

# Proposal for a Regulation on circularity requirements on the design of vehicles and the management of end-of-life vehicles

Facilitating the transition of the automotive sector to circular economy

- 56 Articles
- 11 Annexes
- < 17 implementing/ delegated acts
- Impact Assessment and 3 support studies



*DG ENV.B.3 – From waste to resources*

# Commitments under the European Green Deal and Circular Economy Action Plan for end-of-life vehicles

- EU policy on waste places the reduction of waste generation at its core through:
  - Changes in the design of products,
  - High quality recycling,
  - Uptake of recycled materials in new products

+ increased attention to decarbonisation and security of supply  
→ secondary raw materials

**European Green Deal** identified vehicles as one of the priority products

Vehicles are among 7 sectors selected as the key product value chains in the **Circular Economy Action Plan**

**Alignment with:**

- CRM Act proposal
- Battery Regulation

**For more details see:**

- Executive Summary
- Recitals: 1-7

# Problems and objectives

## 'Design circular'

make design and production circular



### Lack of circularity in design and production

Existing laws have not led to better eco-design of cars nor to an increase in use of recycled materials



### High dependency on imported raw materials

Automotive industry consumes vast amounts of raw materials, many of which (such as rare elements for electric motors) must be imported

## 'Use recycled content'

use more recycled content of plastics, steel, aluminium and CRMs in new vehicles



### Poor quality of vehicle waste treatment

Low-quality scrap steel, insufficient separation of materials, low plastics recycling rates

## 'Treat better'

improve treatment quality and retaining value



### Weak governance and lack of cooperation

Lack of financial accountability and not enough cooperation between manufacturers and recyclers



### 1/3 of vehicles by mass are not regulated

Lorries, motorcycles, buses are not covered by the current end-of-life vehicles rules

## 'Cover more vehicles'

extend the scope to cover motorcycles, buses, lorries and trailers

## 'Collect more'

to stop vehicles from going "missing"



### 1/3 of vehicles go "missing"

Around 3.5 million vehicles disappear without a trace from EU roads each year - and are exported, or disposed of illegally

## 'EPR'

provide harmonised incentives to increase collection, improve waste treatment and enhance cooperation



# Why merging the ELV and 3RTA Directives into a single Regulation?



**Directive 2000/53/EC**

**Legal base:**

**Key objective:**

**Type of provisions:**

On End-of-Life Vehicle (ELV)

192 TFEU (Environment)

- prevent waste from vehicles;
- promote reuse, recycling and recovery of ELVs;
- Improve environmental performance of all operators

This 'compact' Directive contains 13 Articles and 2 Annexes covering

- scope (N1,M1), prevention,
- collection and treatment,
- reuse and recovery,
- dismantling information and reporting

Except for the Annex II on hazardous substance exemptions, it has not been subject to any substantial amendments since its adoption in 2000

**Directive 2005/64/EC**

**Legal base:**

**Key objective:**

**Type of provisions:**

On the type-approval of motor vehicles regarding their reusability, recyclability and recoverability (3RTA)

114 TFEU (Single Market)

New vehicles to be

- reused and/or recycled > 85 %
- or reused and/or recovered > 95 %

National type-approval authorities to verify information provided by car manufacturers

**The 3R type-approval Directive is part of the Type-approval framework** → Regulation (EU) 2018/858, incl. 'lex specialis' market surveillance of vehicles, systems, components and technical units



A **single Regulation** based on the Internal market legal basis ensures:

- ❑ Modernisation and **harmonisation** of requirements
- ❑ **Coherent alignment** of design and end-of-life management aspects
- ❑ **Improve the functioning of the internal markets** related to:
  - **Consistency** in sustainability criteria at design and production,
  - **Improved conditions** for reuse, refurbishment and remanufacturing of parts/components,
  - **Secondary raw materials**, ensuring 'matching' of demand and secondary supply measures,
  - **Consistency** in organisation and financial responsibilities for producers (EU wide EPR).
  - ELVs and low-quality used vehicles exported out of the Union,


