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Producer Liability for Substantial Modification of Products through Repair, Refurbishment and Remanufacturing

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Abstract: Within the framework of the European Union's strategy on the transition to the circular economy paradigm, the reuse of products already on the market or put into service, through repair, refurbishment and remanufacturing, is being promoted in different regulatory spheres. Both processes were already timidly appearing in European legislation. However, the irruption of goods with digital elements and the promotion of the circular economy are the factors that have created the need to put the legal focus on this category of goods. We are currently at a time of deep legislative changes in which the European Union is adopting new regulations and directives that update the principles on which European contract law and tort law are based. This paper aims to analyse how refurbished and remanufactured goods are dealt with in the light of the current state of the art and what the consequences are for the liability of the producer when these processes involve a substantial modification of its products.

Zusammenfassung: In verschiedenen Regelungsbereichen des Aktionsplans der Europäischen Union zur Ausweitung der Kreislaufwirtschaft wird die Reparatur, Überholung und Instandsetzung sowie die Wiederaufbereitung von bereits auf dem Markt befindlichen oder in Betrieb genommenen Produkten zum Zwecke der Wiederverwendung gefördert. Sie sind in der bisherigen europäischen Gesetzgebung zwar bereits sporadisch aufzufinden. Angesichts der zunehmenden Präsenz von Gütern mit digitalen Elementen und der Förderung der Kreislaufwirtschaft wird gleichwohl ein Bedürfnis dafür gesehen, den Fokus der Gesetzgebung auf diese Warenkategorien zu lenken. Gegenwärtig befinden wir uns in einer Zeit tiefgreifender legislatorischer Veränderungen, in der die Europäische Union neue Verordnungen und Richtlinien verabschiedet, die die Grundsätze, auf die das europäische Vertrags- und Deliktsrechts fußt, aktualisieren. Im Folgenden soll analysiert werden, wie mit den vorstehend genannten Gütern im Lichte des aktuellen Stands der Technik zu verfahren ist und welche Auswirkungen sich bezüglich der Haftung des Herstellers ergeben, wenn dieser Vorgang eine wesentliche Veränderung des ursprünglichen Produkts mit sich bringt.

Résumé: Dans le cadre de la stratégie de l'Union européenne sur la transition vers le paradigme de l'économie circulaire, la réutilisation des produits déjà sur le marché ou mis en service, par le biais de la réparation, de la remise à neuf et de la refabrication, est encouragée dans différentes sphères réglementaires. Ces deux processus faisaient déjà timidement leur apparition dans la législation européenne. Cependant, l'irruption des biens contenant des éléments numériques et la promotion de l'économie circulaire sont les facteurs qui ont créé le besoin de mettre l'accent juridique sur cette catégorie de biens. L'Union européenne adopte de nouveaux règlements et directives qui mettent à

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jour les principes sur lesquels reposent le droit européen des contrats et le droit de la responsabilité civile. Le présent document vise à analyser la manière dont les biens remis à neuf et reconditionnés sont traités à la lumière de l'état actuel de la technique et quelles sont les conséquences pour la responsabilité du producteur lorsque ces processus impliquent une modification substantielle de ses produits.

Resumen: En el marco de la estrategia de la Unión Europea sobre la transición al paradigma de la economía circular, se está promoviendo en diferentes ámbitos regulatorios la reutilización de productos ya comercializados o puestos en servicio, mediante su reparación, reacondicionamiento y remanufacturación. Tales procesos ya aparecían tímidamente en la legislación europea. Sin embargo, la irrupción de los bienes con elementos digitales y el impulso de la economía circular son los factores que han creado la necesidad de poner el foco legislativo en esta categoría de bienes. Actualmente nos hallamos en tiempos de cambios legislativos profundos en los que la Unión Europea está adoptando nuevos reglamentos y directivas que actualizan los principios en los que se basa el derecho contractual y el derecho extracontractual europeo. Este trabajo tiene por objeto analizar cómo se tratan los bienes reacondicionados y remanufacturados, a la luz de los desarrollos más recientes, y qué consecuencias tienen en la responsabilidad del productor cuando estos procesos implican una modificación sustancial de sus productos.

1. Introduction

1. Since 2020, the European Union has been taking legislative initiatives framed in the European Commission's communications on the European Green Deal[1] and the Circular Economy Action Plan for a cleaner and more competitive Europe.[2] Both communications set out the EU's sustainable growth objectives in relation to the Member States' SDGs and the 2030 Agenda, as well as providing the roadmap towards making Europe the world's first climate-neutral continent by 2050.

Looking at the key axes of the Circular Economy Action Plan for a cleaner and more competitive Europe, it can be seen that sustainable product design, consumer empowerment and the circularity of production processes are some of the pillars on which European legislation should be built in order to achieve the ambitious climate targets set.

As regards sustainable product design, the Commission says that 80% of products' environmental impact is determined at the design stage, prior to manufacturing. Furthermore, the currently prevailing linear 'take-make-use-dispose' pattern of consumption is not conducive to the circularity of products and their

1 *The European Green Deal*, 11 Dec. 2019 COM(2019) 640 final, eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN.

2 *A new Circular Economy Action Plan For a cleaner and more competitive Europe*, 11 Mar. 2020 COM (2020) 98 final, eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A98%3AFIN.

components, and a new legislative instrument should be adopted to establish product circularity and sustainable design as a general rule. Product manufacturers are operators within the production chain that have a key role to play in the strategy towards the circular economy paradigm. In this new circular economy paradigm, refurbishment and remanufacturing are also two qualities that should be worked into products if they are to be placed on the EU market, as they are properties that aim to extend product life cycle.

2. In terms of consumer empowerment, the Commission aims to review Directive (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods (hereinafter referred to as CSD[3]) by 2024. Consumers are key actors in the European economy and can make a decisive contribution to extending the lifespan of products through new sustainable consumption patterns. In this sense, some soft law[4] proposals have been published that advocate the introduction of repaired, refurbished or remanufactured goods into the remedies provided by the CSD in case of non-conformity of goods, i.e., the possibility of replacing non-conforming goods with refurbished or remanufactured goods, or to promote the use of these goods by enhancing consumer confidence through a legal guarantee.[5]

3. In addition, in recent months the European Commission has adopted two proposals for directives, one on liability for defective products (hereinafter PLD)[6] and one to promote the right to repair goods (hereinafter R2R).[7] Furthermore, on 23 May 2023 the Official Journal of the European Union published the new Regulation (EU) 2023/988 of the European Parliament and of the Council of 10

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3 Dir. (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC, data.europa.eu/eli/dir/2019/771/oj.

4 European Law Institute, *European Commission's Public Consultation on Sustainable Consumption of Goods – Promoting Repair and Reuse. Response of the European Law Institute,* 5 Apr. 2022, www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ELI_Response_Sustainable_Consumption_of_Goods.pdf.

5 Some studies have revealed consumer bias in the acquisition of second-hand, used, refurbished or remanufactured goods: J. D. Abbey, M. G. Meloy, J. Blackburn/ R. Guide V Daniel, 'Consumer Markets for Remanufactured and Refurbished Products', 4. *California Management Review* 2015, p 26, doi: 10.1525/cmr.2015.57.4.26; B. Esmaeilian, P. O. Saminathan, W. Cade & S. Behdad, 'Marketing strategies for refurbished products: Survey-based insights for probabilistic selling and technology level', 167. *Resources, Conservation & Recycling* 2021, p 1, doi: 10.1016/j.resconrec.2021.105401.

6 Proposal for a Directive of the European Parliament and of the Council on liability for defective products, eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022PC0495.

7 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, eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52023PC0155.

May 2023 on general product safety (hereinafter GPSR).[8] These rules also contain some provisions on the refurbishment and remanufacturing of goods which have an impact on the liability of manufacturers and economic operators who carry out these processes through substantial modifications of their products. Thus, the concept of substantial modification of a product acquires major relevance for the purposes of limiting the liability of the original producer when a third party, outside the business or professional sphere of the former, substantially modifies some of its products to the point where the result of the substantial modification is equivalent to a new product.

4. Therefore, the aim of this paper is to analyse the European legal regime for repaired, refurbished and remanufactured products in the light of the current state of the law, and its legal effects on producer liability at a time of deep changes in the existing legislation. To this end, it gives a descriptive and critical review of the current regulation.

2. What is meant by the Refurbishment, Remanufacturing and Repair of goods?

5. The concepts of refurbishment and remanufacturing are confusing and sometimes used indistinctively in the literature but are different processes to which goods are subjected to restore them or give them new properties.

2.1. Refurbishment

6. In recent years, due to the strategy promoted by the European Commission for the transition of consumer law towards the circular economy, the refurbishment of goods has made its way into European legislation, in particular in the new European legislation on consumer law and the civil liability of the manufacturer. Currently, there is no definition of this concept established in European legislation, although the literature has coined a definition for the concept, and a definition currently appears in the Proposal for a Regulation on Ecodesign (hereinafter PRED).[9] In this regard, Article 2(18) PRED defines refurbishment as:

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8 Reg. (EU) 2023/988 of the European Parliament and of the Council of 10 May 2023 on general product safety, amending Regulation (EU) No 1025/2012 of the European Parliament and of the Council and Directive (EU) 2020/1828 of the European Parliament and the Council, and repealing Directive 2001/95/EC of the European Parliament and of the Council and Council Directive 87/357/EEC, http://data.europa.eu/eli/reg/2023/988/oj.

