jobs in EU production would also decrease, but on a much smaller scale. All POs would create more new jobs in the EU repair sector. Some of the repair jobs created under PO6C and PO6D may be in-house repair jobs at producers or at sub-contracted independent repairers. This would depend on producers' approaches to developing repair services for their brand, which may vary. The employment figures do not reflect potential indirect positive impacts on job creation as a result of consumer savings being spent elsewhere.			
Employment (costs and benefits*)*			
Net gains of jobs= 1,261 Jobs producers= -228 Jobs traders= -962 Jobs repairers= +2,451 The new jobs in repair	Net gains of jobs= 4,227 Jobs producers= -763 Jobs traders= -3.224 Jobs repairers=	Net gains of jobs= 1,928 Jobs producers= -342 Jobs traders= - 2,296 Jobs repairers = +4,566 Job losses would be limited	Net gains of jobs= 4,795 Jobs producers= -865 Jobs traders= -3,657 Jobs repairers = +9,317 As in PO6C, job losses

will be concentrated in repair companies that subscribe to the voluntary commitments standard and thus attract more customers interested in quality assurances for repair services. This increase in jobs will not be evenly spread among repair actors.	+8,213 New jobs in repair are likely to span evenly across EU regions, as consumers are likely to look for repair services in their proximity. Losses of jobs will be evenly spread among EU producers and traders and will concern all types of goods.	to businesses dealing with goods with reparability requirements and will particularly affect traders. The negative effects on employment on EU producers would to some extent be counterbalanced by new repair jobs they would need to create to ensure compliance with the right to repair. Where producers decide to sub-contract, new jobs could also be created in independent repairers.	will affect producers of all goods, but in particular traders. The job losses for producers will at least partially be compensated by new in-house repair jobs. Some repair jobs may be created at independent repairers where they are sub-contracted by producers to provide repair.
IMPACTS ON PUBLIC ADMINISTRATION: The national competent authorities will have to ensure effective application of the options in practice. This entails both one-off and ongoing enforcement and implementation costs. The enforcement costs in this cluster include familiarization with the new rules of competent authorities and inspections. Implementation costs include awareness raising campaigns to inform consumers of the new rights.			
Enforcement and implementation costs:			
Enforcement costs for public administration are negligible. Enforcement authorities are not required to enforce voluntary commitments. However, consumers may occasionally alert them to possible cases of non-compliance via consumer complaints. Furthermore, implementation costs on awareness raising campaigns will be necessary to ensure consumers are aware of the label. The estimated costs amount to EUR 2.5 million	Enforcement costs will be relevant to verify compliance of repairers with the quote. The target group includes repairers in all sectors. The estimate does not take into account a potential price threshold for the obligation to provide a quote. The estimated costs amount to EUR 26.4 million	Enforcement costs will be relevant for enforcement authorities to verify compliance with the obligation to repair. The target group for monitoring and enforcement actions is limited to producers manufacturing goods subject to reparability requirements. The estimated costs amount to EUR 4.5 million.	Enforcement costs will be relevant to verify compliance with the obligation by all producers. They will be higher compared to option 6C as enforcement actions will have to cover a larger number of economic operators. The estimated costs amount to EUR 12.3 million While the type of monitoring and inspections is the same as under PO 6C, the number of economic operators is higher, as this PO applies to all products.

Impacts of Option 7: Adding a functionality on refurbished goods in the match-making platform for repair (PO5B)