**For more details see:**

- Proposal: Page 2
- Executive Summary to the Impact Assessment
- IA Section 3.1











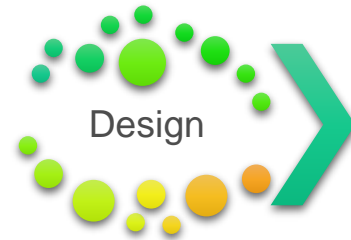
# Scope extension



 Phased-in approach to gradually cover lorries, buses and motorcycles

Current ELV Directive scope = M1,N1

?	L	Motor-cycle	
✓	M1	Passenger car	
?	M2	Small bus	
?	M3	Large bus	
✓	N1	Vans	
?	N2	Light trucks	
?	N3	Heavy trucks	
?	O	(Semi)-trailers	



End-of-life management



- Removal information to treatment operators

- Collection  
- Mandatory depollution in ATFs  
- Certificate of Destruction  
- Basic EPR requirements

- Roadworthiness (except for L category)



**Note: Scope extension applies 5 years after entry into force. All application dates of Art. 4-49 are for the existing scope!**



General scope exemptions:			
special purpose vehicles	other parts than in the base vehicle	vehicles produced in small series	vehicles of historical interest

**For more details see:**

- Article(s): 2, 55(2a)
- Recitals: 8,9,10,95
- Impact Assessment: M28,M30,M31,M32

# Chapter II – Circularity requirements

## Improving circular design of vehicles



### Modernisation

- Substance exemptions (Annex III) with ECHA involvement and socio-economic criteria
- Battery substance exemptions to Battery Regulation
- Definitions of 'post-' vs 'pre-consumer' waste to promote higher quality recycling and utilization post-consumer wastes



### Recycled content

- 25% for plastics, of which 25% closed loop
- Possibly for steel + study
- Feasibility study for aluminium and other CRMs




**Scope does not apply to:**  
- M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub>, O  
- L<sub>3e</sub> - L<sub>7e</sub>

### Design for removal

- Removal and replacement obligations for certain parts and components, in particular xEV batteries and e-drive motors

**For more details see:**  
• Article(s): 4-7  
• Annex I, II, III, VII  
• Recitals: 13-24  
• Impact Assessment: M1, M2, M5, M7, M9-M11



**NO (immediate) CHANGE**

- 3R rates under ISO22628 remain:
  - 85% reusable or recyclable;
  - 95% reusable or recoverable
- Update 3R methodology planned

# Chapter III – Obligations Manufacturers



Improving (circular design) information



**NO  
(immediate)  
CHANGE**

- Labelling of parts and components (Annex IV)



## Modernisation

- Information on removal and replacement of parts, components and materials
  - EV batteries
  - E-drive motors
  - Depollution (Annex VII – B)
  - Reusable and recyclable (Annex VII)
  - CRM containing
  - Digitally coded parts



## Recycled content declarations

- Plastics, steel, aluminium, magnesium, REEs

## Circularity Strategy

- Description of procedures in place
- End-of-life treatment technologies in place and progress
- Planned actions
- Changes in design



**Art 11 on information req. does apply to:**

- M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub>, O
- L<sub>3e</sub> - L<sub>7e</sub>

**For more details see:**

- Article(s): 8-12
- Annex IV, VII
- Recitals: 25-31
- Impact Assessment: M3, M4, M6-M11

# Chapter IV – End-of-Life Management – Extended Producer Responsibility (EPR)



EPR, governance and cooperation



## Modernised specification of EPR

- Manufacturers have responsibility for the waste stage of vehicles
- Alignment with Battery Regulation, esp. when EV battery and vehicle producer are the same entity
  - Register of producers
  - PROs
  - Authorisation
  - Specific scope financial responsibility manufacturers\*



## ELV specific requirements

- Explicit possibility 'individual' vs 'collective' responsibility (or hybrid approaches)
- Fair representation waste management operators
- ELV specific EPR fee modulation criteria
- Cost allocation mechanism to facilitate cross-border EPR

### Costs coverage\*:

- Collection
- Depollution
- Treatment cost, taking into account revenues of spare parts and materials
- Sufficient treatment capacity
- Awareness campaigns
- CoD notifications
- Reporting

### Basic elements of Art 16, 17, 19, 20 apply to:


- M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub>, O
- L<sub>3e</sub> - L<sub>7e</sub>