9 Proposal for a Regulation of the European Parliament and of the Council establishing a framework for setting ecodesign establishing a framework for setting ecodesign requirements for sustainable products and repealing Directive 2009/125/EC, eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022PC0142.

preparing or modifying an object that is waste or a product to restore its performance or functionality within the intended use, range of performance and maintenance originally conceived at the design stage, or to meet applicable technical standards or regulatory requirements, with the result of making a fully functional product.

7. There are some elements of the definition that are crucial to understanding the concept of refurbishment. Firstly, the basis of refurbishment is a process of preparation or modification of an object that is waste or a product.[10] In my opinion, the concept of waste is problematic. To illustrate this, it is enough to ask whether it is possible to restore the performance or intended functionality of a waste product. Waste is what results from the decomposition or destruction of a thing or the material that is rendered unusable after a work process or an operation has been carried out. Therefore, it does not seem that waste can be prepared or modified to restore its performance or functionality through a process of refurbishment. However, perhaps the European Commission is thinking of the recycling of waste. In this regard, Article 6 of Directive 2008/98/EC on waste states that waste shall cease to be classed as waste when it has been subjected to an operation, such as recycling, and the resulting elements can be used for their specific purposes.[11] Therefore, to the extent that waste has to go through a recycling process in order for the resulting elements to be used for their specific purposes, it is difficult to imagine a product refurbishment process based on waste. Moreover, the concept of product is also subject to an autonomous definition in other EU legislation,[12] so the

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10 V. Ulfbeck, 'From Linear to Circular Value Chains: A Role for Tort Liability in Recycling Practices?', 13. *European Journal of Risk Regulation* 2022, p 607, doi: 10.1017/err.2022.30. Equating waste with products has its origin in the 1977 European Convention on Products Liability in regard to Personal Injury and Death: *'There was discussion on whether waste should be considered as a "product" and, accordingly, be subject to the provisions of the convention. The committee considered that if the producer were to use waste in some later manufacturing process or to supply it to another person for that purpose, the waste must be regarded as a product and therefore be subject to the system of liability provided for in the convention. If, however, the waste was discarded, thus becoming refuse, the convention would not apply'.*

11 Dir. 2008/98/EC of the European Parliament and of the Council of 19 Nov. 2008 on waste and repealing certain Directives, http://data.europa.eu/eli/dir/2008/98/oj.

12 For some examples, in Reg. (EU) 2023/988 of the European Parliament and of the Council of 10 May 2023 on general product safety, amending Regulation (EU) No 1025/2012 of the European Parliament and of the Council and Directive (EU) 2020/1828 of the European Parliament and the Council, and repealing Directive 2001/95/EC of the European Parliament and of the Council and Council Directive 87/357/EEC, http://data.europa.eu/eli/reg/2023/988/oj, *'product' means any item, whether or not it is interconnected to other items, supplied or made available, whether for consideration or not, including in the context of providing a service, which is intended for consumers or is likely, under reasonably foreseeable conditions, to be used by consumers even if not intended for them.* In the Proposal for a Directive of the European Parliament and of the Council on liability

definition of product provided for in the PRED itself, which is based on the physical nature of the good, must be considered.[13]

8. Secondly, refurbishment is based on a process of 'preparing or modifying'. These concepts refer to a new condition of the good so that it can fulfil a new purpose, or to a change in its characteristics. These are broad enough terms that also include sorting, selection, inspection, disassembly, cleaning, reprocessing and assembly.[14]

9. Thirdly, the result of the refurbishment process should be that of restoring the performance or functionality of the product within the intended use, range of performance and maintenance originally conceived at the design stage, or that it meets applicable technical standards or regulatory requirements, with the result of making a fully functional product. It is therefore a matter of restoring the product to a fully functional condition, after changing some of its main characteristics, and thus returning it to the design stage.

To assess the performance requirements that can be expected from a refurbished product, the performance of the product as it was conceived at the design stage should be taken into account. In this respect, Article 6 PRED refers to Annex I of the PRED to set the performance requirements.

10. Unlike remanufacturing, refurbishment does not necessarily have to be carried out through an industrial process, which means that it may be carried out by other subjects and economic operators, in addition to the original manufacturer.

In conclusion, refurbishment does not involve the creation of a new product through an industrial process. The design and essence of the product as such does not change, but some of its main characteristics are modified so that it regains the functionality and performance conceived for the product at the design stage.

2.2. Remanufacturing

11. The concept of remanufacturing is also not defined in any rule of the *acquis communautaire* and will also be included in the future legislation on sustainable product design, meaning it will therefore affect the liability of manufacturers. A definition of remanufacturing is provided in Article 2(16) PRED: *'"remanufacturing" means an industrial process in which a product is produced from objects that are*

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for defective products, *'product' means all movables, even if integrated into another movable or into an immovable. 'Product' includes electricity, digital manufacturing files and software.*

13 Proposal for a Regulation on the European Parliament and of the Council establishing a framework for setting ecodesign requirements for sustainable products. *'product' means any physical good that is placed on the market or put into service.*

14 E. Bracquené & J. Brusselaers & Y. Dams & J. Peeters & K. De Schepper & J. Deflou & W. Dewulf, 'Reparability criteria for energy related products. Study in the BeNeLux context to evaluate the options to extend the product lifetime. Final Report', 2018 /www.benelux.int/files/7915/2896/0920/FINAL_Report_Benelux.pdf.

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'.

It is therefore the production of a new product from other products or components. For the reasons set out in the previous section, it is advised that the reference to waste should be deleted, as a product must cease to be considered as waste through recycling, so that the resulting elements can be subject to the remanufacturing process. As regards components, they are ancillary to a good or product resulting from the remanufacturing process, as they are equivalent to 'intermediate products' (Recital 11 PRED).

12. According to the definition of remanufacturing, this process must necessarily take place at the industrial level. In my opinion, this provision makes it difficult for remanufacturing to be carried out by the owner of the good themselves or by an economic operator who is not considered to be a manufacturer or producer, or that it could be carried out by craftsmen.

The manufacturing process to which the product is subjected must be substantial enough to produce a change in its performance, safety or purpose. This means we must take into consideration the performance requirements set out in Annex I of the PRED and in the GPSR. Therefore, if any product has been subject to a substantial modification affecting its safety or performance and this has been produced through an industrial process, we know that we are dealing with a remanufactured product.

13. The definition of remanufacturing refers to the introduction of the product on the market with a commercial guarantee. Remanufacturing aims at extending the life span of the product, meaning that once the process is completed, it is reintroduced on the market and can be acquired by consumers within the framework of a sales contract. I cannot understand why the legislator refers to the commercial guarantee and not to the legal guarantee, as remanufactured goods can also be acquired through a sales contract, meaning the seller should be liable for the period of two years (Art. 10 CSD). Perhaps because the legal guarantee is only provided for new goods? What is clear is that it is the producer who becomes the guarantor for any defects or non-conformities that the remanufactured product may have, according to the provisions of the commercial guarantee (Art. 17 CSD).

2.3. Repair

14. As regards the concept of repair, this has also, so far, been controversial, since the CSD does not provide a definition of this remedy and in case law there has been some discussion of the meaning of 'repair'.[15] Article 2(20) PRED gives a definition of repair: *'"repair" means returning a defective product or waste to a*

15 Article 1.2(f) Directive 1999/44/EC does contain a definition of 'repair', which *'shall mean, in the event of lack of conformity, bringing consumer goods into conformity with the contract of sale'.*

condition where it fulfils its intended use'. Once again, I would point out that waste, when considered as such, is suitable for repair, as it must be recycled to recover its properties. The reference to a defective product seems to me more appropriate, although perhaps the concept of 'lack of conformity' should be adopted, a concept in harmony with the CSD. Likewise, the concept of repair incorporated in Article 2(20) PRED is sufficiently broad to include the repair that takes place within the framework of the legal guarantee of the CSD, as well as the way in which repair has been described in the R2R, which extends the effectiveness of this remedy beyond the period of the legal and commercial guarantees (Arts. 10 and 17 CSD). Likewise, the reference to a 'defective product' highlights a property that refurbished or remanufactured goods do not necessarily possess, since such goods need not necessarily be defective before undergoing these processes.

Next, the definition in Article 2(20) PRED refers to returning the product '*to a condition where it fulfils its intended use*'. In my opinion, it would also have been more appropriate for the definition to refer to the 'bringing into conformity' of the product instead of referring to the intended use, since the concept of 'lack of conformity' is broader and covers the intended use of the product (Arts. 6 and 7 CSD).

15. The future European regulation to be adopted on sustainable design will serve to drive the repair, refurbishment and remanufacturing of products. However, several rules exist in the European *acquis communautaire* that will define the legal regime applying to this new category of products. These rules will also determine the obligations and liability of manufacturers dealing with goods and products in general, and particularly those involved in the trade of used, refurbished or remanufactured products. Let us look at the existing rules and the extent to which they contemplate the refurbishment and remanufacturing of products.

16. In March 2022 the European Commission published an ambitious new proposal for a regulation that aims to enable the European Union to meet some of the environmental objectives set out in the European Green Deal and in the Circular Economy Action Plan for a cleaner and more competitive Europe. This is the PRED, to which we have already referred before. According to the Recitals, this proposal for a regulation is a central instrument for moving towards a climate-neutral economy and focuses the regulatory approach on the sustainable design of products.

