

**A Scoring System on Reparability  
to support Ecodesign  
in a Circular Economy**

**Seville 26/06/2018**

**Draft Meeting Minutes – 1.0**

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## Agenda

Schedule	Topic
09:00 – 09:15	Registration and welcome Round table and objectives of the meeting (JRC)
09:15 – 10:15	<u>Part I: Policy context</u> Repair and Ecodesign for a Circular Economy (ENV) Presentation of preliminary results of EU behavioural study 'Consumers' engagement in the Circular Economy' (JUST)
10:15 - 11:15	<u>Part II: Towards a Scoring System on Reparability: Key aspects for a generic scoring system</u> (JRC) Overview of the technical approach, state-of-the-art tools & studies, key parameters
11:15 - 11:30	Coffee break
11:30 - 12:00	Identification of priority parts of products
12:00 - 13:15	Key elements of the scoring framework: classification, rating, assessment and verification of parameters
13:15 – 14:00	Lunch break
14:00 – 15:00	Key elements of the scoring framework: classification, rating, assessment and verification of parameters – cont.
15:00 – 15:45	Key elements of the scoring framework – aggregation and reporting options
15:45 – 16:00	Coffee break
16:00 – 16:45	<u>Part III: Towards a Scoring System on Reparability: Product-specific aspects</u> (JRC) Overview on product-specific issues for laptops, vacuum cleaners, washing machines
16:45 – 17:30	AOB, wrap-up, next steps and conclusion (JRC)

## Participants

The meeting was chaired by Michael Bennett (MB), JRC. The JRC project team comprised Mauro Cordella (MC), Javier Sanfelix (JS) and Felice Alfieri (FA). Other European Commission representatives included: Jiannis Kougoulis (JK) and Ruben Dekker (RD) from DG ENV, and Jeroen Van Laer (JVL) from DG JUST.

<b>LIST OF THE ORGANISATIONS ATTENDING THE MEETING</b>
Apple
APPLiA
Association Halte à l'Obsolescence Programmée (HOP)
Bundesanstalt für Materialforschung und -prüfung [BAM] – Ministry for Material Research & Development, & Testing (DE)
BSH Home Appliances Group
Department for Environment Food and Rural Affairs [DEFRA] (UK)
ECOS
Electronic Reuse (eReuse.org)
Energy Authority (FI)
EPEE – European Partnership for Energy and the Environment
FEICA - The association of the European adhesive and sealant industry
FNAC DARTY Group
Friends of the Earth
Groupe SEB
ICF
LightingEurope AISBL
KU Leuven - University of Leuven
Miele & CIE
OCU [Organización de Consumidores y Usuarios] – Organisation for Consumers & Users - ES
Repairably
RREUSE
SERI - Sustainable Europe Research Institute
Solidanca - AERESS
Vorwerk
Whirlpool Corporation
Whirlpool UK Appliances Ltd

## Welcome and introduction

The Chair welcomed the participants and presented the agenda of the day, which was accepted by all present without comment. The Chair also explained the role of the Product Bureau in the European Commission's JRC in its supporting role to the implementation of product policies.

This was followed by a "tour de table" presentation by participants, who consisted of a balanced representation of experts from the repair sector, business (industry, retailers and trade associations), academia and research institutes, government representatives, consumer and testing organisations, and environmental NGOs.

## Part I: Policy context

### - Repair and Ecodesign for a Circular Economy (DG ENV)

The policy framework was described by DG ENV. Requirements on material efficiency aspects such as repairability, reusability and upgradability are being implemented in product policy tools such as Ecodesign and Energy Labelling regulations to contribute to the objectives of the Circular Economy Action Plan and related policy initiatives. A series of supporting activities was presented, including the JRC study regarding a possible scoring system on reparability, on which we will concentrate today.

### - Presentation of preliminary results of EU behavioural study 'Consumers' engagement in the Circular Economy' (DG JUST)

Preliminary results of the EU Behavioural study on 'Consumers' engagement in the Circular Economy' were presented by DG JUST.