PO7 Match-making platform promoting refurbished goods
ECONOMIC IMPACTS: PO7 will help to achieve some consumer savings as a result of consumers purchasing refurbished goods cheaper than new goods (especially where consumers' own goods cannot be effectively repaired). EU producers and traders of new goods would have losses from forgone sales of new goods, translating into a decrease in annual turnover and a decrease in GVA. The sellers of refurbished goods gain benefits as a result of increased sales. The repair/refurbishment sector will gain as a result of increased demand for repair services.
Benefits for business
Value added and turnover
EU repair/refurbishment sector will gain EUR 584.6 million in turnover = EUR 227.6 million increase in GVA, as more refurbished products will be purchased. EU sellers of refurbished goods who register on the platform will gain visibility and potentially new clients and increased revenue.
Costs for business
Losses (including turnover, negative change in GVA)
EU producers will lose EUR 80.9 million in turnover from sales of new products where refurbished goods are bought instead. They will face a decrease in GVA of EUR 19.6 million. EU traders will lose EUR 334.4 million in turnover of sales of new products where refurbished goods are sold instead = decrease of EUR 90.3 million in GVA
Administrative and compliance costs for business
There are no estimated adjustment and administrative costs for businesses, as any costs are likely to be limited to self-registration and up-dates for refurbishment businesses participating in the platform. Any costs will depend on the take-up of the platform but these costs should be offset by the inflow of new customers.
Additional costs (for third countries)
Reduced volume of new imported goods into the EU for some third-country producers, as far as such goods are replaced by purchases of refurbished products; losses amount to EUR 186.5 million due to a decrease in sales of new products.
Benefits for consumers
Consumer savings: EUR 1.9 billion PO7 encourages consumers to purchase a refurbished product as a sustainable consumption choice. It guides consumers towards relevant sellers of refurbished products by identifying offers with suitable conditions, notably quality assurance by a longer guarantee on refurbished goods. In combination with the match-making platform for repair under option PO5B, synergies would be achieved by addressing a target group with high potential to contribute to sustainable consumption - consumers who have a defective product and are not immediately purchasing a new one. If they do not find a suitable repair offer under PO3B, PO7 would encourage them to consider a refurbished product instead as a sustainable consumption choice

for a lower price. There are indications that a significant minority of consumers who purchased used goods did so for environmental considerations.[230] As the platform would guide consumers towards more refurbished product providers, consumers would be more likely to identify suitable offers for refurbished products they may not have considered. The scale of consumer savings will depend on the take-up of the PO by businesses and consumers.
Costs for consumers
PO7 is limited to an online environment and therefore consumers who are not willing or able to search for sellers online would have less choice compared to others.
SOCIAL IMPACTS: PO7 is likely to have a limited positive impact on employment in the EU. Some jobs will be lost in production due to a decrease in demand for new goods by EU consumers. Jobs will be lost also in trade, due to decreased sales of new products. Increased demand of repair/refurbishment services will secure more jobs in the sector and create new jobs.
Total job gains: 199 EU producers: -36 EU traders: -152 EU repairers: +386
IMPACTS ON PUBLIC ADMINISTRATION: The public administration in MS will have to ensure effective implementation and application of this option. Implementation costs include costs for IT development and the ongoing maintenance of the refurbishment platform, as well as awareness raising campaigns. Limited enforcement costs will relate to monitoring potential irregularities on the platform.
Enforcement and implementation costs
The PO entails one-off implementation and enforcement costs of EUR 0.7 million for all MS to finance the IT development of the platform web-site and for communication campaigns for awareness raising. Ongoing implementation will relate to maintenance, including back-office monitoring of the platform and up-dates of software and business processes of EUR 3.2 million. The total estimated implementation and enforcement costs amount to EUR 3.8 million.

[230] IA Study, Annex 1.4, Consumer Survey, Section 5, QE2; reasons for buying a used product: between 2 and 3 out of 10 respondents said that they bought used goods (from a sample of popular consumer goods) due to the carbon footprint of the product and concerns about waste.

Annex 7: Glossary

Term or acronym	Meaning or definition
B2B	Business-to-business
B2C	Business-to-consumer
CEAP	"A New Circular Economy Action Plan for a cleaner and more competitive Europe", Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Brussels, 11.3.2020 COM(2020) 98 final
CO2-eq	Carbon dioxide equivalent
CRD	Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council
CSD	Directive 1999/44/EC of the European Parliament and of the Council of 25 May 1999 on certain aspects of the sale of consumer goods and associated guarantees
CWP	Commission Work Programme
Data Act	Proposal for a Regulation of the European Parliament and of the Council on harmonised rules on fair access to and use of data (Data Act), 23.2.2022, COM(2022)68 final.
Directive on the Common System of Value Added Tax	Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax, OJ L 347, 11.12.2006, pp. 1–118.
Ecodesign Directive	Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a

