Position Paper on Ecodesign Requirements for Imaging Equipment and Cartridges pursuant to Directive 2009/125/EC

ABSTRACT

Ecodesign is needed to reduce the estimated 45% of global CO_2 emissions sourced from product life cycles[1]. For printers and cartridges this means, above all else, increasing the numbers that are remanufactured and refurbished. Some OEMs (Original Equipment Manufacturers) design in order to make it difficult for any independent third-party refurbishers to extend the working life of OEM printers and cartridges. But there are other OEMs – Brother, Lexmark, Ricoh, Toshiba and Xerox amongst them – that already design for remanufacture. These OEMs are producing ecodesigned products and have invested in ecodesign business models. So, at what point did DG ENV decide that ecodesign regulations should discourage all OEMs from competing to design for remanufacture, including those that have been doing so for years? To address the oversight, we have proposed an 'opt in' amendment to Annex II. It aims to recognise the existence of these good practices and to incentivise others to follow suite.

1. Context

1.1 With the publication on 4th May 2022 of the Ecodesign and Energy Labelling Working Plan 2022-24 (2022/C 182/01), the European Commission rejected a proposal to extend a voluntary agreement with the imaging equipment sector to comply with Ecodesign Directive 2009/125/EC. The reason stated was that *'this revision would not achieve the objectives considered in the CEAP (Circular Economy Action Plan) and cannot be considered compliant with the guidelines on self-regulatory instruments* ***in particular regarding the possible reuse of consumables'***.

1.2 We conclude from the above, that the draft regulatory proposals published in June 2024 are thought to include effective measures to increase the percentage of cartridges that are collected after use for remanufacture and refurbishment. Their reuse will reduce CO_2 emissions from the product life cycle by approximately 70%, create more EU-based employment, and increase investment in a green industrial future.

1.3 The draft text includes several detailed proposals to enable more reuse of cartridges and printers, and these are warmly welcomed. The adoption in due course of a repairability index could, for example, become a helpful market signal. The index would first need to be simplified by removing unnecessary elements already included in the requirements of ecodesign regulations (such as parts availability). Equally, raising the minimum durability requirements could address the issue of increasing market penetration by imported 'new build' cartridges that are typically not yet designed to be used more than once.

[1] *Completing the Picture: How the Circular Economy tackles Climate Change*, (2019) Ellen MacArthur Foundation

1.4 Whilst much in these regulations is welcomed, DG ENV has made a significant choice; one with implications for the effectiveness of these ecodesign regulations. The choice has been to equally disadvantage all OEMs (Original Equipment Manufacturers) regardless of whether any of them have already invested in ecodesigned products and collection systems. Our proposed amendments aim to rectify this and to restore a more equitable balance between the three main business models applied to remanufacturing imaging equipment and cartridges.

1.5 In common with the findings of the European Court of Auditors' Special Report 17/2023 on the Circular Economy, we have reservations about the design and anticipated effectiveness of the draft regulations. In our view, the pathway to reducing the risk of further criticism of the Commission by the European Court of Auditors is to provide clarity and encouragement to those OEMs that are investing in the take-back of their products for remanufacture, as well as to those independents that step in when OEMs fail to take responsibility for extending the life cycle of their products. In its report dated 3/7/2023 the European Court of Auditors found *'only limited evidence that the Commission's two Circular Economy Action Plans, in particular in terms of the circular design of products and of production processes, had been effective in influencing circular economy activities in the EU*'.

2. 'Born Circular' – Remanufacturing by Original Equipment Manufacturers (OEMs)

2.1 Three business models are used in remanufacturing:

1) an OEM takes responsibility for the return and reuse of its own product
2) an OEM appoints an approved third party to carry out the preparation for reuse to OEM specifications
3) third parties independently refill, reuse and also remanufacture cartridges and printers.

2.2 There are also OEMs that do none of the above. Rather than designing products that are 'Born Circular', they manufacture them to be used and discarded as soon as possible. Often it is independent third parties that then step in to collect these abandoned cartridges and printers, battle against numerous technical barriers and succeed in reselling this used equipment. Supporting the independent sector through these regulations is necessary but only when OEMs have failed to take on the responsibility themselves.

2.3 On the other hand, OEMs that have invested in their own remanufacture capability inevitably design their printers and cartridges for remanufacturing, making them more robust and durable, and have a system to collect as many as possible. OEMs that remanufacture have a built-in feedback loop to the durability of their design since component failure modes are identified during remanufacture. This leads to improved future designs, making the product even more durable.