According to the study, consumers pay considerable attention to both durability and reparability information at the point of purchase. When this information was provided in the experiment, respondents were more likely to choose highest durability products than reparability products (results influenced by the configuration of the test). The lowest durability/reparability products became, respectively, widely unpopular. Data collected regarding willingness-to-pay shows some variation between the different products studied. Concerning the concept of durability and reparability, no technical definition was used in the experiment; rather, it was elicited from the consumers taking part in the survey and the experiment. The common understanding of consumers is that durability is related to the expected lifetime of a product, and that it represents a proxy for the quality and durability of the product. Repair was handled in general, with no differentiation between authorised and non-authorised repairers: it was found that consumers wish to have a product repaired, and that who actually conducts the repair is a secondary consideration. Consumers are not generally so keen to repair products themselves (possibly with the exception of clothing, which has less complexity and risks associated with it, compared to, e.g., electronic products). Several questions were raised by participants with respect to: methodological clarifications, such as how information on durability and reparability was presented to participants in the study, whether self-repair and the time dimension of repair were included in the study, whether quantitative information about the willingness-to-pay of consumers was obtained, and which definition was used in the study for "durability". Clarifications were provided by JVL, who also referred to the final study, expected to be published in September or October 2018, for further details on the methodology used.

## Part II: Towards a Scoring System on Reparability: Key aspects for a generic scoring system

### - Overview of technical approach, state-of-the-art tools & studies, key parameters

The technical approach followed by JRC was presented, as well as an overview of tools & studies considered relevant for drafting a scoring system. A preliminary list of key parameters and indications gathered from stakeholders were also provided to feed into the discussion.

Alignment with the standards developed by CEN-CENELEC JTC10 (including prEN 45554) was welcomed by participants.

Cost was considered by many participants to be one of the main barriers for consumers to repairing products. Repair costs can be roughly split between spare parts (1/4) and labour costs (3/4). Also an industry member remarked that it does not make sense to have technically repairable products (from a feasibility point of view) but very high costs for repair. Some manufacturers are engaged in limiting the repair costs to a certain percentage of the product purchase price.

When asking how this aspect will be addressed in the framework of this Scoring System for assessing reparability and upgradability, the European Commission replied that evaluation of costs at EU level is difficult, owing to the variation in inputs to overall costs at Member State (MS) level, and also owing to the lack of legal competence that the European Commission has to act in this area, in general. Other policy instruments and platforms could possibly better handle this issue (e.g. possibly VAT reductions).

The European Commission suggested instead placing an emphasis on actions regarding the parameters which may have an influence on repair costs, such as: availability of diagnostics tools and interpretation information, availability and quality of detailed product information, and availability, time of shipment and cost of spare parts. The importance of such parameters was backed by many participants. The quality of information concerning reparability and upgradability operations per se was considered more important than the availability of information itself. Availability of standardised parts was also mentioned as a factor which could possibly contribute to improving the reparability of products. An industry member alerted that focusing on the cost of spare parts could be misleading, since this is related to the manufacturing process and quality issues. Moreover, the availability of spare parts for a long time could have impacts on the cost of the product.

Split views were instead collected with respect to design parameters such as: ease of access of parts in the product, time for disassembly (e.g. based on the MOST technique and calculated through the eDiM method), and modularity of products.

"Working environment" was also considered an important parameter, although clearer definitions are needed. The availability of qualified engineer repair services and networks offered by manufacturers, which was remarked by some industry members as of high relevance, could be integrated into such a parameter, as well as consideration of the necessary/ minimum types of tools. Alternatively, it was suggested that the "working environment" could be regulated also via other frameworks.

Moreover, also the following parameters were preliminarily pointed out as important:

- Return of products, i.e. take-back (producer responsibility) systems, to ensure the commitment of manufacturers to repair their products.
- Safety issues, which could be merged with the "level of skills" considerations.
- Availability of software, especially in a standard format.

Several participants suggested also integrating durability issues into the system. For instance, glues could be allowed for durable products.

An industry member asked how this scoring system could fit in the existing Ecodesign directive. The European Commission responded that at this moment it is too early to define the potential use of the scoring system within the overall policy framework. After this technical study by JRC, DG ENV will commence a consumer study to understand if and how such information could/ should be communicated. The European Commission will ensure that no inconsistencies occur if the scoring system were to be incorporated in policy instruments.

### - Identification of priority parts of products

The European Commission introduced to participants the ideas regarding aspects to consider when identifying priority parts of products.

The majority of participants agreed that listing priority parts is of high relevance, mainly to reduce complexity of the assessment.

Several participants also commented that specific characteristics and technologies of products need to be taken into consideration for the definition of such lists, as described in the draft CEN-CENELEC standard on reparability.