The current regulatory framework is Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a

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G. Howells & C. Twigg-Flesner & T. Wilhemsson, *Rethinking EU Consumer Law* (London: Routledge Taylor & Francis Group 2017), p 187. It has been held that repair was the bringing into conformity of the good by fixing the defect flagged by the consumer.

framework for the setting of ecodesign requirements for energy-related products.[16] The scope of Directive 2009/125/EC is limited to energy-related products, so that other categories of goods fall outside its scope. This is the reason for which a new regulation must be adopted, in other words why a new legislation is required at European level that is generally applicable to all product categories and that establishes binding and cross-cutting requirements to ensure that all products falling within the scope of the European Union meet these sustainability requirements. The result should be that all products placed on the market in the European Union are suitable for circular use.

17. The ecodesign of products is the basis of the new obligations that the PRED imposes on economic operators, by means of which the European legislator aims to reduce the environmental impact of products. Ecodesign will thus cease to be a business policy decision that depends on manufacturers and will be the new approach imposed by legislation.[17]

The PRED covers different aspects that have a clear environmental impact, including ecodesign requirements (Chapter II); the digital product passport (Chapter III); labels (Chapter IV); the ban on destroying unsold consumer products (Chapter VI); and the obligations of economic operators (Chapter VII). For this paper, we will focus on ecodesign requirements for refurbishment and remanufacturing.

18. Article 5 PRED considers repair, refurbishment and remanufacturing as two processes for extending the life span of products for which the European Commission must adopt ecodesign requirements by means of delegated acts. In other words, under the new regulation, the requirements applicable to the refurbishment and remanufacturing of products will have a direct impact on product ecodesign to promote the circular economy.

The placement of the two processes in the order set out in Article 5 PRED is indicative of their different nature. Article 5.1(f) PRED places maintenance and refurbishment of products on the same level, while Article 5.1(k) PRED places remanufacturing beside recycling of products. This is consistent with the definition of both processes discussed above, as unlike refurbishment, remanufacturing involves an industrial process that takes place at the end of the product's life span aimed at the creation of a new product from waste, components or other products (Art. 2(16) PRED).

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16 Dir. 2009/125/EC of the European Parliament and of the Council of 21 Oct. 2009 establishing a framework for the setting of ecodesign requirements for energy-related products, eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32009L0125.

17 For an analysis of the basic principles of ecodesign, M. P Dopazo Fraguío, 'El diseño de productos sostenibles como paradigma preceptivo: evolución normativa y régimen jurídico propuesto en la Unión Europea', 139. *Actualidad Jurídica Ambiental* 2023, pp 1–57.

19. Article 5 PRED does not give any further indication of the parameters to be considered by the European Commission when setting product ecodesign requirements for refurbishment and remanufacturing. We must therefore refer to Annex I PRED, which states:

The following parameters may, as appropriate, and where necessary supplemented by others, be used as a basis for improving the product aspects referred to in Article 5(1):

(c) ease of upgrading, re-use, remanufacturing and refurbishment as expressed through: number of materials and components used, use of standard components, use of component and material coding standards for the identification of components and materials, number and complexity of processes and tools needed, ease of non-destructive disassembly and re-assembly, conditions for access to product data, conditions for access to or use of hardware and software needed, conditions of access to test protocols or not commonly available testing equipment, availability of guarantees specific to remanufactured or refurbished products, conditions for access to or use of technologies protected by intellectual property rights, modularity;

In my opinion, refurbishment and remanufacturing will be determined by two categories of criteria. On the one hand, the materials and components used and, on the other hand, the possibility of access to certain product information that will be decisive for undertaking these processes.

20. Article 5 PRED stipulates that the criteria for determining the ecodesign requirements for refurbishment and remanufacturing are to be set by the European Commission by delegated acts, among others. In this regard, Recitals 18 and 19 PRED require the European Commission to adopt a scientific approach based, in particular, on the experience of Directive 2009/125/EC and on the best available evidence carried out on products at all stages of their life cycle. Furthermore, to assess the setting of ecodesign requirements, the European Commission will have to take a step further and develop science-based assessment tools to evaluate the methods for setting ecodesign requirements. Furthermore, Recital 19 PRED also foresees that the delegated acts to be adopted by the European Commission will have an impact on other related aspects regulated in other directives, such as the reparability score of which the consumer should be informed prior to the acquisition of a product or service.[18]

Article 1 and 5 PRED consider the 'repairability' of a product as an aspect for which the PRED must establish ecodesign requirements. The ecodesign

18 A reform of Dir. 2011/83/EU is currently being processed that affects the pre-contractual information duties of the trader with the consumer to require him to inform about the reparability of the good or service before being contractually bound. Proposal for a Directive of the European Parliament 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, eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022PC0143.

requirements on reparability will be set by the Commission by means of delegated acts, considering the provisions of Annex I PRED, which provides as follows:

> *ease of repair and maintenance as expressed through: characteristics, availability and delivery time of spare parts, modularity, compatibility with commonly available spare parts, availability of repair and maintenance instructions, number of materials and components used, use of standard components, use of component and material coding standards for the identification of components and materials, number and complexity of processes and tools needed, ease of non-destructive disassembly and re-assembly, conditions for access to product data, conditions for access to or use of hardware and software needed;*

21. Under the provisions of Annex I regarding repair, there are two issues that are generally controversial. Firstly, the repair will comply with the ecodesign standards if spare parts are available to the manufacturers and repairers who have to carry out the repair. It should be noted that the availability of spare parts is an aspect that was not harmonized in the CSD. In this regard, Recital 33 CSD leaves it up to the Member States to set a time period for the availability of spare parts to sellers, producers and any operator in a product's production chain. Therefore, delegated acts to be adopted by the Commission affecting the repairability of products could harmonize an aspect that is not within the regulatory scope of the CSD.

Secondly, a particularly controversial aspect is the availability of information for repairing defective products.[19] As is well known, many manufacturers do not provide free access to product repair manuals as they are protected by intellectual property legislation. It is not the purpose of this paper to investigate how this duty of information and the protection of the manufacturer's interests should be reconciled, but the issue is sure to be a thorny one.

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19 K. Wiens, 'Using copyright to keep repair manuals secret undermines circular economy', 2013 www.theguardian.com/sustainable-business/copyright-law-repair-manuals-circulareconomy.
According to the author, producers are invoking their intellectual property rights over user or repair manuals in order not to provide them to consumers. In the United States, some states have passed rules that seek to reconcile, on the one hand, the rights of consumers to have the good repaired and, on the other hand, the intellectual property rights of producers by preserving information about their business that is not necessary to repair the good. See in this regard, E. Schueller, 'Who has the Right to Repair?', 2018 www.fleetmaintenance.com/in-the-bay/diagnostic-and-repair/article/20989863/who-has-the-right-to-repair; V. Mak & E. Terryn, 'Circular Economy and Consumer Protection: The Consumer as a Citizen and the Limits of Empowerment Through Consumer Law', 43. *Journal of Consumer Policy* 2019, p 238, doi: 10.1007/s10603-019-09435-y.

3. The liability of the producer for the repair, refurbishment and remanufacturing of its products

22. Now that the concepts of repair, refurbishment and remanufacturing have been laid out and analysed according to the current state of European legislation, it is appropriate to analyse the liability of the economic operators involved in these processes; fundamentally, the liability of the original manufacturer and of the party that has carried them out. This analysis must also take into account the current European legislation that contains provisions on the manufacturer's liability for product repair, refurbishment and remanufacturing processes.

3.1. Proposal for a Directive on liability for defective products

23. On 28 September 2022 the European Commission published the Proposal for a Directive of the European Parliament and of the Council on liability for defective products (hereinafter the Proposal for a Directive),[20] which is to replace Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products (hereinafter Directive 85/374/EEC).[21] The Proposal for a Directive is therefore the baseline document which will be discussed in the European Parliament and the Council and which may culminate in the adoption of a new Directive on this matter.

The text adopted follows the principles already established by the European legislator when the CSD was adopted in 2019: the unitary conception of the good, even though goods currently incorporate digital elements, and the concentration of liability on the producer of the good.

The Proposal for a Directive broadens the group of subjects that are considered to be producers, including the software developer and the algorithm developer. Furthermore, regarding the subject matter of this work, it is important to highlight that the person who makes a substantial modification to a product is considered a producer (Recital 29 of the Proposal for a Directive). This provision is part of the strategy for the transition towards the circular economy paradigm and is based on the need to extend the useful life span of products.

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20 Proposal for a Directive of the European Parliament and of the Council on liability for defective products. For an introduction to this Proposal, G. Veldt, 'The New Product Liability proposal – Fit for the Digital Age or in Need for Shaping Up?', 1. *European Journal of Consumer and Market Law* 2023, pp 24–31; J. S. Borghetti, 'Taking EU Product Liability Law Seriously: How Can the Product Liability Directive Effectively Contribute to Consumer protection?', 1. *French Journal of Legal Policy* 2023, pp 1–41.

21 Dir. 85/374/EEC of 25 Jul. 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products, data.europa.eu/eli/dir/1985/374/oj.