### For more details see:

- Article(s): 14-22
- Annex VIII
- Recitals: 34-43
- Impact Assessment: M22-25



# Chapter IV – End-of-Life Management – Collection and treatment

 Improve **quality** and quantity of treatment



## Modernisation

- New definitions for:
  - Removal
  - Recycling (WFD aligned)
  - Remanufacturing and refurbishing (ESPR aligned)
- Mandatory 'removal' of parts and components prior to shredding to facilitate:
  - Improved depollution
  - Reuse and remanufacturing
  - CRM recovery
  - Quality of output fractions
- Modernised treatment requirements (Annex VII)



## NEW

- Reuse incentives, including:
  - Labelling and warranty of removed parts for shipment for reuse
  - Repair offer with a reused, remanufactured or refurbished part
- Restriction to mix ELVs waste with WEEE and packaging waste
- Ban on landfilling untreated non-inert fractions
- 30% material recycling target for plastics



**NO  
(immediate)  
CHANGE**

- Basic responsibilities of ATFs
- Reuse + recycling (85%) and reuse + recovery targets (95%)
- No new material specific recycling targets, except for plastics


**Basic elements of Art 23, 27, 29 on treatment apply to:**

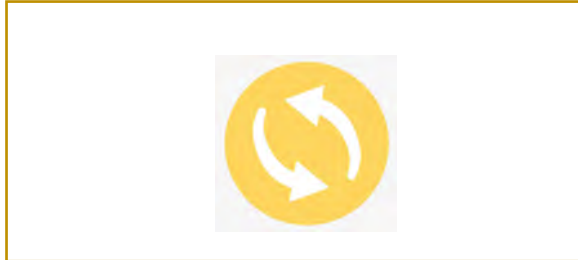
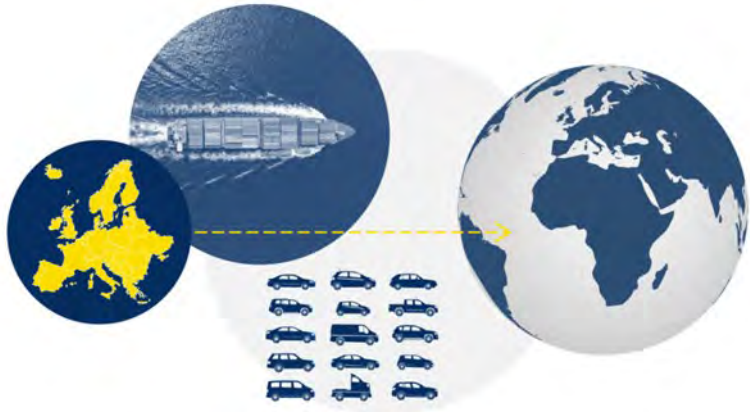
- M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub>, O
- L<sub>3e</sub> - L<sub>7e</sub>

**For more details see:**

- Article(s): 3,27-33
- Annex VII
- Recitals: 50-65
- Impact Assessment: M12-16

# Chapter V – Used vehicles and export

 Reduce 'unknown whereabouts'




## Modernisation

- Vehicle owner to demonstrate not to trade an ELV
- Annex I part A, criteria for technically and economically irreparable
- Annex I part B, additional indicative criteria



## NEW

- Specific export controls:
  - No ELVs
  - Roadworthy
  - Exporter to declare VIN and country of last registration
- Interoperable vehicle registration systems
- Automated verification and custom controls with:
  - Specific rules on suspension and release for export
  - Electronics systems (MOVE-HUB to EU single Window Environment for Customs)

 **NO (immediate) CHANGE**

- Concept of CoDs

**Scope does not apply to:**  
- L<sub>3e</sub> - L<sub>7e</sub>

**Art 38-45 does apply to:**  
- M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub>, O

**For more details see:**

- Article(s): 3,37-45
- Annex: I
- Recitals: 11,68-74
- Impact Assessment: M17-M21

**ELV?**  

**YES** **NO**

- Specific criteria to distinguish ELVs from used vehicles

# Chapter VI – Enforcement



Ensure compliance



## Modernisation

- Authorisation EPR
- Cooperation mechanism between member states
  - ATFs
  - Repair and maintenance operators
  - Other facilities
- Updated reporting:
  - On vehicle fleets and export
  - Achievement (new) targets
  - PROs
  - 5 year summary reports