	framework for the setting of ecodesign requirements for energy-related products (recast)
Ecodesign Regulation for household dishwashers	Commission Regulation (EU) 2019/2022 of 1 October 2019 laying down ecodesign requirements for household dishwashers pursuant to Directive 2009/125/EC of the EP and of the Council amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EU) No 1016/2010
ECGT	Proposal for Proposal for a Directive of the EP and of the Council amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information, Brussels, 30.3.2022 COM(2022) 143 final 2022/0092 (COD).
EP	European Parliament
EPREL	European Product Registry for Energy Labelling
ESPR	Ecodesign for Sustainable Products Regulation: Proposal for a Regulation of the EP and of the Council establishing a framework for setting ecodesign requirements for sustainable products and repealing Directive 2009/125/EC, Brussels, 30.3.2022 COM(2022) 142 final, 2022/0095 (COD).
GHG	Greenhouse gas
GVA	Gross Value Added
IA	Impact Assessment
ICT	Information and communication technologies
MCA	Multi-criteria analysis
MS	Member State(s) of the European Union

OIOO	One in, one out approach
OPC	Open public consultation
p.a.	Per year
PO	Policy option(s)
Refurbished goods	Specific category of second-hand goods that have been tested for their functionality and defects, so that they are proved to be fully functional.
SGD	Directive (EU) 2019/771 of the EP and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC
SO	Specific objective
TFEU	Treaty on the Functioning of the European Union
UN	United Nations
VAT	Value-added tax

ANNEX 8: SME TEST

Step 1/4: Identification of affected businesses

SMEs are included in the scope of the initiative, as they account for the vast majority of businesses in the EU, especially in the repair sector. According to Eurostat data, in 2019 businesses with less than 250 employees accounted for 99.7% of all enterprises, 77% of aggregate turnover, 80% of value added and 89% of employment in the repair sector.

Overall, the preferred PO package affects SMEs in a positive way. It generates new business in the repair sector. Increasing revenues for repair service providers will benefit SMEs disproportionately, as they have such a large share of the repair sector. In particular, PO1A (prioritising repair whenever it is cheaper than replacement) increases the amounts of repair in the context of the legal guarantee, therefore benefitting the repair sector. Cost savings gained by shifting remedies from replacement to less costly repair in the context of the legal guarantee will also benefit SMEs to a significant extent, as they account for over 60% of the total turnover in the manufacturing sectors of for instance footwear, clothing and furniture. In retail trade, which is also affected by the preferred PO package, the share of SMEs in aggregate turnover and GVA alike is 51% (excluding the sale of motor vehicles). This ratio is slightly higher for the sale of relevant consumer durables in specialised stores, for instance 53% in the case of ICT equipment.

PO5B (the matchmaking platform on repair at national level) will give more visibility to SME repairers (once registered to the national platform). As SMEs would have more limited resources to advertise their services compared to bigger repair service providers, they would benefit comparably more from such advertising effect. The national platform also benefits SMEs, as they can only spend comparably less resources on search engine optimisation or on sponsored web search results. Likewise, POs 6A (voluntary commitments) and 6B (obligation to provide a repair quote) will also positively affect SME turnover by enhancing the growth of the repair sector. Finally, PO7 (platform on refurbished products) will benefit the repair/refurbishment sector as a result of increased demand of refurbished goods, which in turn will help comparably more SMEs refurbishing products/selling refurbished products.

SMEs in the manufacturing and retail of consumer durables will face some costs. The introduction of PO1A will cause adjustment costs that, relative to business revenues, are disproportionately higher for SME traders/producers. However, overall the benefits from the cost savings for SME traders/producers and the increased business for SME repairers outweigh the costs of implementing PO1A. Adjustment and administrative costs relating to PO5A (obligation to inform where to repair) and PO5B (a matchmaking platform on repair at national level) will affect SMEs more than large enterprises, relative to their turnover. PO6C (obligation to repair goods subject to reparability requirements under EU law) is likely to disadvantage a large number of SMEs in the repair sector, namely independent repairers, as the producers will conduct the repair work under this measure. However, as the producers will need to provide the repair work against a price, in reality also market actors other than the producers will have a possibility to compete for repair opportunities.