3.1.1. What are the Implications of the Substantial Modification of a Product?

24. The manufacturer is the economic operator at the centre of claims by injured parties for damage caused by defective products. This is laid down in Article 7(1) of the Proposal for a Directive, following the same criteria as Article 3 of Directive 85/374/EEC. In the event that the manufacturer cannot be identified or is not established in an EU Member State, liability shall be imputed to certain economic operators involved in the product supply chain (Art. 3 Directive 85/374/EEC and Art. 7 Proposal for a Directive).

The future directive to be adopted in this area will extend the range of persons who will be considered as producers. One of the main problems that have arisen with the definition of product in Article 2 of Directive 85/374/EEC is that only manufacturers of tangible movable goods can be considered as producers and, therefore, manufacturers of intangible goods, such as software, are excluded from the concept of producer.[22] To redress this issue, Article 4(1) of the Proposal for a Directive includes a new definition of product which includes software (Recital 12 of the Proposal for a Directive). Therefore, the software or algorithm developer will be considered as a producer.[23] It is not the purpose of this paper to analyse the concept of manufacturer as incorporated in Article 4(11) of the Proposal for a Directive, but it differs from the definition of producer in Article 3(1) of Directive 85/374/EEC.

25. Regarding the transition to the circular economy, Recital 29 of the Proposal for a Directive is the only one that refers to this issue, the wording of which provides as follows:

> *In the transition from a linear to a circular economy, products are designed to be more durable, reusable, reparable and upgradable. The Union is also promoting innovative and sustainable ways of production and consumption that prolong the functionality of products and components, such as remanufacturing, refurbishment and repair.*

Recital 29 refers to remanufacturing. In my opinion, the same concept of remanufacturing as used in the PRED should be adopted to manage the same concept and refer to the same phenomenon: the industrial process that a product undergoes

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22 C. Wendehorst, 'Safety and Liability Related Aspects to Software', 2021, pp 64-66, digital-strategy.ec.europa.eu/en/library/study-safety-and-liability-related-aspects-software. The author discusses the problems with the definition of software in Art. 2 Directive 85/374/EEC.

See also ECJ 10 Jun. 2021, *KRONE* v. *Verlag Gesellschaft mbH & Co KG*, https://curia.europa.eu/juris/documents.jsf?num=C-65/20. The ECJ had the opportunity to decide on the concept of product in Art. 2 Directive 85/374/EC and excluded from its scope of application an inaccurate health advice published in a newspaper which caused personal injury to a reader.

23 G. Wagner, 'Liability Rules for the Digital Age', 3. *Journal of European Tort Law* 2022, pp 201-202, doi: 10.1515/jetl-2022-0012.

before it is placed on the market with a new guarantee, after its performance, safety or purpose has been altered. Recital 29 regards remanufacturing and refurbishment as two different processes by which the life span of products is extended, but which for the purposes of the manufacturer's liability have the same effect.

The economic operator who has substantially modified the product by a remanufacturing or refurbishment process is then considered to be the manufacturer, so that they can be held liable for damage resulting from the substantial modification of the product, an idea that is reflected in Article 7(4) of the Proposal for a Directive:

> *Any natural or legal person that modifies a product that has already been placed on the market or put into service shall be considered a manufacturer of the product for the purposes of paragraph 1, where the modification is considered substantial under relevant Union or national rules on product safety and is undertaken outside the original manufacturer's control.*

In the light of Recital 29, any economic operator who substantially modifies a product, whether through remanufacturing, refurbishment or repair, is considered to be the manufacturer for the purposes of imputing liability for damage caused after they have intervened in the product. This applies one of the principles on which the law on product liability is based: the producer is only liable for damage caused by defective products that it has placed on the market.

26. According to Recital 29, the result of refurbishment, remanufacturing or repair is a new product. In my opinion, the term 'new product' is unfortunate because the product is not necessarily reintroduced onto the market as such, with a new guarantee; rather, as we have seen, this is only an effect of remanufacturing. Perhaps it would be more appropriate to refer to a new 'putting into service'. It would be this moment that would make it possible to differentiate the liability of the original manufacturer and the manufacturer who carries out the substantial modification of the product. The wording of Article 7(4) PLD is more precise and refers to 'placing on the market' or 'putting into service'. Therefore, when a substantial modification is made to the product, it must be considered that, given that the risk associated with a product may have altered or that new risks may have appeared, there has been a new putting into service or a new placing on the market in order to differentiate the scope of liability of the original producer and the producer who has made the modification.[24] However, this can be problematic. In

24 V. Ulfbeck, 13. *EJRR* 2022, p 608. The author reaches the same conclusion, although she relies on the liability of the product manufacturer in general and the manufacturer of a component. She refers to a case from the United States, where employees suffered personal injuries as a result of inhaling toxic substances released in the process of dismantling the batteries of vehicles. District Court for the Northern District of Texas 8 Apr. 1983, *Johnson* v. *Murph Metals*, https://law.justia.com/cases/federal/district-courts/FSupp/562/246/1570944/: *'Nevertheless, there are necessarily*

the digital era many products incorporate software that is indispensable for the product to perform its functions. Users of such products sometimes change the operating system that comes as standard with the product or make modifications to enable the product to perform other functions. Considering the provisions of the PLD, these users who make modifications would not be able to take action against the original manufacturer if the defect is caused by the modification made to the product. In these cases, it could be a case of exclusive negligence of the victim or of contributory damage (Art. 12 PLD). The fundamental question will lie in interpreting what is meant by substantial modification of the product, something on which the PLD is silent and does not provide any interpretative criteria.[25]

27. The new GPSR does provide criteria, in Article 13(3) GPSR, for interpreting what is meant by substantial modification of a product. It would be appropriate for the final version of the Proposal for a Directive to include criteria to determine this, or to refer to the provisions of Art. 13(3) GPSR.

The substantial modification of a product must be carried out by a person outside the business organization of the original producer and outside of its control, either online, such as a software update, or through a material intervention in the product, i.e., through an active intervention aimed at modifying the properties of the product. According to the provisions of Recital 41 of the PLD, it does not appear that the substantial modification can be caused by a vulnerability of the product which makes it defective as a result. The concept of vulnerability is not defined in the PLD, nor is it a key concept according to the current text on which fundamental elements of the new regulation are based, so it is necessary to refer to the definition of this concept that appears in Article 6(15) of the so-called NIS 2 Directive: *'"vulnerability" means a weakness, susceptibility or flaw of ICT products or ICT services that can be exploited by a cyber threat'*.[26] Therefore, the

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some limits on the concept of product use. In each of the cases known to the court involving "use" of a product, the plaintiff had some contact, however brief, with the defendant's product. In this case, Defendants' product was necessarily destroyed prior to the alleged injuries. Stip. No. 14. Plaintiffs have stipulated that Defendants' product did not injure them while it was intact or while it was being destroyed. Stip. Nos. 15, 18. Rather, the alleged damage occurred after a portion of the destroyed battery was transformed, through the smelting process, into an allegedly injurious substance. During the time periods in question, Plaintiffs did not even come in contact with Defendants' product; Defendants' product had ceased to exist'.

25 G. Wagner, 3. *ERTL* 2022, p 215.

26 Dir. (EU) 2022/2555 of the European Parliament and of the Council of 14 Dec. 2022 on measures for a high common level of cybersecurity across the Union, amending Regulation (EU) No 910/2014 and Directive (EU) 2018/1972, and repealing Directive (EU) 2016/1148 (NIS 2 Directive), data.europa.eu/eli/dir/2022/2555/oj; S. Schmitz & S. Schiffner, 'Responsible Vulnerability Disclosure under the NIS 2.0 Proposal', www.jipitec.eu/issues/jipitec-12-5-2021/5495/schmitz_schiffner_pdf.pdf: *'A vulnerability is a set of conditions that allows the violation of a security (or privacy) policy. Such conditions might be created by software flaws, configuration mistakes and other human errors of operators, or unexpected conditions of the environment a system runs in'.*

concept of vulnerability is based on a deficiency or weakness in the product itself, whereas a substantial modification requires conduct that tends to alter the characteristics of a product.

28. The intended effect of granting the consideration of manufacturer to the economic operator who substantially modifies a product once it has been placed on the market and put into circulation is to separate the scope of liability of the original manufacturer from that of the person who has substantially modified the product if the product is defective and the damage is caused by their intervention. This will allow the injured party to take direct action against the refurbisher.

29. To impute and claim liability for damage caused by a refurbished or remanufactured product, the modification made to the product must be substantial. Recital 29 PLD gives some indications as to what is to be considered a substantial modification:

'Whether a modification is substantial is determined according to criteria set out in relevant Union and national safety legislation, such as modifications that change the original intended functions or affect the product's compliance with applicable safety requirements'.)

Recital 29 PLD refers to national and European safety legislation to determine whether a product modification can be considered as substantial. Without seeking to be exhaustive, to analyse the substantial nature of a modification, it is necessary to bear in mind the new General Product Safety Regulation. Article 6 GPSR determines the aspects to be considered when assessing product safety. Likewise, the Proposal for a Regulation of the European Parliament and of the Council on horizontal cybersecurity requirements for products with digital elements also provides, in Annex I, a set of requirements to be met by products with digital elements in order to certify and presume their cybersecurity.[27] Therefore, an alteration of these requirements on the basis of which the safety and cybersecurity of a product was certified may mean that we are dealing with a refurbished good and, therefore, with the possible exoneration of the original manufacturer if the damage is related to the intervention of the new manufacturer.

