European Office

Ecodesign for Sustainable Product Regulation (ESPR)

VDMA position on the implementation of the Ecodesign for Sustainable Product Regulation (ESPR) and digital product passport (DPP)

Registration number
in the register of representative bodies:
976536291-45

May 2024

VDMA fully supports the objective of the Ecodesign for Sustainable Products Regulation (ESPR), which is to establish a framework to improve the environmental sustainability of products and to ensure free movement in the internal market. The mechanical and plant engineering industry is contributing with its technologies to this overall objective and certain products have already been addressed by the current Ecodesign Directive. We believe the Ecodesign Directive has been a regulatory success through its product-by-product approach and the possibility of industry experts input through the Ecodesign consultation forum. Harmonised standards remain the best tool to provide presumption of conformity and accommodate state-of-the-art.

We see a significant impact for our industry from the ESPR and upcoming ecodesign requirements, on a direct as well as indirect level. We therefore would like to seize the opportunity to highlight our position and recommendations on the future implementation of the ESPR for the capital goods industry. It is our target that the ESPR continues the regulatory success of its predecessor Ecodesign Directive, that it creates an opportunity for industry to improve the circularity and sustainability of their products and at the same time develop new business models.

VDMA recommendations on upcoming ecodesign requirements under the ESPR

The ESPR sets the goal to address products along their entire life cycle in terms of product lifespan and reliability, reusability, upgradability, reparability, maintenance, refurbishment, remanufacturing and recycling of products. Additional restrictions on critical substances, further requirements for energy and material efficiency, a mandatory proportion of recycled content and the calculation of a carbon and/or environmental footprint are possible upcoming requirements. While some of these ecodesign requirements are already common practice and market requirements in the mechanical engineering industry, e.g. service in repair and maintenance, we see challenges for us when it comes to other ecodesign requirements.

Follow the energy efficiency first principle

From the perspective of energy relevant product producers, the increase of energy efficiency should be the focus, when addressing ecodesign requirements. They are the most decisive factor to the environmental performance of our products. Our biggest impact is through our products and their usage. Manufactures constantly try to improve the energy efficiency of their technologies. It is crucial that the Commission will involve and closely cooperate with the Ecodesign Forum in the development of the Delegated Acts (DA). The development as well as the adoption procedure should be as transparent as possible and involve all stakeholders to benefit from the industry-expert knowledge on energy efficiency measures.

Ensuring effective enforcement through the market surveillance system of those energy efficiency measures will be of utmost importance for the success of the ESPR, providing good and fair opportunities for manufacturers and constituting the most effective regime to reach sustainability objectives as well as a level playing field. Market surveillance enforcement should thus be included in every thought on ESPR and form a corner stone in each delegated act.

R-strategies as the base

In principle, we believe that the so-called “R-strategies” (Refuse, Rethink, Reduce, Re-Use, Repair, Refurbish, Remanufacture, Repurpose, Recycle and Recover) are the foundation for sustainable products, innovative business models and as the basis for the successful implementation of the circular economy. Coming from the planning and design of products, the extension of the lifespan and extend to the recovery of raw materials.

Durability
While terms such as planned obsolescence are associated with short-lived consumer goods, the idea is at odds with the understanding of machines and industrial appliances. These are capital or investment goods whose explicit purpose is to be durable. Machines are the workhorse among products: often applied in extreme conditions, they are used intensively and are judged for their level of performance and reliability, because machinery's productivity is directly related to a manufacturing company's productivity. A machine manufacturer's competitiveness depends on these factors, which is why a market failure justifying regulatory intervention in this area is uncommon.

Market differentiation is possible at the level of contractually agreed service duration. This is competition benefiting the circular economy, with business models working in favour of extending lifetime. New technologies such as condition monitoring and predictive maintenance optimise the use of spare parts and reduce the chances of a premature end of lifetime. This evolving business model should be protected, rather than interfered with, from a regulatory point of view.

Repair
Repairability has been identified as an important lever to improve circularity in products. VDMA agrees that, wherever feasible, in considering the framework conditions easy, inexpensive and accessible repair options should be available. However, the debate is mainly informed through non-repairable consumer goods. As described above, there is a well-established services market including repair services in the industrial goods sector. Machines are repairable.