Key question: **To what extent is the initiative relevant for SMEs?** (not relevant, relevant, highly relevant)

This initiative is relevant for SMEs, as many SMEs operate in the sectors affected by the preferred PO package, namely the repair sector and the manufacturing sector for certain products. However, in the manufacturing sector of other products, for example mobile phones, laptops and TVs, which are very relevant for achieving more sustainable consumption, SMEs only make up for less than 20% of the total turnover, which reduces the impact of this initiative on them. In the retail sector, SMEs account for 51% of sales according to available Eurostat data (their share is slightly above this value if only looking at the consumer durables concerned).

Step 2/4: Consultation of SME Stakeholders

The OPC captured input from SMEs and their representative organisations. SMEs that responded to the OPC were relatively supportive to PO1A, with 48% of responding SMEs considering it effective (in comparison, 50.4% of all responding business stakeholders considered the measure effective). The views of responding SMEs on PO6A

varied, as 41% of SMEs considered the measure effective, 32% considered it ineffective and 26% were neutral (in comparison, 52.5% of all responding business stakeholders considered the measure effective). In some position papers, SMEs expressed that providing incentives for consumers to repair products or making repair services cheaper could extend the lifespan of consumer goods. SMEs further emphasised that repairers should receive from the manufacturers spare parts at fair price and a free access to technical documentation.

The business survey carried out in the context of the IA Study gathered responses mainly from SMEs (83% - 195 out of 235 respondents). SMEs were positive about PO1A and PO6C. As regards PO1A, 62% of micro-sized companies, 40% of medium-sized and 48% of small-sized companies surveyed considered the measure having high potential. As regards PO6C, 66% of small-sized companies, 57% of micro-sized companies and 50% of medium-sized companies considered the measure having high potential. SMEs' interests were represented also by the business associations interviewed in the IA Study.

Step 3/4: Assessment of the impact on SMEs

The IA study provided data on the role of SMEs in the sectors affected by the initiative and on the impacts that the initiative would have on them. The business input in the IA study was to a large extent shaped by SMEs, as they represented the clear majority of the respondents. The significance of SMEs in terms of number of enterprises, aggregate turnover, value added and employment was calculated based on the Eurostat data (Structural Business Statistics) for the relevant manufacturing sub-sectors, for repair and for retail trade. The IA study collected, via an online business survey, information from affected businesses on market practices regarding repair and replacement of defective goods, insights on the repair market as well as their views and observations on the proposed measures. The business survey was conducted in 12 Member States and gathered 235 valid responses, of which 83% (195 out of 235 respondents) were from SMEs. The modelling of costs and benefits in the IA study was not undertaken separately by business size, because of the relatively moderate overall costs and impacts expected and a disproportionate need for company information (or detailed assumptions) if the modelling had to be conducted not only for individual product groups but also for different company size classes thereunder. The study therefore made qualitative assessments in this regard.

Step 4/4: Minimising negative impacts on SMEs

Since SMEs have a large share of the repair sector, all POs promoting repair among all repair providers (POs 1A, 5B, 6A, 6B and 7) have a positive impact on them, whereas PO5A and PO6C affect SMEs only if they are producers or independent repairers who are sub-contracted by producers. POs promoting a shift of remedies from replacement to less costly repair will also benefit stakeholders in the manufacturing sector in terms of cost savings. This will have a positive effect on SMEs in the manufacturing sector of certain products, which are relevant for more sustainable consumption like footwear, clothing and furniture, of which SMEs account for over 60% of the total turnover. However, it will have a more limited impact on SMEs in the manufacturing sector of other products which are relevant for more sustainable consumption like smart phones, laptops and TVs, where SMEs are much less represented. PO7 will furthermore benefit SMEs refurbishing products and selling refurbished products. On the other hand, the introduction of POs 1A, 5A and 5B will make SMEs face adjustment and administrative costs relative to business revenues that are disproportionately higher than for other enterprises. SMEs in retail sector (SMEs account for 51% of the sector) will lose in sales of new goods similarly as other businesses in the retail sector.

The option on the obligation to repair (PO6C) and information obligations (PO5A) are targeted namely to the producers, so the increased demand of repair through these measures benefits namely the producers. This negative impact on other repairers, namely independent SME repairers, is mitigated via the measures promoting equal opportunities to repair among all repair service providers, such as the repair platform (PO5B) and the repair quote (PO6B).