In this document, the European Environmental Bureau (EEB) provides technical input and policy recommendations for the revision of the End-of-Life-Vehicles (ELVs) Directive, which aims to tackle the environmental impacts of ELVs treatment in and outside the EU. The recommendations outlined below can help the automotive sector move towards more responsible and circular business models.

ELVs amount to 8 million tonnes in the EU a year and raise several environmental challenges for EU governments. Large amounts of waste could be cut down if national authorities put in place the right policies and followed the **Waste Management Hierarchy outlined in the EU's Circular Economy strategy**. According to this strategy, waste streams should be tackled at the source by improving the **design of vehicles at production stage**, which would help reduce most of the environmental impact of ELVs. Waste prevention measures should also look to eliminate the toxic content of this waste stream in order to:

- Incentivise durability and repairability;
- Facilitate recycling and avoid the circulation of toxic substances.

**The following issues are priorities for the EEB and its +150 member associations**, which aim to bring the ELVs Directive closer to an overarching policy of the EU's Circular Economy.

Even if important, we have intentionally not covered the issues related to illegal exports, registration and de-registration of vehicles, as these are well covered by other stakeholders.
Recycling targets - calculation methodology

The calculation methodology for the targets should be clear and the same across all Member States to better reflect the progress of the sector in terms of reuse and recycling and to make data more reliable and comparative. Any double calculation in two different registries should be avoided. Any residues coming from recycling operations should be deducted from the input to recycling in order to avoid inaccurate inflating of reported rates.

Additionally, a target for recovery should be taken out of the Directive. Reuse and recycling provisions should be better enforced, while recovery term is redundant and only drives incineration of materials, which does not improve circularity of the sector.

The recycling target today is high but does not incentivise the recycling of specific materials. It can be easily achieved by recycling the easiest-to-recycle materials (i.e., steel). In the shredding process that are highly entropic, valuable materials and mixed and then melted in furnaces to become alloys in metals, thus lost. To ensure recycling of other materials, especially light-weight critical raw materials it should be considered to set material specific recycling targets rather than overall weight-based targets. This is particularly the case for such critical raw materials as catalytic converters containing precious palladium or cobalt-containing batteries in the growing number of electric vehicles.

Lastly, the vague definition and calculation of recycling and recovery opens door to much incineration and backfilling of ELV materials that should instead be dismantled and recycled. This loophole is crucial to amend to bring the automotive sector closer to the circular economy.

Reuse and preparation for reuse

The ELV's Directive should better reflect the Waste Management Hierarchy, where prevention is the top priority, followed by reuse. The current target does not give enough attention to such activities as reuse or preparation for reuse. Not only should this difference from recycling be visible in reporting the rates, but also a separate mandatory target for reuse should be considered to incentivise this activity. The rules to incentivise reuse should also be harmonised across the EU to avoid market distortions.

We recommend binding requirements to ensure non-destructive disassembly and removal of all reusable modules from the vehicle before shredding, and to store them safely for reuse. The easiness and economic feasibility of dismantling before shredding depends on design for dismantling, therefore that should also be one of the minimum requirements for the design stage. Appropriate dismantling of layers and modules will also facilitate quality recycling. It also depends on a functioning IDIS (International Dismantling Information System). It might be necessary to consider additional funding schemes within the Extended Producer Responsibility (EPR) framework to finance those operations.
Eco-design principles

Greater attention will need to be given to how the design of vehicles can influence their full life-cycle impacts. Eco-design style measures already applied in other product groups, e.g. the Essential Requirements for the PPWD in the case of packaging, and the Ecodesign Directive for energy using products, demonstrate that minimum requirements can support broader material and energy efficiency objectives.

In the case of conventional combustion engines, the life cycle impacts have typically been most significant in the use phase. In this case, replacing an old vehicle with a new model might represent the most efficient option - but this would need to be assessed on a case by case basis. Data by the EEA for example shows that factors such as a growing demand for SUVs means that newer vehicles are not necessarily more efficient. We suggest considering a cap on fossil fuel consumption/CO2 emissions per vehicle that will put an end to the placement on the market of more energy guzzling cars.

In contrast, the transition towards zero emission vehicles while likely shift the burden to the production stage. In this case, issues around design for reuse, remanufacture, refurbishment, repair and recycling will become more important than ever. Eco-design measures are expected to be developed for batteries for EVs in the context of the revision of the Batteries Directive. However, these measures will not address other parts of the vehicle, chassis, vehicle management system, etc. where extending mileage before the end of life of vehicles may present the most desirable option from a climate perspective.

Encourage recycled content

In line with article 4.1c and to improve recycling, economic viability and the uptake of secondary raw materials (SRM), the revision of the ELVs Directive could set a mandatory recycled content rate. Such a target could be differentiated per material and staged over 2025 and then 2030 years.

However, of the circulation of hazardous substances into new products should be avoided. The current article 4.1c does not prevent this aspect, since more emphasis is put on quantity rather than quality, which might even incentivise the dilution of hazardous substances and their recirculation to new production.

The uptake of recycled contents should ensure the same standards apply for recycled materials as for virgin with regards to performance and chemical contents, and the potential incentives and obligations should clearly refer to this.
Extended Producer’s Responsibility

It is recognised that large amounts of ELVs are treated outside the country where they were first used or even outside the EU. Producer Responsibility Organisations (PROs) should have access to information regarding ELVs, while EU governments should make sure that information is exchanged transparently across all parties involved.

This is also stipulated in article 5 of Directive 2018/849, where the use of certificates is suggested – however not enforced well enough by member states.

For countries outside the EU, the situation might be more difficult, nevertheless, we encourage the Commission to consider any kind of secured system of financial flow where the EPR fee paid in the EU would follow the vehicle to its last end-of-life stage in order to finance its safe treatment, wherever it will take place.

EPR schemes for vehicles should closely follow the polluter-pays principle. Producers exempted from chemicals restrictions should nevertheless ensure full traceability towards downstream users and pay an additional fee to cover the costs of treating difficult and toxic substances, including the dismantling and proper segregation before shredding.

A harmonised chemicals inventory list

To improve the information flow from producer to recycler, a product information system shall be established in the form of an inventory of substances of concern, building on the existing sector database of the sector and supported by the new ECHA database. This would facilitate the end-of-life activities of ELVs’ handlers. It should require a list of all substances used in a vehicle to improve safe dismantling of the problematic ones (ie, PVC, PU, batteries, ABS, etc). A similar inventory requirement exists in the EU Ship Recycling Regulation. Additionally, the Directive’s provisions regarding safe pretreatment of components containing hazardous substances should be made stricter.

Electric vehicles’ (EVs) batteries

The revision of ELVs Directive should align closely with the upcoming revision of the Batteries Directive, as the market continues to experience a rapid growth in electric vehicles use and related use of batteries. The revision of the ELVs Directive should set appropriate rules on dismantling and repair information (IDIS) provided to end-of-life users by the producers and enable second life for batteries from ELVs.

In the current phrasing of the Directive the definition of “reuse” only considers the recovered components used for the same purpose. This strict definition may restrict the recovery of EV batteries and usage for other applications, thus potentially hampering the take-off of the second-life battery market.