3.1.2. How will the Substantial Modification of a Product Affect the Producer's Liability Period?

30. Article 14(2) PLD provides for a general liability period of 10 years, starting from the time the product was put into service or placed on the market. This means that the manufacturer will not be liable for damage caused by a defective product after the

27 Proposal for a Regulation of the European Parliament and of the Council on horizontal cybersecurity requirements for products with digital elements and amending Regulation (EU) 2019/1020, eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52022PC0454.

period of 10 years after the product was put into service or placed on the market. This is the same liability period provided for in Article 11 of Directive 85/374/EEC.[28]

31. The innovation introduced by the Proposal for a Directive is the restarting of the manufacturer's liability period once the product has been substantially modified. Based on the principle that the Proposal for a Directive considers refurbished products as new goods, once the refurbishment has been carried out, the new manufacturer or refurbisher will be liable for a period of ten years for any damage caused by the refurbished product (Recital 44 PLD). This measure is certainly intended to protect consumers, but some questions remain as to how the new ten-year liability period will affect the original manufacturer and the new producer. Article 10.1(g) PLD provides that the new manufacturer may be exempted from liability if the damage is not caused by the modification made to the product. Therefore, if the substantial modification of a product entails the restarting of the manufacturer's liability period, what will happen when the damage is not related to the substantial modification? Should we consider that the action against the original producer is reinstated? Will the new manufacturer also be liable? Imputing liability to the new manufacturer simply because of the restarting of the limitation period means depriving the new manufacturer of the cause of exoneration from liability recognized in Article 10.1(g) PLD. In accordance with the European Commission's intention to define the liability of economic operators, it would be more logical for the original producer to continue to be liable if it can be demonstrated that the damage caused by the defective product is not related to the substantial modification and, in all cases, provided that the period of ten years has not elapsed since the product was placed on the market or put into service. However, this is not in line with Recital 44 and Article 14(2) PLD.

3.1.3. What is the Liability of the Original Manufacturer and the Substantial Modifier?

32. The restarting of the liability limitation period provided for in Recital No. 44 PLD in the event of substantial modification of the product raises the problem of determining how the original manufacturer and the substantial modifier should be liable, as well as how the claim made against the substantial modifier will affect it, i.e., whether the action against the substantial modifier will interrupt the limitation period against the original manufacturer.

Firstly, I consider that we must start from the principle enshrined in Article 11 PLD, which provides for the joint and several liability of two or more economic operators who are liable for the same damage. Article 11 PLD, interpreted in the

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28 On the limitation period provided for in Art. 11 Dir. 85/374/EEC, see ECJ 9 Feb. 2006, *Declan O'Byrne* v. *Sanofi Pasteur MSD Ltd and Sanofi Pasteur SA*, https://curia.europa.eu/juris/documents.jsf?num=C-127/04.

light of Recital no. 40 PLD, suggests that joint and several liability will operate fundamentally in cases of bundled products, i.e., 'where a defective component is integrated into a product that causes damage'. This would be the case, for example, of a product with digital elements that is placed on the market or put into service as a whole, when the tangible movable property and the software are presented to the victim as an integrated whole, i.e., because both components are bundled together. What I mean is that the hardware and software producers will be jointly and severally liability when the product is placed on the market or put into service as a whole, to the extent that otherwise it would not be able to perform its functions. However, if a third party eventually substantially modifies a product outside the sphere of control of the original manufacturer, I believe that this case should not be related to the general principle of Article 11 PLD, except if the damage is caused by a defect in the product when it was placed on the market and by the intervention of a third party who substantially modified it, in which case the substantial modifier should be considered as a third party with respect to the original producer, a case considered by the provisions of Article 12(2) PLD.

The second paragraph of Article 12 PLD states that the liability of the economic operator, in our case the manufacturer, 'may be reduced or disallowed when the damage is caused both by the defectiveness of the product and by the fault of the injured person or any person for whom the injured person is responsible'.

Therefore, if the defectiveness of a product is caused by a third party who substantially modifies a product outside the original manufacturer's sphere of control, it should be possible to nullify the manufacturer's liability if the damage can be imputed exclusively to the substantial modifier and the product was not previously defective. The problem posed by Article 12(2) PLD is that, in essence, it says that liability may be reduced or cancelled if the damage is caused by the defective nature of the product and by the fault of 'any person for whom the injured person is responsible'. We have already seen that Article 13(3) GPSR requires that a substantial modification, such as that which may take place through a remanufacturing process, is not carried out 'by the consumers themselves or on their behalf for their own use'. In my opinion, as will be discussed in more detail below, Article 13(3) GPSR must be interpreted on the basis of Recital 25 GPSR, which refers to the external intervention of a third party who pirates the product. In other words, the voluntary intervention of the third party held liable by the injured party, who acts on behalf of the latter to refurbish or remanufacture the product, could not be considered a substantial modification within the meaning of Article 13(3) GPSR because it is an intervention requested by the injured party and executed by a third party for whom the injured party is responsible, which means, in my opinion, that Article 13(3) GPSR and Article 12(2) PLD are not in harmony.

33. With regard to the effects on the starting date of the limitation period of the claim against the substantial modifier, if the latter is considered a third party acting outside the sphere of control of the original manufacturer and,

therefore, the joint and several liability of Article 11 PLD cannot be applied, the best thing for the victim to do would be to sue both parties, because the substantial modifier can invoke the cause of exemption from liability in Article 10.1(g) of the PLD, or at least interrupt the limitation period of the original manufacturer out of court.

34. Be that as it may, if we place ourselves in the position of the injured party, the situation seems complicated because, given the system designed by the PLD, they may find it difficult to impose liability on the original manufacturer or the party who carried out the substantial modification. In this situation, we may wonder whether it would be appropriate for the original manufacturer to be liable if there has been a substantial modification to its product outside its sphere of control. Undoubtedly, this is an unfair measure for the original manufacturer, who will be exposed to a multitude of claims for damages that do not arise from the defective nature of the product when it was introduced on the market, but from the intervention of a third party acting outside its sphere of control. This scenario would improve the chances of success of claims by injured parties, who would know that they would be able to recover damages from the original manufacturer. In any case, the right of the original manufacturer to take action against the substantial modifier whose intervention has caused the damage should be safeguarded by means of an action for recovery which, according to Article 2.3(b) PLD, is not subject to harmonization and will depend on the legislation of the Member States.

3.1.4. Following the Legislative Procedure: The Opinion of the Council

35. On 15 June 2023, the Council published its comments on the text proposed by the European Commission, and the amended text does indeed introduce some new features relating to the substantial modification of products, as we shall now discuss.

36. Firstly, according to the provisions of Recital 29, the substantial modification of the product does not necessarily have to be carried out outside the original manufacturer's control (Art.4(5) PLD). Thus, the substantial modification can either be carried out by a third party outside the original manufacturer's control, or by the original manufacturer or a manufacturer within its control. In this case, Recital No. 29 adds that the *'manufacturer should not be able to avoid liability by arguing that the defect came into being after it originally placed the product on the market or put it into service'*.[29] Therefore, even if the damage is caused by the substantial modification of the product after it was originally placed on the market or put into service, the original manufacturer who has carried out the substantial

29 Proposal for a Directive of the European Parliament and of the Council on liability for defective products – Mandate for negotiations with the European Parliament, eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_10694_2023_INIT.

modification cannot claim that the product was not defective when it placed it on the market or it was put into service (Art. 10.2(d) PLD). If this were not the case, the manufacturer could easily exonerate itself from liability and leave the victim unable to hold it liable for the substantial modification of the product. The result of the substantial modification is still the conceptualization of the product as a new product, irrespective of the person who carried it out. Therefore, the Council's contribution should be seen in a positive light, given that it widens the sphere of those liable for substantial product modification.

37. Secondly, the new Recital 29 devotes special attention to substantial modifications of products that consist of software updates or the continuous machine learning of the AI system embedded in the product. In practice, substantial modifications of this type may be the most frequent, and the main problem posed by these modifications is determining when they occur. In this respect, the Council considers that: *'the substantially modified product should be considered to be made available on the market or put into service at the time the modification is actually made'.* This criterion to establish the time of the modification seems to me to be appropriate for product updates because, as they are ordered by the manufacturer, it is possible to know with certainty when the product has been updated. However, more difficulties arise when it comes to the continuous machine learning of the algorithm, as there is no intervention by the manufacturer in the form of an update whereby it can be considered that the product has been substantially modified, rather the modification is due to the self-learning capacity of the system.

38. Thirdly, some minor changes have been introduced to Recital 44 on the limitation of the manufacturer's liability period once a substantial modification has been made to the product. Recital 44 clarifies that the liability period is not restarted, but rather that the substantial modification of the product marks the start of a new liability period for the manufacturer who carried it out (Art. 14(1) PLD). In my view, the clarification is welcome, and makes it possible to give a clearer explanation of what will happen when the person who made the substantial modification manages to exonerate himself from liability if he proves that the damage is not due to his intervention. In this case, we must consider that the liability of the original manufacturer subsists as long as 10 years have not elapsed since the product was placed on the market or put into service, so that there will be a new 10-year liability period for the person that made the substantial modification.