2.4 In this context, we do not understand why DG ENV has chosen to disadvantage all OEMs, including those that have already invested in EU sites to remanufacture and refurbish their own products. If the Commission is aiming to encourage investment in an EU Green Industrial future, it is necessary to include OEMs that are capable of delivering the scale and quality of investment required. There is surely an opportunity to use the ecodesign regulations to signal to all OEMs the type of investment required. Instead, the regulations have been designed to increase the internal cost of capital for OEMs by raising the investment risks for both ecodesigned printers and cartridges.

2.5 The proposed regulations anticipate that demand for refilled and even remanufactured cartridges will be increased by requiring all OEMs to provide original parts, information and intellectual property to insured independent third parties. There are very few qualifications required for such access, presumably because it is anticipated that this will create a larger, competitive market for the collection of printers and cartridges for reuse. We draw attention to the comprehensive evidence collated by the JRC for these regulations, specifically the 2023 IPSOS Behavioural Study[2] which highlights the negative perceptions of quality in the reused products. Such negative perceptions are only very rarely directed towards OEM-approved remanufactured products, yet DG ENV has chosen to draft regulations that require all OEMs to give priority to independents wishing to reuse the cartridges and printers. This policy approach would have more merit if the onerous requirements were used in conjunction with an opt-in for those OEMs that have invested in ecodesigned products and collection systems. This common policy-making technique would effectively create an ongoing incentive for laggard OEMs to invest in collection systems, EU-based remanufacturing sites, and joint ventures with independent third parties, in order to qualify for the opt-in.

2.6 Imaging equipment OEMs, including Lexmark, Ricoh, Brother, Xerox and Toshiba have a history of investment in printer and cartridge take-back and remanufacturing operations in the EU. These product manufacturers and designers primarily service business-to-business, contractual customers.

2.7 Adding to this steadily expanding investment by responsible OEMs is Fujifilm Manufacturing Europe. The company recently established a Circular Manufacturing Centre in the Netherlands to Promote Resource Circulation in Europe.

2.8 Even market leader HP has begun to recognise the possible advantages of taking back product for remanufacture. The somewhat hesitant announcement of 'HP Renew' made by HP during the Circular Economy Conference in Brussels in April 2024 is welcomed. There is surely an opportunity in these draft ecodesign regulations to build upon these welcome investments by giving further incentives to these and other OEMs.

2.9 Why does an OEM offer a guarantee of improved quality in the market for remanufactured cartridges? The cartridges:

- meet the same global specifications required of the OEM at the time of the original product release, including for toner emissions, toner yield, ROHS, product certifications, etc.
- are built with original OEM components designed to maintain the longevity and durability of the printer. These components are matched to work efficiently ("Best Together") with other OEM printer parts such as imaging units, fusers, electrophotographic elements, etc.
- undergo the same product testing regime with technical support from the same engineering teams as those who designed and made the products in the first place.

2.10 By specifying qualifying conditions for our proposed opt-in clause in Annex II, DG ENV has the opportunity to require OEMs to prepare some of the evidence base which will be needed to further improve these regulations, initially by requiring OEMs with opt-in systems to publish their annual cartridge remanufacturing rates. As a positive side effect, this will create useful data for

[2] *Technical Support on Imaging Equipment – User Behaviour Study*, IPSOS, (28th March 2023)

'Repairability Index' benchmarks and for any future minimum rates of cartridge reuse at the eight-year review. Secondly, by requiring the publication of the methodology, competition between OEMs will be focused on the actual percentage rates – and not on the use of different methods of calculation.

3. Definitions of 'Remanufactured' – Must ESPR be used?

3.1 The adoption of ESPR Regulations (Ecodesign for Sustainable Products Regulations) (EU) 2024/1781 on 13th June 2024 aimed to clarify the definition of terms such as 'remanufacturing'. In practice, the imaging equipment sector, including non-OEM third-party independents, has long used (and abused) the term 'remanufacturing' by applying it to almost any printer or cartridge that has been prepared for reuse. A cartridge refilled with toner by an independent third party is said to have been remanufactured even if it has not been through an industrial-scale and quality-certified process. The ESPR draws a distinction between 'refurbished' products that have been restored to their original OEM specification and performance and 'remanufactured' products that introduce new (or used) components which may present safety concerns. Remanufactured products will always be considered to be "as new".