Depending on the product and repair required, they are conducted in-house, by an external specialised repair service or by the manufacturer. In most cases, the machine - as well as the repair service required - is more complex and involves more technical expertise than a B2C product. It is unlikely that any untrained person could conceivably be eligible to repair a machine because liability issues, other relevant safety legislation and required expertise limit the options of a manufacturer to allow access for repair. Importantly, it is frequently a time- and resource-sensitive process, which explains the establishment of a market around these services. It is of utmost importance to evaluate carefully when setting ecodesign requirements under the ESPR for B2B products on repairability and to keep their specifications and complexity in mind. We demand that only authorized professional repairer can carry out a repair on those products and it must be indicated, e.g. by a name plate, when a third party but not the original manufacturer itself carried out the repair.

Refurbish and Remanufacture
Within the mechanical engineering industry remanufacturing and refurbishment are central fields of action in order to make circular economy both ecologically and economically a successful business model. However, this also requires the right framework conditions and current regulatory obstacles need to be adapted. At the same time, there must be an incentive for customers to return the product as well as for the purchase of a remanufactured product.

We very much welcome that the ESPR defines these two approaches and sets a clear differentiation of them:

> ***Remanufacturing*** describes an industrial process for manufacturing a product from used products or used parts. The remanufactured product can be considered to be the same as a new product, i.e. that the product is made available on the market for the first time. Therefore, products resulting from remanufacturing must meet all requirements for placing on the market. The remanufacturer must therefore fulfil the obligations like any other manufacturer.

> Remanufacturing differs from the **refurbishment** process, where a used product is returned to a satisfactory working condition. The main purpose of refurbishment is to restore the product to a condition that existed at the time it was placed on the market, or at least to a condition in which the product can be used again without restrictions according to the manufacturer's specifications.

Where refurbishment is relevant at the component level and the ready-to-use product (end product/application), remanufacturing in our opinion is today only applicable for the final end product/application.

Uncertainty for the application of the two approaches arises in the mechanical engineering industry, particularly as a result of contradicting legislation. Remanufacturers, for example, need clear guidelines on how to deal with the fact that restricted substances covered by the RoHS Directive are contained in reusable components, thus preventing remanufacturing. In addition, uncertainty also arise from the REACH Regulation. Between the time a product is placed on the market for the first time and the placing of a product on the market that has been subjected to a remanufacturing process, new substance restrictions or new substances requiring information may have been listed.

Furthermore, there is no clear definition under the Blue Guide on the term “substantial modification”, as major part of a remanufacturing process. Future Delegated Acts (DA) would need to clarify and set out clear guidelines when it comes to a substantial modification. For example, in variable speed drives, which are already regulated under the current Ecodesign Directive and are foreseen to be addressed with new ecodesign measures under the ESPR, when the control board is replaced, but with the exchange comes new functions (e.g. ethernet interface, safety functions), the product would directly fall under the scope of the Cyber Resilience Act (CRA) and the Machinery Regulation (MR). In this case, the entire product would have to be CE approved again due to the control board exchange and at the same time fulfill all efficiency and material requirements. In those kinds of cases, companies need clear guidance on how to deal with potential inconsistencies or overlapping regulations (e.g. REACH/RoHs/CRA/MR) and remanufacturing/upgrading.

We suggest that within the preparatory study of products those kinds of inconsistencies need to be pointed out and clear guidance need to be set which principal or regulation the manufacture needs to follow. Considering also to make exceptions for particular parts and components so that not a full new CE approving process is needed at all time.

Furthermore, in mechanical engineering, the original manufacturer is concerned that another company will reprocess the product and will not sufficiently label it. We believe it is important that companies who produce a product by means of a remanufacturing process have to fulfil manufacturer obligations, in particular with regard to the marking of products. Numerous mechanical engineering companies have continuously optimized their products through research and development and the associated investments. This pays off with reputation in the market. Therefore, if the remanufacturer is not the original manufacturer, he must be subject to the same obligations as any other product manufacturer and thus requires CE conformity. In addition, there must not be any obligation for the original manufacturer to disclose technical documents in order to protect the know-how. Future product specific requirements under the DA would need to put those points into practice otherwise the original manufacture will be negatively affected.

A similar situation applies for refurbished products. The buyer of a refurbished product must be able to recognize that it is a refurbished product. This can be done, for example, by a "refurbished by" or with the name plate of the refurbisher. This makes it clear that the original

manufacturer did not carry out the refurbishment and that therefore the original manufacturer is not responsible for the product.

Recyclability
Machines consist mainly of metals. Recycling rates and recycled content rates for mass metals certainly point to a high recyclability of machines at the end of their lifetime. According to current data[1] most mass metals are largely recyclable and have a reuse rate of 58% for aluminium and 46% for iron. For precious and specialised metals, recycling rates are lower. However, those precious and specialised metals used in industrial applications suggests there is a market for retrieving such metals from machines at the end of their lifetime.