Another point raised by participants concerned the difficulty of identifying failures in advance, and that linking priority parts to such a parameter might provide misleading/ incorrect information. Some participants pointed out the need to have good quality data and statistics when defining a list of priority parts; it was also emphasised that it is necessary to involve product experts (e.g. manufacturers and repairers) in such a process.

A participant, taking the example of a washing machine, mentioned that priority parts should include the electronic control of the motor (in the sense of it being a "key component" for the product to function at all), but also the legs used to support the product (in the sense of being a more "trivial" component, but one which is absolutely necessary to ensure proper functioning and even safety via balancing the spinning, etc.). It was suggested to focus on costs, although perhaps it would be more appropriate to rather refer to the functionality and failure/replacement rate of parts.

In any case, it was concluded that methodological guidance and cut-off rules are needed to define what a priority part is. This must also be compatible with market surveillance authorities' practices.

A possible solution would be to define priority parts using the current market situation. The list would be then revised periodically to reflect technological progress, both in terms of the products per se, and evaluation methods.

A participant recommended to await the availability of European standards on material efficiency, since they are being developed by experts in the field. However, it was explained that there is no need to wait such standards. The work done in the context of this scoring system builds on the state-of-play draft EN standards and integrates additional input from repairers and NGOs, who do not necessarily follow the standardisation work. Moreover, the European Commission remarked that more speedy input is needed that will be attempted to be iteratively refined for the next phase of the work examining possibilities for use with three test product groups, and that standards will allow harmonisation of methods in the future.

## - Key elements of the scoring framework: classification, rating, assessment and verification of parameters

The proposed classification, rating, assessment and verification of parameters were presented and discussed. The JRC clarified that the plan is to apply the assessment and verification methods to the entire product or to the priority parts identified earlier (where relevant), and to aggregate results into a final score. Some participants requested that information about the methods used must be transparently provided, as well as the need to cross-check the obtained results with different stakeholders for consistency.

### Block 1) Disassembly steps / fasteners and connectors / tools needed / ease of access

Many participants highlighted the importance of clearly defining what a disassembly step/sequence is in order to avoid alternative interpretations in the assessment. If used, it was recommended to refer to the concept of "disassembly depth"<sup>1</sup>. Moreover, the maximum and the minimum number of disassembly steps have to take into account the current state of products on the market.

"Fasteners" (fastening methods) were pointed out by some participants as a minimum requirement to consider. For instance, the application of glues can make repair operations very difficult or impossible. However, it was remarked that a protocol to identify fasteners should be also provided.

Regarding the type of tools needed, some participants said that it is necessary to define for whom tools are "common". The list of tools can be in fact different between consumers and repairers. It was mentioned that no consensus on this topic has been so far achieved in the discussions for the prEN 45554 standard. A participant said that the list of common tools should be limited, and should not cover all existing tools. The list has to allow a fair comparison amongst products of the same group.

Some stakeholders also remarked that ease of access to parts is a very relevant parameter. As explained by the JRC, this is already covered, at least partially, via the other parameters. The JRC explicitly asked about the feasibility of using time for disassembly as an overall summary parameter. Stakeholders present considered this to be either subjective or too complex to use in the short term; hence, it was concluded that no satisfactory method of assessment seems to be practically available at the time being. Nevertheless, given its importance, this could be considered for integration in the future.

Some participants considered that the key parameter to start with is the availability of information of satisfactory quality with regard to disassembly sequences, fasteners and tools. However, an industry member considered that it was more relevant to focus on the availability of an authorised service network rather than these types of parameters. It was suggested to consider this as an equivalent option to the possibility to facilitate the repair of a product at home.

As concluded by the European Commission, an equilibrated and progressive approach will be applied.

### Block 2) Guarantee issues / return models / data transfer and deletion

For some participants, the commercial guarantees would be an effective method to have products repaired and could be part among the parameters to be included in the repair scoring. However, stakeholders also commented that this has to be handled with care, as it could potentially lead to more replacements instead of additional repairs, depending on the products or manufacturer. Other stakeholders were of the opinion that a transparent commitment to repair instead of replacement

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<sup>1</sup> The disassembly depth is the number of steps required to remove a part from a product



would be an important aspect. In any case, commercial guarantees could be a potential mean to reduce the production of waste and good handling of defective products via repair or – in the case of replacements - appropriate recycling/reuse of components.