39. Fourthly, the main new aspect introduced by the Council is the inclusion of a definition of the term 'substantial modification' in the text of the future directive:

> *(10a) 'substantial modification' means a modification of a product after it has been placed on the market or put into service: (a) that is considered substantial under relevant Union or national rules on product safety; or (b) where relevant Union or national rules lay down no threshold on what should be considered a substantial*

modification, that: (i) changes the product's original performance, purpose or type, without this being foreseen in the manufacturer's initial risk assessment; and (ii) changes the nature of the hazard, creates a new hazard or increases the level of risk;[30]

40. It was undoubtedly a wise idea to include the definition, as otherwise it would be necessary to use the definition contained in Article 13(3) GPSR, which, as we saw previously, includes some elements that are extraneous to the concept of substantial modification, in particular the requirement of Article 13.3(c) GPSR. The definition includes some requirements that already appear and were discussed in the analysis of Article 13(3) GPSR, such as changes in product performance, purpose or type that were not considered in the initial risk analysis, as well as changes in the nature of the hazard or an increased level of risk.

41. The main new aspect of the definition is the elimination of the requirement provided for in Article 13.3(c) GPSR, according to which: *'the modifications have not been made by the consumers themselves or on their behalf for their own use'.* As we have argued above, the consequence of such a requirement is that substantial modifications made by or on behalf of the consumer fall outside the concept of substantial modification, which is undesirable because it gives privileged treatment to manufacturers who substantially modify a product on behalf of a consumer. The clarification is therefore welcome, although it means that the definition in Article 13(3) GPSR is not the same as that which will presumably be given in the PLD, resulting in the undesirable situation of there being two institutional definitions of the same concept.

3.2. General Product Safety Regulation

42. On 23 May 2023, the new GPSR (EU) 2023/988 (GPSR) was published in the Official Journal of the European Union. The new regulation repeals Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety.[31] However, according to Articles 50 and 52 GPSR the new regulation will not enter into force until 13 December 2024. Recitals 1 and 2 GPSR state that the reform is justified by the need to adopt new legislation adapted to the current scenario, where complex products have emerged with the development of new technologies. At the present time products may be vulnerable in terms of security, so new legislation must be adopted in line with the developments in new technologies. The new legislation also takes the form of a regulation, to provide the European Union with a coherent legislative framework in this area.

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30 Proposal for a Directive of the European Parliament and of the Council on liability for defective products - Mandate for negotiations with the European Parliament.

31 Dir. 2001/95/EC of the European Parliament and of the Council of 3 Dec. 2001 on general product safety, data.europa.eu/eli/dir/2001/95/oj.

43. According to Article 1 of the GPSR, the aim of the new regulation is to ensure a high level of consumer protection by laying down essential safety requirements to be met by products placed on the European market. As regards the scope of application, the GPSR follows the approach adopted by Directive 2001/95/EC and provides for its application in the absence of specific European legislation for certain categories of product (Art. 2(1) GPSR), thus establishing general product safety requirements. Although specific regulations have been adopted for certain classes of product, there is no applicable sectoral legislation for some types of products, making a horizontal and transversal regulation on product safety necessary (Recital 6 GPSR).

3.2.1. What is a 'Product' under the new Regulation?

44. Before dealing with refurbished and remanufactured products in the framework of the GPSR, it is necessary to consider some of the definitions included in the GPSR, insofar as they determine its scope of application.

45. With regard to the definition of 'product' in Article 3(1) GPSR, there are few modifications with respect to the definition of the same concept in Article 2(a) Directive 2001/95/EC:

> *'product' means any item, whether or not it is interconnected to other items, supplied or made available, whether for consideration or not, including in the context of providing a service, which is intended for consumers or is likely, under reasonably foreseeable conditions, to be used by consumers even if not intended for them.*

46. Looking at the different elements of the definition, the first issue to highlight is the movable and tangible nature of the products that fall within the scope of application of the GPSR. Recital 17 of the GPSR provides that the new regulation is not directly applicable to services, something that was already envisaged in Recital 9 of Directive 2001/95/EC. However, it is possible for consumers to contract the provision of a service involving the supply or making available of a product (*in the context of the provision of services*). In this case, the same Recital states its applicability to such products. Finally, Recital 17 GPSR provides an exception for equipment which consumers ride or travel, where such equipment is operated directly by a service provider in the context of a transport service. In this case, such equipment should not fall within the scope of the regulation, as it should be considered in relation to the safety of the service provided. Therefore, equipment or products used in the context of a transport service and operated by the service provider fall outside the scope of the GPSR and will be subject to the specific regulation. This distinction, which determines that certain products which are supplied or made available to the consumer as part of

the provision of a service fall within the scope of the GPSR and others are excluded, does not seem to be justified and does not provide legal certainty.[32]

47. The definition then refers to the possible interconnection of the product with other objects. If the product is interconnected with another object to perform all or part of its functions, the safety of this product must be assessed jointly (Art. 6.1(b) GPSR). The definition of product refers to the interconnection of the product with other objects.

48. It makes no distinction whether the consumer has paid a consideration for the acquisition of the product, since the regulation applies irrespective of whether the product is supplied or made available for a fee or free of charge.

49. The products must be supplied or made available to consumers or, although not intended for consumers, must be likely, under reasonable and foreseeable conditions, to be used by consumers, even if they are not the direct recipients. This provision also appeared in the product definition of Article 2(a) Directive 2001/95/EC. Therefore, in principle, products that have been designed exclusively for professional use fall outside the scope of the GPSR. However, if such products are subsequently used by consumers under reasonable and foreseeable conditions, they fall within the scope of the GPSR (Recital 9 GPSR). Thus, according to some authors, products such as DIY and gardening tools will be covered by the GPSR.[33] Despite the European legislator's aim to protect consumers who acquire products for professional use, in my opinion it is not easy for such products to be acquired by a consumer, as they are often not available on major platforms for the sale of goods to consumers.[34] Perhaps the European legislator is thinking of products destined for professional use that are acquired by consumers as second-hand goods.

50. Article 2(a) Directive 2001/95/EC expressly referred to used or refurbished goods and this reference has disappeared in the new product definition incorporated in Article 3(1) GPSR. Nevertheless, Article 2(3) GPSR declares its applicability to used, repaired or refurbished products, unless such products are placed or

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32 D. Fairgrieve & R. Goldberg, *Product liability* (Oxford: University Press 2020), p 869: *'It may well be that the distinction lies in whether the service provider operates the equipment, as in the case of a train or a bus. If so, an escalator in a store or an airport would not be within Article 2 (a), but a lift might be, unless, perhaps, it has an old- style attendant to operate it. Similarly, supermarket shopping trolleys and exercise equipment in a gym would, it seems, be within Article 2(a), as would be swings and other equipment in a playground, but fairground equipment would not. Such distinctions are not readily defensible'.*

33 D. Fairgrieve & R. Goldberg, *Product liability,* p 868.

34 D. Fairgrieve & G. Howells, 'General Product Safety – a Revolution Through Reform?', 69. *The Modern Law Review* 2006, p 60, doi: 10.1111/j.1468-2230.2006.00576.x. In England, in the legislation transposing Directive 2001/95/EC, they opted to impose an obligation on manufacturers to label products in order to determine the users of the products. In this way, the product itself would specify who the intended users.

made available on the market as such in order to be repaired or refurbished (Recital 16 GPSR). In other words, there is no requirement for products under these conditions to meet the essential safety requirements laid down in the GPSR.

3.2.2. What is meant by Substantial Modification?

51. In recent years, products have evolved and become increasingly complex. In addition, many incorporate digital elements and are thus vulnerable in terms of cybersecurity. Consequently, the GPSR states that, in the event of a modification made to a product, for example, through a further update, if the modification is substantial, the manufacturer must carry out a new risk assessment if this modification affects the security of the product (Recital 25 GPSR).

52. Likewise, in line with what I have already mentioned with regard to the PLD, for the purposes of defining the liability of the original manufacturer and of the manufacturer who has made the substantial modification, the person who makes the substantial modification to the product will be considered the manufacturer (Recital 34 and Art. 13(2) GPSR).[35] This means that, as a manufacturer, they must comply with the obligations imposed on manufacturers by the GPSR.[36] In my opinion, although the GPSR does not expressly state so, this directly affects the refurbishment and remanufacturing of goods, as these are processes that can lead to a substantial modification of the product.

53. Returning to the provisions of Article 13(2) GPSR, if the substantial modification affects the safety of the product, the manufacturer who has made the substantial modification will be obliged, with respect to the part affected by the modification or with respect to the entire product, to comply with the obligations imposed on manufacturers by Article 9 GPSR. These obligations include the duty to carry out an internal risk assessment and to prepare the relevant technical documentation to assess safety.[37] In order to perform the internal risk assessment, manufacturers must have internal product safety processes in place, by means of which they can assess the risks of the product. It is surprising that the GPSR leaves

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35 The consideration of the economic operator who makes the substantial modification of the product as a manufacturer and the conceptualization of the product resulting from the substantial modification as a new product raises some problems in relation to the protection of the original manufacturer's trademark. For the purpose of this paper, it is not intended to go into detail on this particular issue. It is referred to the best studies of this matter: A. Kur, 'As Good as New' – Sale of Repaired or Refurbished Goods: Commendable Practice or Trademark Infringement?', 70. *GRUR International* 2021, pp 228–236, doi: 10.1093/grurint/ikaa187; M. Senftleben, 'Fashion Upcycling and Trademark Infringement – A Circular Economy/Freedom of the Arts Approach', in *Institute for Information Law,* Universidad de Amsterdam, pp 1–21.