3.2 It remains unclear what the implications will be of these new definitions and how they will be adopted alongside parallel regulatory changes. We welcome for example, improved consumer safety regulations in GPSR (2023/988). Article 9 of the GPSR will require firms to prepare an internal risk analysis to formally record any product safety implications and article 6 sets out safety issues to include in such an internal analysis.

3.3 As an example, OEMs generally restore their printers and cartridges to the original specification and performance but occasionally also upgrade worn or damaged components to improve performance. Non-OEM (independent third parties) will often use substitute components. The boundary between these component choices and the implications is yet to be determined, but there will be a clear incentive to adopt 'refurbishment' instead of 'remanufacture' to avoid the need to recertify remanufactured printers and cartridges as 'new'. In this product sector, the term 'refurbished' is associated with highly variable quality products, few OEMs would willingly describe their products as 'refurbished' and yet this is where the ESPR definitions is expected to drive them.

3.4 The new definitions are given in (EU) 2024/1781 published 13th June 2024, paragraph 17:

> *'Second-hand products, in particular products that undergo refurbishment or repair, originating from within the Union are not new products and they can circulate within the internal market without needing to comply with delegated acts setting ecodesign requirements that have entered into force after their placing on the market.* ***However, remanufactured products are considered new products and they will be subject to ecodesign requirements if they fall within the scope of a delegated act'.***

Furthermore, Article 2 of the Ecodesign Regulations defines in section (16)

> *'Remanufacturing means an industrial process in which a product is produced from objects that are waste, products or components and in* ***which at least one change is made to the product that affects the safety, performance, purpose or type of the product*** *typically placed on the market with a commercial guarantee'.* This definition is deliberately contrasted to 'refurbishment' defined in Article 2 section (18).

3.5 The EC adopted these new definitions from the medical devices sector in the USA via the recently approved EN 45553 standard chaired by Solange Blaszkowski (Philips). Whilst it may have been convenient to copy and paste definitions used in the US medical devices sector, the assumption that medical devices terminology can be laid upon other product sectors is likely to cause some confusion in the next decade. The tyre industry, which takes back aircraft and truck tyres more than once to return them to use, the IT equipment, lighting equipment, automotive parts aftermarket, laptops and audio equipment sectors, have already voiced concern to us. If the ESPR definitions are adopted for printers and cartridges the interaction with national or proposed EU 'Green Claims' regulations raises further questions since a claim that a printer or cartridge has been either 'refurbished' or 'remanufactured' invites a legal challenge. This combined legal pressure is welcome since it is likely, in time, to improve the descriptive accuracy and quality of reused printers and cartridges.

3.6 Perhaps because of the uncertainty and risks, some of our members have asked whether a transitionary definition might be used to recognise the widely used term 'remanufactured' as meaning either refurbished or remanufactured. They are concerned that almost all printers and cartridges will be forced to use the term 'refurbishment'.

3.7 A possible hybrid definition to satisfy this request would be for example in Annex 1 (23) 'remanufactured cartridge' would mean 'a cartridge that, after having been used at least once and then collected, qualifies under (EU) 2024/1781 as either refurbished to its original OEM specification and performance or else as remanufactured to be new'? And in Annex 1 'Remanufactured Printer' would mean a printer that, having been used and then collected, is restored to its original condition and performance or better. 'Condition and Performance' will be understood to mean consistent with the definition in Article 2 (16) of the Ecodesign for Sustainable Products Regulations. The printer will qualify under (EU) 2024/1781 as either refurbished to its original OEM specification and performance or else as remanufactured to be new.

3.8 This option leaves open the possibility of continuing to use the term 'remanufactured' for either refurbished or remanufactured products. We have decided to include this awkward hybrid definition in our proposed amendments in the knowledge there are likely to be more elegant solutions. If invited to do so, we will contribute to a working group on the topic to identify an improved set of definitions.

4. Printer Equipment

4.1 Much of the focus of ecodesign regulations is, understandably, on cartridges. Member companies taking back printers have highlighted how the adoption of the ESPR definitions will have unwelcome implications for the viability of their investment in remanufacturing processes. Upgrading to meet the latest specifications is not always possible because components containing newly identified hazardous substances are, for example, deeply embedded in the printer.