Trends such as lightweight construction increase the use of plastics parts over time. The industry is raising awareness regarding this trend and thinking through recycling options as soon as a new material or a new technology is developed. There are, of course, challenges regarding complex materials such as high technology composite plastics. Only solutions specific to the value chain can be successful in this respect. Broadly speaking, plastics applied in machinery are high-tech materials fulfilling a specific and customised function.

Electronic components are integrated into machinery due to the digitalisation of industrial processes. For electronic components, it is important to consider that there are grounds for exempting some specific machinery from component disassembly requirements. In extreme operating conditions, recycling-friendly fixing techniques can contradict the safety requirements of the machine. Electronic components enter separate recycling streams.

Recycled content
One of further new ecodesign requirements is the option of implementing recycled content requirements to stimulate secondary raw materials markets. We believe there is no “one-fits-all” approach. Depending on the product, current market situation and availability of the quality and quantity of a recyclate a recycled content quota might be helpful in some product groups (e.g. packaging with a short lifetime) but not applicable in others.

Several existing market barriers make it particularly difficult for the mechanical engineering industry to procure recyclates. Most manufacturers lack the supply chain power to be able to demand a specific recyclate that is certified to exactly fulfil the specifications needed. Without a guaranteed quality, the manufacturer cannot use the material reliably. Market dynamics could lead to a shortage of supply. Furthermore, there are doubts that recycled content measures could be properly surveilled by authorities. Before setting any requirements under the upcoming DAs, there is a need to first address the above-mentioned problems.

Substances of concern (SoC) under the ESPR
We fully support the goal of preventing substances classified as hazardous from being released into the environment. In this respect, regulation of substances classified as very hazardous is fundamentally correct. However, chemicals legislation like REACH and RoHS must remain the primary legislation for addressing chemicals and should be risk-based, not hazard-based.

We see a strong political will to regulate substances of concern under the ESPR and believe that when the Commission decides to set requirements for specific products under a DA on the circular economy perspective, they should follow the following approach: the Commission should identify through an assessment the substances in the product which would negatively affect the re-use and recycling of materials today in the product and then set only for those substances information requirements, in order to be able to track possible negative effects.

[1] Bookshelf - Statusbericht 2024 (statusbericht-kreislaufwirtschaft.de)

Whenever there is an adjustment of implementation measures, possible further developments in terms of material re-use and/or recycling must be considered.

Reduction of the carbon and/or environmental footprint
VDMA supports the use and development of reliable, coherent, understandable and verifiable environmental information, in particular on the carbon footprint. We see a strong demand to indicate the carbon footprint throughout the value chain. Many of our companies are already addressing this topic today, either on company or product level. However, the calculation of the carbon or environmental footprint for complex capital goods comes with many barriers.

Over a long period, the EU Commission has developed the Product Environmental Footprint (PEF) as a methodology for creating a life cycle analysis (LCA) for products. VDMA considers it positive that the PEF takes into account all environmental parameters along the life cycle of products. However, there are key challenges in accessing and obtaining the required data and its quality. As a small and medium-sized industry, manufacturers often lack the "supply chain power" to retrieve data along the entire supply chain in order to make a reliable statement about the life cycle of individual products or components. Access to data on components and parts and their impact on the environment is one of the biggest challenges. In addition, mechanical engineering companies often involves individually manufactured products. The number of individual components and suppliers is therefore very high and multiple sourcing, can result in an infinite number of possible combinations of purchased parts and configuration options for products. Thus, the calculation of a PEF or a LCA can easily reach impossible levels of complexity.

For those reasons, VDMA is against the mandatory application of the PEF methodology as long as there is no significant improvement in access to reliable, verifiable, robust and affordable data and tools. For the mechanical engineering sector, international connectivity and cooperation are key to enabling all stakeholders to compare products. When calculating the carbon or environmental footprint of products international standards should set the base. This is also important, as many member companies must already today or in the near future report under the CSRD. To be able to report scope 3 emissions, international standards are the way to go. The same argument applies from an export perspective. Manufacturers exporting their products into countries outside the EU where they have to report on emissions and substances (e.g. California Proposition 65), only international standards are being accepted.

In order to support companies and create coherence we demand that the Commission is setting up a European database for emission factors, including geographically specific emission factors, which companies can use and refer to when calculating their carbon footprint, not only under ESPR but also for other regulations (e.g. CBAM). This is of particular importance to make the carbon footprint comparable and to avoid, especially for SMEs, that companies must pay for costly data bases. Furthermore, we need an overall standardization request for Product Category Rules (PCR) to be able to make products comparable and transparent, when being regulated under the ESPR.