36 C. Hodges, *European Regulation of Consumer Product Safety* (Oxford: Oxford University Press 2005), p 93.

37 C. Hodges, *European Regulation of Consumer Product Safety,* p 106.

it up to the manufacturers to carry out the internal product risk assessment processes (Recital 37 GPSR). Recital 37 GPSR only provides that the internal processes shall be adapted to the position of the economic operator in the supply chain and shall take the form of organizational procedures, guidelines, standards or the appointment of an ad hoc manager.

54. The internal processes for assessing product safety are primarily aimed at analysing and certifying the risks related to the product and the solutions adopted to eliminate or mitigate them (Art. 9.2(a) GPSR). Therefore, if the modification made to the product is considered substantial, the manufacturer who has carried it out must proceed in accordance with the provisions of Article 9 GPSR and assess the risks for the product. However, if the modification is not substantial, the manufacturer who has made the modification has no obligation to assess the risks that could compromise the safety of the product. Therefore, the key question is to determine when a substantial modification of the product took place.

55. According to the provisions of Article 13(3) GPSR there are three cases in which a substantial modification of the product can be understood to have taken place. If any of the circumstances of Article 13(3) GPSR are met, it will be considered that a new product is involved (Recital 35 GPSR) and the person who has made the modification will be considered the manufacturer.

> *3. A modification of a product, by physical or digital means, shall be deemed to be substantial where it has an impact on the safety of the product and the following criteria are met:*
>
> *(a) the modification changes the product in a manner which was not foreseen in the initial risk assessment of the product;*
>
> *(b) the nature of the hazard has changed, a new hazard has been created or the level of risk has increased because of the modification; and*
>
> *(c) the modifications have not been made by the consumers themselves or on their behalf for their own use.*

56. Firstly, if the modification involves altering a product in such a way as to modify the result of the initial risk assessment, this is a substantial modification of the product. Manufacturers must carry out an assessment of the possible risks related to the product (Art. 9.2(a) GPSR) and, in accordance with this assessment carried out in line with the internal processes adopted by the manufacturer, draft a technical report of the results. Therefore, if the modification made to the product results in a modification of the initial risk assessment, i.e., an increase the probability of an occurrence of a hazard causing harm and the degree of severity of that harm (Art. 3(4) GPSR), there is a substantial modification of the product, which will make it necessary to reassess all risks related to the product if the modification has altered its safety, or to assess the risk implicit in the modification if it does not affect the safety of the entire product. In this regard, Recital 35 GPSR does not

require the person carrying out the substantial modification to repeat tests and provide new documentation in relation to aspects of the product that have not been affected by the modification. It will therefore be a comparative risk assessment of the product that will determine the extent of the modification.

57. Secondly, if the modification alters the nature of the hazard, creates a new hazard or increases the level of risk, this is also a substantial modification. The concept of 'hazard' is not defined in Article 3 GPSR. However, Article 3(4) GPSR does define what is meant by risk, where the term 'hazard' appears in the definition: *'the combination of the probability of an occurrence of a hazard causing harm and the degree of severity of that harm'.*

58. Both concepts evoke the same idea: the imminence or proximity of the occurrence of some harm or damage. Therefore, if a modification has been made to the product that increases the level of risk, this implies that the product has been substantially modified. In my opinion, although it is not established in Article 13.3(b) GPSR, in this case it would also be necessary to take as a reference the initial risk assessment carried out by the original manufacturer, in order to have a benchmark for assessing whether there are new hazards or changes or increases to existing hazards that affect the product.

59. Thirdly, as far as the third criterion is concerned, in my view it should be interpreted in accordance with Recital 25 GSPR. The third criterion says that there is a substantial modification of the product if the modification has not been made by or on behalf of the consumer for their own use. To the contrary, if the modification is made by the consumer or by a third party on their behalf for their own use, it is not a substantial modification. It is clear that if it is the consumer themselves who modifies the product or a third party on their behalf, it is not a substantial modification. Therefore, the modification must be made by a third party, outside the commercial or professional organization of the original manufacturer, in order to qualify as substantial and, consequently, for the third party to be considered as a manufacturer and be subject to the obligations imposed by Article 9 GSPR. This provision reduces the set of modifications that a product may undergo that may be considered substantial. All of this relates to an emerging market based on the acquisition of used products for refurbishment or remanufacturing and subsequent sale.

60. The question that arises is whether all the criteria of Article 13(3) GPSR must be fulfilled for the modification to qualify as substantial or whether it is only necessary for some of them to be fulfilled. It is clear from the wording of the article (*'and the following criteria are met')* that all the criteria must be fulfilled. The last criterion provided for in Article 13.3(c) GPSR refers to the party that has carried out the substantial modification, which must not be the consumer or anyone acting on their behalf and is therefore a general criterion. The other criteria refer to the effects of the modification of the product in terms of changes to the

result of the initial risk assessment, the nature of the hazard or the variation in the level of risk.

3.4. Proposal for a Directive on common rules promoting the repair of goods

61. On 22 March 2023, the European Commission published R2R. The adoption of the R2R is part of the transition towards the circular economy launched by the European Union in accordance with the objectives set out in the European Green Deal.

62. One of the cornerstones of the green transition is the sustainability of EU consumer law. Over the past few decades, the European Union has adopted several rules that have stimulated increased cross-border consumption between Member States. Because of these policies, a number of negative externalities have arisen with an environmental impact, such as an increase in greenhouse gases, the generation of waste due to consumer goods being discarded by consumers as they are defective or prematurely replaced by newer ones, etc.

63. To favour the sustainability of European consumer law, one of the key principles promoted by the European Union is the right to repair goods. In this regard, the New Circular Economy Action Plan and the New Consumer Agenda advocate the promotion of the right to repair. The repair of consumer goods is not a new instrument that the EU wants to use to improve the sustainability of consumption. Repair appeared as a remedy for the non-conformity of consumer goods as far back as Directive 1999/44/EC, now repealed by the CSD. In these directives, repair is a contractual remedy available to consumers and sellers to enable them to resolve any lack of conformity that becomes apparent within the legal guarantee period of two years from the time of delivery of the product, which may be extended by the Member States (Art. 10 CSD). Once the seller's liability period has expired, no economic operator is obliged to repair the good, unless the producer has committed to do so in the commercial guarantee (Art. 17 CSD). By protecting the right to repair, the R2R seeks to extend the useful life of products by regulating a new contract for the provision of repair services, which will oblige independent producers or repairers to repair the good when the inter-contractual period provided for in the R2R is fulfilled.[38] Consequently, contract law is central to the European Commission's legislative intervention to promote the right to repair by means of a

38 C. Montalvo & D. Peck & E. Rietvelt, 'A Longer Lifetime for Products: Benefits for Consumers and Companies', 2016 www.europarl.europa.eu/RegData/etudes/STUD/2016/579000/IPOL_STU(2016)579000_EN.pdf. Studies exist which show that by extending the useful life of certain consumer products, e.g., a toaster, by 10% would save 4,000 tonnes of CO2 and 60 tonnes of waste per year.

new type of contract, in addition to other initiatives that are being processed that affect antitrust law and pre-contractual information duties in consumer contracts. In the first case, the European Commission plans to consider it an unfair practice for traders to provide false information on the reparability of goods. Pre-contractual information duties will also be increased regarding reparability in the CRD.[39]

3.4.1. Is R2R Applicable within the Seller's liability Period (Art. 10 CSD)?

64. Article 1(2) R2R states that '*This Directive shall apply to the repair of goods purchased by consumers in the event of a defect of the goods that occurs or becomes apparent outside the liability of the seller pursuant to Article 10 of Directive (EU) 2019/771*'. To interpret this rule, we must refer to Recital 2 R2R, which states that *'it is necessary to lay down uniform rules promoting the repair of goods purchased by consumers within and beyond the liability of the seller established by Directive (EU) 2019/771'.* The same idea is repeated again in Recital 4 R2R.

65. If we try to delimit the scope of application of the R2R, the literal wording of the transcribed paragraphs does not clarify whether the rule will also be applicable within the framework of the legal guarantee of the seller provided for in the CSD, although the wish of the European legislator is for the new PLD to apply 'within and beyond the liability of the seller established by Directive (EU) 2019/771'. What are the implications, therefore, of the PLD applying within and beyond the liability of the seller?

66. The CSD places the last economic operator in the chain of production and distribution of the good, i.e., the seller, at the centre of the claims of consumers who have acquired a defective good through a sales contract (Art. 10 CSD), without prejudice to their right of recovery against any economic operator who caused the lack of conformity (Art. 18 CSD). Once the lack of conformity or the defect has become apparent within the seller's liability period (Art. 10 CSD), the seller must first repair or replace the goods, or if the repair is impossible or disproportionate, the consumer may request a reduction of the price or the rescission of the contract.

67. The explanation of the legal guarantee in the CSD aligns poorly with the functioning of the contract for the provision of repair services, where it is envisaged that the consumer's free choice to decide who repairs their goods should be facilitated and that they can request the European Repair Information Form (hereinafter, ERIF) from the producer, the seller or independent repairers (Recital 8 R2R). Furthermore,

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39 Dir. 2011/83/EU of the European Parliament and of the Council of 25 Oct. 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, data.europa.eu/eli/dir/2011/83/oj.