Some industry members commented that commercial guarantees may not be a good proxy for reparability. The main argument provided is that manufacturers have to find a balance between the quality of products, manufacturing costs and the risk of facing additional costs during the commercial guarantee period. Longer guarantees may imply higher prices for consumers. Moreover, there is a need to understand if failures are due to product misuse by consumers/ end-users, products' imperfections at the production stage or during the use phase, and a commercial guarantee itself does not indicate if a product is repairable or not.

An industry member remarked that the key parameter is the cost of repair, and that extended guarantees can incentivise the repair of products, if offered subsequent to the repair operation taking place (i.e., a post-repair guarantee that covers a certain period, as from "day 1", again).

One participant undertook to provide information to the European Commission regarding the cost of repairing a product, or the repair service cost, as a percentage of the cost of the product.

Another participant suggested focusing also on the provision of information concerning the legal guarantee, as many consumers are not fully aware of their consumer rights.

If included in the repair scoring, it could be further examined to what extent commercial guarantees should focus on repair. Moreover, this could be integrated with other design and service parameters.

Regarding the return of product models, some stakeholders expressed that this was not a good parameter to contemplate. Lease contracts alone do not ensure any concrete environmental benefits, since this depends on how the contracts are managed (e.g. from where to where and how products are taken back, and what happens subsequently). Moreover, this could also have the effect of increasing the cost of products and could actually hinder the second hand market business that is focused on repair and reuse. A participant also added that Product Service Systems (PSS), such as leasing, are still solely applied to a relatively limited amount of product groups.

Another participant explained that return models are related to durability. It was suggested to integrate some indications about durability in the scoring system, if possible.

### Block 3) Provision of diagnostic support and interfaces / Availability of spare parts / Availability and ease of installation of software and firmware / Availability of information

One stakeholder pointed out that provision of diagnostic support and interfaces is not suitable for some products. A manufacturer also suggested that the development and provision of a repair kit should be considered.

The availability of spare parts was confirmed as one of the most relevant parameters. Several participants remarked how important the following factors were: availability of spare parts over time, time of delivery of the parts and their price. These aspects should be aggregated as much as possible.

It was said that legally binding periods of availability of spare parts already exist in some countries (e.g. 5 years in Spain). It was questioned how claims about the availability of spare parts can be verified in the medium-long term. However, some participants considered that it should be relatively easy to verify this aspect from the perspective of a market surveillance authority. An issue raised by a participant was related to the difference in price of spare parts across Europe.

Regarding software and firmware, a participant argued that after some time operating systems do not allow safety and functional updates any more. It was suggested that tools for data deletion could improve the upgradability and reusability of the product. Also, open source software and firmware could be further developed and provided.

It was also discussed if standardisation of components could be a solution. However, this was considered as too restrictive. With the expected onset of the Internet of Things it would instead be needed to find standardisation solutions to allow compatibility between different devices.

With respect to the availability of information, it was argued that this is fundamental to facilitate repair at a convenient price. Several participants considered that it was also important to ensure a fair treatment for different repairers, although some differentiation should be introduced between professional and do-it-yourself repairs. Both independent and authorised repairers should have access to repair information. However, some manufacturers considered that it was very important to ensure professionalism of independent repairers by including minimum qualification criteria. APPLIA volunteered to provide some parameters to assess these qualifications.

With respect to the communication means, it was suggested to facilitate both hands-on (physical) and online availability; the latter means can be especially relevant for second-hand products.

Finally, as to the cost of spare parts, it was remarked that also for the provision of information there could be differences between European countries.

#### Block 4) Working environment / level of skill required / safety / availability of OEM service engineers / ease of restoring to full working conditions.

A manufacturer pointed out that some problems become known only when the product is on the market for some time, meaning repair issues (such as priority parts) can change over time. Because of this, it was suggested focusing on the quality of the repair service.

It was highlighted by several stakeholders that repairs carried out by OEM services are more expensive for consumers. A participant proposed to have a more general parameter about the availability of repair networks in local areas instead of the availability of OEM services. Moreover, a participant considered that this parameter can be already covered with two of the other parameters discussed (working environment + level of skills).

It was also widely commented that any safety issues should also be reported on, or at least taken into account regarding any evolution towards facilitating "do-it-yourself" repairs, for example. However, the Commission underlined that these matters should be taken as an automatic "given", that is, it is a separate part of the process of a product being able to obtain the CE mark, via other applicable legislation, depending on the product group (e.g., the Machinery Directive).