As mentioned earlier, ensuring effective enforcement through market surveillance carried out by authorities will be of the utmost importance for the success of the ESPR. We are firmly convinced that conformity assessment by the manufacturer alone is preferable to conformity assessment with the involvement of a third party. The latter should not be extended without further impact assessment to new products, as it will add costs to manufacturing and slow down innovation while not adding value. Third party certification is and cannot be a substitute for effective market surveillance. For mechanical engineering products, which are often manufactured as one-offs, the involvement of third parties makes it extremely difficult to introduce new technologies, innovative solutions, specific customer requirements and the tight schedule in such businesses. The Commission should rather establish requirements for appropriate procedures to ensure that reliable documentation and data are available,

including effective market surveillance. The information on the environmental impact would thus be part of the CE marking of a product.

Setting horizontal measures for product groups
We fear that horizontal product sustainability measures will be ambitious only on paper but will not actually lead to ambitious circular products as there is no one-size-fits-all solution. We strongly support to set ecodesign requirements on a product-by-product approach to take into account individual characteristics and specificities of products via the adoption of product-specific legislation based on the best available evidence through impact assessments, as well as transparent and inclusive consultation with stakeholders.

Differentiating consumer and industrial goods in the context of circularity requirements and aspects is crucial. Incentive structures, customer behavior, customer relations, pricing, material composition and market dynamics distinguish both sectors. Therefore, VDMA strongly advises against any horizontal legislative requirements for B2B products.

Intermediate products along the value chain
As the ESPR is for the first time not only addressing components and end-products but also intermediate products, like steel, iron, aluminium, and chemicals, we believe that a clear and structured approach is needed from the outset.

We see the potential that a meaningful exchange of information between different actors along the value chain on intermediate products will improve e.g. the quality of the product carbon footprint. The aim should be that primary data is passed on from the intermediate product producer in the DPP. If data is not provided by suppliers, the regulation must allow for 100% use of default values or Commission-accepted emission factors in the calculation of carbon footprints.
However, we are concerned about double regulation for intermediate products like steel, iron, and aluminium (e.g. EU-ETS, CBAM) and chemicals (REACH, RoHS) and that those efforts would lead to much higher prices for those products.

From a user and/or processor perspective of intermediate products, we raise the question on how final product manufacturers should deal with intermediate products regulated under the ESPR. There is a lot of uncertainty and a strong demand from our industry that the Commission needs to lay out clearly on how regulating intermediate products would work in practice under the ESPR and what kind of obligations the user and/or processor of the intermediate product would have in regard of the DPP. Meaning which information and data requirements would need to be added to the DPP once using the intermediate product. Furthermore, there needs to be a clear approach on how multiple DPPs would work in practice, e.g. should the DPP of the intermediate product (for example steel) merge into the DPP of a component (for example electric motor) or would they co-exist.

The digital product passport (DPP) as an opportunity for more sustainable choices and new business models

One obstacle for the circular economy is the high transaction costs to date. With the help of digitalization, existing information gaps in the circular economy can be overcome, enabling more informed decisions than before and creating new markets with specific use cases. This also addresses the above-mentioned challenges in the creation of LCAs for products.

If designed correctly, the digital product passport envisaged under the ESPR can make an important contribution to the circular economy and enable new business models in line with the "R's" of the circular economy.

Within this paper we don't want to assess the DPP system but rather what to consider in regard of the DPP data from the environmental and sustainability perspective:

- Information requirements should be limited to the essential requirements of stakeholders over the lifetime of a product. It is crucial that information collected will add value for the different actors in the value chain and the environmental performance of the product.
- Responsibilities to provide data must be shared between the different actors in the value chain, so that the burden of providing the sustainability data is not only on the manufacturer who is placing the product on the market.
- The DPP should follow the data minimisation principle (as much data as needed, as little data as possible). Access to information should be allowed on a need-to-know basis only.
- It is essential to ensure that company secrets are protected and that no company or product-relevant information can be passed on by a DPP to unauthorized third parties.
- The DPP should not only be limited to the legal requirements but should also offer the option of including voluntary and additional information from the manufacturer from the outset.

VDMA contact:

Dr. Sarah Brückner
Head of Department Environmental Affairs and Sustainability
Managing Director Waste Treatment and Recycling Technology
sarah.brueckner@vdma.org

Frederike Krebs
Policy Advisor Environmental Affairs and Sustainability
frederike.krebs@vdma.org