Article 14.1(a) CSD provides that the repair must be carried out free of charge, whereas the R2R provides that the consumer must bear the costs necessary to provide the repair information (Recital 9 R2R) and, moreover, the price is an essential element of the contract for the provision of repair services (Recital 12 and Art. 4.4(e) R2R). Therefore, while the seller's legal guarantee as per the CSD is applicable when the defect manifests itself within the liability period of Article 10 CSD, the R2R would be applicable when the defect did not exist at the time of delivery but arose afterwards (Recital 11 R2R). This could be the case, for example, of defects attributable exclusively to the consumer (Art. 13(7) CSD) or to a third party.

68. To the contrary, if we are outside the scope of application of the CSD, there is no doubt that this will be a very important area for the application of the R2R. This is the case, for example, where defects in goods arise or become apparent outside the seller's liability period of Article 10 CSD.

69. Furthermore, the subjective scope of application of the R2R is delimited by the attribution of the status of consumer to the owner of the good (Art. 2 R2R), i.e., a subject who has acquired the good for a purpose other than a professional, commercial or trade activity. However, this principle has been criticized by some authors, who have advocated the adoption of rules that promote sustainability in contracts between professionals.[40]

3.4.2. If a Product is Repaired, is it also Substantially Modified?

70. According to the definition contained in Article 2(20) PRED, to repair a product means to make it fit again for its intended use. We see, then, that the European legislator conceives repair as a minor intervention on the product that, in principle, does not entail altering its performance, safety or functionality relative to how the product was conceived in the design phase, something that does occur in the framework of refurbishing and remanufacturing. The question therefore arises of whether repairing a product can mean substantially modifying it, given that Recital 29 PLD conceives repair, refurbishing and remanufacturing as sustainable ways of prolonging the functionality of products and components.

71. As we already know, the question of whether the intervention of a third party outside the original manufacturer's sphere of control constitutes a substantial modification must be assessed in accordance with Article 13(3) GPSR. In general, the modification will be considered substantial if it changes the initial risk assessment of a product (Art. 13.3(a) GPSR), if it changes the nature of the danger associated with the use of a product (Art. 13.3(b) GPSR, and if the modification has not been made by the injured party or by a third party acting on their behalf (Art.

40 European Law Institute, *European Commission's Public Consultation on Sustainable Consumption of Goods*, 5 Apr. 2022, www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ELI_Response_Sustainable_Consumption_of_Goods.pdf.

13.3(c) GPSR). In my opinion, if the aim of the repair is to restore the use of a defective product, the repair can hardly lead to a substantial modification, but this does not mean that the repairer should not be held liable if the product, after having been repaired, causes damage to third parties. In other words, if the repair has failed and, consequently, instead of fixing the defect, this has been aggravated by the intervention of the repairer, it can be considered that a substantial modification has taken place if the requirements of Article 13(3) GPSR are met.

3.4.3. How will a Repair by an Independent Repairer Affect the Manufacturer's Liability?

72. The R2R considers the producer as the main party liable to repair the good when it proves to be defective beyond the seller's liability period. However, this does not prevent other parties from assuming the repair obligation, such as sellers or independent repairers (Recital 8 R2R). The service may be provided by the obligated economic operators themselves, or they may subcontract the service (Recital 13 and Art. 5(1) R2R). In these cases, it is clear that if the obligated party delegates the performance of the service to a collaborator or assistant, they remain liable for defective performance, and that no other contractual link shall exist between the collaborator and the consumer beyond the main contract.

73. Therefore, the manufacturer, the seller and the independent repairers are the parties who will carry out the repair within the framework of the contract for the provision of repair services. If the repair is carried out by the manufacturer themselves, no further problems should arise as to the determination of liability for damage caused by the repaired product, since in this case no third party outside the manufacturer's sphere of control will have been involved. Problems will arise where the seller or an independent repairer undertakes the repair outside the manufacturer's sphere of control.

74. In my view, we must start from the assumption that the repair will be carried out because a product is defective (Art. 2(20) PRED). Therefore, the manufacturer will be liable for the damage caused by the defective product, unless the ten-year period set by Article 14(2) PLD has elapsed. This facilitates the injured party's claim if the product was defective and, in addition, the repairer has failed to properly repair the product, since the damage caused by the defective product would be attributable to both the manufacturer and the repairer and the principle of joint and several liability of Article 11 PLD would apply, although the liability of the original manufacturer could be reduced in view of the intervention of the repairer (Art. 12(2) PLD). Likewise, if the repair is not large enough to be considered a substantial modification of the product (Art. 13(3) GPSR), the repairer cannot avail themselves of the exemption from liability of Article 10.1(g) PLD. Moreover, if the repair does not substantially modify a product, the manufacturer's liability period under Article 10(2) PLD would not start again, so that the

manufacturer and the repairer would be subject to the same liability period for the damage caused by the defective product.

4. Conclusions

75. The European legislator has put the focus on repair, refurbishment and remanufacturing processes to extend the life cycle of products in line with the objectives of the European Union for the transition towards the circular economy paradigm. However, the concepts of these processes are problematic when it comes to differentiating them and delimiting producer responsibility.

76. Some inconsistencies have been detected in the definitions of these concepts in the PRED. We believe that, in accordance with the provisions of the PRED, the European legislator's intention is to graduate the intervention on a product from a lesser to a greater degree, as follows: repair, refurbishment and remanufacture. However, given the difficulties that may exist in classifying a refurbishment or remanufacturing intervention, perhaps products should be grouped together in the same category.

77. The concept of 'substantial modification' is contained in Article 13(3) GPSR. This concept is essential to determine the scope of liability of the original manufacturer and of the person who has carried out the refurbishment or remanufacturing. Therefore, in view of the requirements of Article 13(3) GPSR, it must be determined whether the intervention carried out on a product can be considered a substantial modification that allows liability for the damage caused by the product to be imputed to the party who has carried out its refurbishment or remanufacturing. However, the circumstance provided for in Article 13.3(c) GPSR, in my opinion, unnecessarily limits the possibility of considering an intervention on a product as a substantial modification. I consider that Article 13.3(c) GPSR is intended for cases of malicious intervention by a third party who attacks the product (Recital 25 GPSR) or exploits a vulnerability. However, the repair, refurbishment and remanufacturing are carried out by a person for whom the consumer is responsible, so this circumstance fits poorly with Article 13.3(c) GPSRand Recital 25 GPSR.

78. Article 11 PLD is based on the principle of joint and several liability when several economic operators are liable for damage caused by a defective product. The joint and several liability of economic operators will be particularly useful in the case of damage caused by goods with digital elements, where it is very difficult for the injured party to hold the producer of the hardware or software liable. Recital 40 PLD continues along these lines. The principle of joint and several liability can also apply in the case of a substantial modification of a product through repair, refurbishment or remanufacturing, if the product was defective and the damage can be related to these processes. Then, according to Article 11 PLD, the injured party may take action against the original manufacturer and against the operator who has carried out the substantial modification. However, when the substantial modification of the product is performed by a third party outside the sphere of control of the original manufacturer and the damage can be attributed exclusively to the third

party, without the product being defective, I consider that this case should be referred to Article 12(2) PLD, whereby the liability of the original manufacturer would be annulled as it would be attributable to the third party who has repaired, refurbished or remanufactured the product.

79. In this scenario, where it may be difficult for the victim to succeed in their claim against the party responsible for the damage caused, it could be more beneficial to direct the claims against the original manufacturer and, if the latter can prove that the product was not defective and that the damage is exclusively attributable to the substantial modifier, they could take action against the liable party through the action for recovery which is not subject to harmonization in the PLD. This is a measure that can be particularly burdensome for the original manufacturer, but which can be defended to guarantee the indemnity of the victim and to avoid trial costs if the victim does not succeed in their claim, as we should not forget that the substantial modifier can rely on the cause of exoneration from liability in Article 10.1(g) PLD.

80. Another effect of the substantial modification is that the manufacturer's liability period is restarted by virtue of Article 14(2) PLD and Recital 44 PLD. This is a measure to increase the protection of the injured party, who will not be prevented from claiming liability from the substantial modifier because the limitation period has been restarted. However, in the case of a substantial modification of the product, the restarting of the limitation period does not free the original manufacturer from liability, and the latter may be liable if the substantial modifier succeeds in excusing its liability according to Article 10.1(g) PLD, although even then it will not be liable if the ten-year period of Article 14(2) PLD from the date the product was placed on the market has elapsed.

81. As regards repair, the possibility of this intervention being considered a substantial modification is more complicated because repairs tend to bring the product into conformity. However, if the repair aggravates the defect and consequently alters the parameters of Article 13(3) GPSR, such an intervention could also be classified as a substantial modification. The fact that the repair is carried out on a non-conforming product facilitates the application of Article 11 PLD because the liability for damage caused by the manufacturer's defective product will always allow the manufacturer to be held liable, either solely or jointly with the repairer. If the repair cannot be classified as a substantial modification, both the repairer and the manufacturer will be liable for the same period of time (Art. 14(2) PLD).

82. Finally, in terms of the liability of economic operators, the nuances implicit in the concepts of repair, refurbishment and remanufacture prevent them from being treated uniformly in this area, and we therefore advocate regulating the legal regime of the products resulting from these processes in a unified manner to guarantee the indemnity of injured parties and to provide legal certainty to the economic operators involved in these processes.