The issues of warranty and liability after repair were also discussed. It was said that guarantees are often solely orientated towards/ provided for new products, but that the provision of a warranty after repair could also be an interesting measure. For example, it has been reported that in Spain it is mandatory to provide a warranty after repair as a consequence of the national implementation of the WEEE Directive.

#### Rating of parameters

Some stakeholders considered it to be a difficult matter to focus on a maximum score. The JRC explained that if a maximum score were used, this maximum would correspond to the best condition possibly available on the market, and not on the relatively best alternatives.

Some suggestions received from participants were related to the possibility to have absolute, rather than normalised values, or to consider positive and negative scores. The JRC explained that this is mainly an issue of rescaling, and that normalisation would allow more stability and fairness in the assessment. Moreover, it will be the objective of the subsequent study to explore which labelling approach would best fulfil consumer expectations.

### - Aggregation and reporting options

Different aggregation and reporting options were introduced by the JRC team. In particular, a hybrid approach was proposed that is made of minimum requirements (i.e., pass/ fail) for some important parameters, complemented by a rating (gradational) system for other parameters.

A manufacturer shared its experience with the binary scoring system used by its company. This binary scoring system is based on two criteria: firstly, availability of spare parts at a non-excessive price; and secondly, the possibility to repair a product for a certain amount of time. The same manufacturer highlighted that it can be difficult to verify claims regarding the availability of spare parts for future years (i.e., that the availability of a stock of parts may be claimed by manufacturers or other actors in the value chain, but that this needs to be verified, and at various points in the related product group's life). Moreover, a participant pointed out that this system can be valid for manufacturers but may not be a useful communication tool for informing consumers.

Most of the participants disagreed on the usefulness of a binary system. Instead, a scoring system allowing higher granularity and possibility of clustering of specific areas would be preferable.

Different scoring alternatives were proposed by participants. In particular, a participant shared the 40-year experience of consumers and testing organisations with the scoring of products. It was suggested that the scoring system is based on three main pillars: spare parts, information, and dismantling. Minimum requirements for these parameters should be fulfilled in order to consider that a product is repairable. Scores and weights should be then assigned to different parameters to reflect their relative importance. The final result could be expressed typically either with a 1-5 star rating, or with a 0-100 percentage, with the latter one being perhaps more effective in stimulating competition on repair. Alphabetical ranking could instead confuse consumers due to its similarity with the EU Energy Label.

The implementation of minimum requirements was backed by several participants. Some industry members pointed out that these could interact with existing regulations and change depending on the product group. However, it is self-evident that any scoring system needs to be consistent with existing regulations (and not solely Ecodesign/ Energy Labelling, etc.).

With respect to the weighting of different parameters, stakeholders commented that scores assigned to the most relevant parameters should be multiplied by a factor (e.g. x2, x3, etc). Weighting should be adapted to the product group. Moreover, it was pointed out that, while spare parts are more relevant for simpler products, availability of information is more important for complex products.

A warning was expressed with respect to the need to avoid situations where a product with a certain score (e.g. 6-7) is not easy to repair in reality. It was moreover commented that products that are above minimum requirements/ scoring should be differentiated. The level of differentiation should be proportional to the level of ambition of the scoring system.

A participant suggested the provision of additional information to complement the overall rating score. The important of transparency was also highlighted. Aggregated scores should be provided with calculation details.

As an alternative approach, an industry member suggested starting with a more simple approach, focusing on the provision of information (e.g. availability of repair centres). Another participant instead suggested that repair should be scored at different levels according to recipients of the information, e.g. positive attributes for self-repairs by consumers (DIY) and separately other attributes with respect to repairs by repair centres.

### Part III: Towards a Scoring System on Reparability: Product-specific aspects

The JRC presented the preliminary input received to date from stakeholders regarding the three product groups for which the scoring system will be tailored in the in the next phase of the study: laptops, vacuum cleaners and washing machines. Stakeholders were invited to contact the study team to share any relevant information.

### Next steps and conclusion

The Chair thanked all the participants of the meeting for their fruitful contributions, and reminded stakeholders that they are invited to send their written comments to the study team by **27 July 2018**. The next meeting will be held in November in Brussels (date and timing to be confirmed, pending other meetings and logistical arrangements in Brussels). The Chair asked for any constraints (e.g., clashing dates with other relevant meetings, etc.) to be communicated to the JRC team also by the above deadline, to assist the preparation of the second stakeholder meeting.

The meeting closed at 17.30.