## NEW

- Mandatory inspections (10% per calendar year):
  - ATFs
  - Repair and maintenance operators
  - Other facilities
- Member states to establish effective, proportionate and dissuasive penalties

**Basic elements of Art 46-49 on enforcement and reporting apply to:**

- M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub>, O
- L<sub>3e</sub> - L<sub>7e</sub>

**For more details see:**

- Article(s): 19,46-49
- Annex I, VIII
- Recitals: 75-81
- Impact Assessment: M17,M19,M22,M25



# What are the costs and revenues? (annual costs 2035)

## Note:

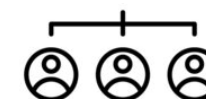
- There are significant shifts in costs and revenues between economic operators
- Loss of revenue potential for SME's in relation to export requirements
- Significant increases in revenue potential for SME's, recyclers
- Significant carbon savings

Manufacturers (type approval):	- 430 M€
Authorities (type-approval):	- 23 M€
Vehicle owners (export):	- 150 M€
Car dealers (less export)	- 570 M€
ATFs (removal costs):	- 530 M€
Shredders, PST (investments)	- 1,230 M€
Recyclers (end-processing):	- 440 M€
Reporting (ELV):	- 42 M€
<b>Total costs:</b>	<b>3,417 M€</b>

ATFs:	+ 490 M€
Shredders, PST (add. revenue):	+1,120 M€
Recyclers (end-processing):	+810 M€
<b>Total revenues:</b>	<b>2,420 M€</b>
<b>+ CO<sub>2</sub> savings*:</b>	<b>2,800 M€</b>



Net cost per new vehicle\*\*



\*\* After re-balancing of costs and revenues between actors

Manufacturers (3RTA):	26 €
Authorities (type-approval):	1.5 €
Vehicles owners (less export)	13 €
Car dealers	45 €
ATFs:	3.7 €
Shredders, PST (add. revenue):	9.3 €
Recyclers (net revenue):	-17 €
Reporting (ELV):	2.7 €
<b>Net cost per new vehicle**:</b>	<b>+/- 69 €</b>

Of which EPR costs to manufacturers: 16 €  
Total cost allocated to vehicle owners: 39 €

**For more details see:**

- Impact Assessment – Annex 8

\* Monetised against 2035 – DG MOVE handbook medium scenario of 227 EUR/ton CO<sub>2</sub>

\*\*\*Note the estimated number of cars newly placed on the market (N1,M1; 2035) does not equal the number of ELVs

# What are the benefits?



**12.8 million tons less CO2 emitted**

worth 2.9 billion EUR



**3.8 million more ELVs collected and treated in the EU**

including motorcycles, lorries, buses and vehicles that could have been exported or dismantled illegally



**350 tons of rare earth materials collected for reuse and recycling**

significantly contributing to the EU's strategic autonomy



**5.4 million tons of materials recycled at higher quality or re-used**

including plastics, steel, aluminium, copper and critical raw materials



**22,000 new jobs will be created in the EU**

including 14,000 jobs for SMEs, contributing to a stronger and modernised dismantling and recycling industry



**Lower prices for second-hand parts and components**

meaning it will be cheaper to maintain and repair vehicles

# More information



Proposal for a  
Regulation on  
end-of-life  
vehicles

Press release:

[https://ec.europa.eu/commission/presscorner/detail/en/IP\\_23\\_3819](https://ec.europa.eu/commission/presscorner/detail/en/IP_23_3819)

Dedicated website: [https://environment.ec.europa.eu/topics/waste-and-recycling/end-life-vehicles\\_en](https://environment.ec.europa.eu/topics/waste-and-recycling/end-life-vehicles_en)

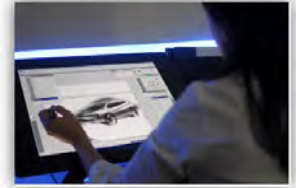
Questions and Answers :

[https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_23\\_3820](https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_3820)

Your feedback  
to the proposal  
at '**Have Your  
Say!**'

[https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12633-End-of-life-vehicles-revision-of-EU-rules\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12633-End-of-life-vehicles-revision-of-EU-rules_en)

open at least **until 24<sup>th</sup>** of November (or 8 weeks after translations)



# Thank you



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