4.2 Without exemptions, some categories of printers could only ever be 'refurbished' and this has economic consequences since 'refurbished' is a description applied to such a wide variety of used printers.

4.3 The implication is that the adoption of the ESPR definitions in this sector will increase the investment risk and thereby the expected rate of return. This will reduce the level of investment since some (unknowable) categories of printer will never be capable of being upgraded to 'remanufactured' and therefore 'new' status before resale.

4.4 Typically, it is the following regulatory uncertainty that may make it impractical to label a printer as remanufactured (new) and not merely refurbished.

- **RoHS Directive** – Changes implemented since the printer was originally specified.
- **REACH/Substance restrictions** - Periodical amendments to Annex XIV and XVII / Substance restrictions since the printer was originally specified.
- **Eco Labels** e.g. EU Ecolabel and others e.g. Blue Angel - If the remanufactured printer cannot achieve accreditation to the latest ecolabel standards compared to that when first placed on the market, its market value will be lower.

5. OUR PROPOSED AMENDMENTS

Article 8 Add the following clauses:

- Two years after the regulations enter into force the Commission will review the introduction of a Repairability Index product scoring system.
- Eight years after the regulations enter into force the review shall in particular assess…
  - Comparison between (a) the cartridge remanufacturing rates achieved by the systems managed by manufacturers, importers and authorized representative, and (b) those cartridges subject to these regulations'
  - The introduction of minimum percentage reuse requirements.

Annex 1 Definitions (4)

'Professional Remanufacturer' means a natural or legal person, located in the EU who can demonstrate capability to replace components and testing such that the equipment qualifies under (EU) 2024/1781 as either refurbished to their original OEM specification and performance or else as remanufactured to be new.

OUR PROPOSED AMENDMENTS (continued)

Annex II. Ecodesign Requirements / Inkjet Cartridges (B) and Toner Cartridges (D) / Resource Efficiency / Sub section **1.2. Reuse and Remanufacturing**

ADD the following clauses:

1. 'Manufacturers, importers, or authorized representatives shall facilitate the remanufacturing of OEM cartridges by **either**:
- remanufacturing their own toner cartridges; OR
- supporting third-party professional remanufacturers as defined in section **XX** below *(the numbering will change*)

For cartridges remanufactured by the OEM.
The OEM manufacturer, importer or authorised representative shall implement:

(a) a system for the return and reuse of the cartridges they place on the market;

(b) a system to make cartridges available for seven years after the date of end of placement on the market or putting into service of the printer models.

The OEM remanufactured cartridges shall provide the following key functionalities:

- full and continuous cartridge acceptance by the compatible printer;
- cartridge and printhead calibration, cleaning and alignment;
- no blocking of data collection agents;
- single installation message without use of terminology suggesting that the remanufactured cartridge may have a lower quality or reliability; and
- functioning toner level gauge indicating the approximate page count or fill levels remaining, if provided with the original cartridge.

2. From one year after the date of placement on the market or putting into service, a public disclosure of the percentage of remanufactured cartridges versus total cartridges produced annually. As well as the methodology used to calculate this data.

Annex 1 (23)
'Remanufactured Cartridge' means a cartridge that, after having been used at least once and then collected, qualifies under (EU) 2024/1781 as either refurbished to its original OEM specification and performance or else as remanufactured to be new.

Annex 1 'Remanufactured Printer' would mean a printer that, having been used and then collected, is restored to its original condition and performance or better. 'Condition and Performance' will be understood to mean consistent with the definition in Article 2 (16) of the Ecodesign for Sustainable Products Regulations. The printer will qualify under (EU) 2024/1781 as either refurbished to its original OEM specification and performance or else as remanufactured to be new.

The European Remanufacturing Council has participated in the technical workshops and contributed to the comprehensive evidence base compiled by the JRC at: https://susproc.jrc.ec.europa.eu/product-bureau/node/633 Our member companies include Original Equipment Manufacturers, approved third-party specialists and independents that remanufacture OEM equipment and cartridges.

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About the Council:

The vision of the European Remanufacturing Council is to triple the value of Europe's remanufacturing sector to €100 billion by 2030. We will bring together businesses from every product sector to share knowledge, and seek changes to policy with the aim of making remanufacturing a normal part of the product life cycle.

For more information about the ERC please visit www.remancouncil.eu