

# Packaging Circular Economy

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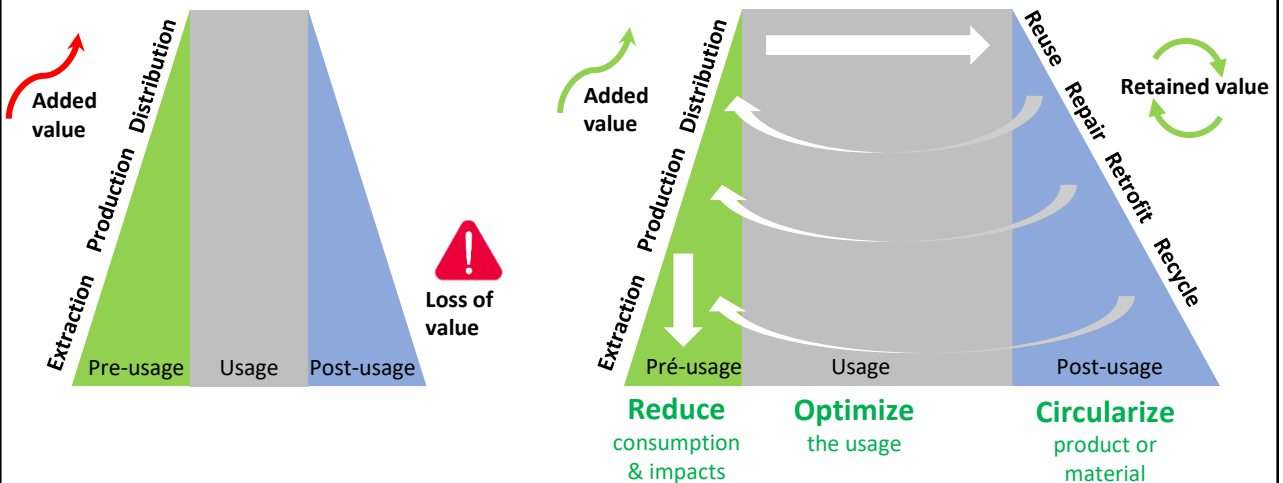
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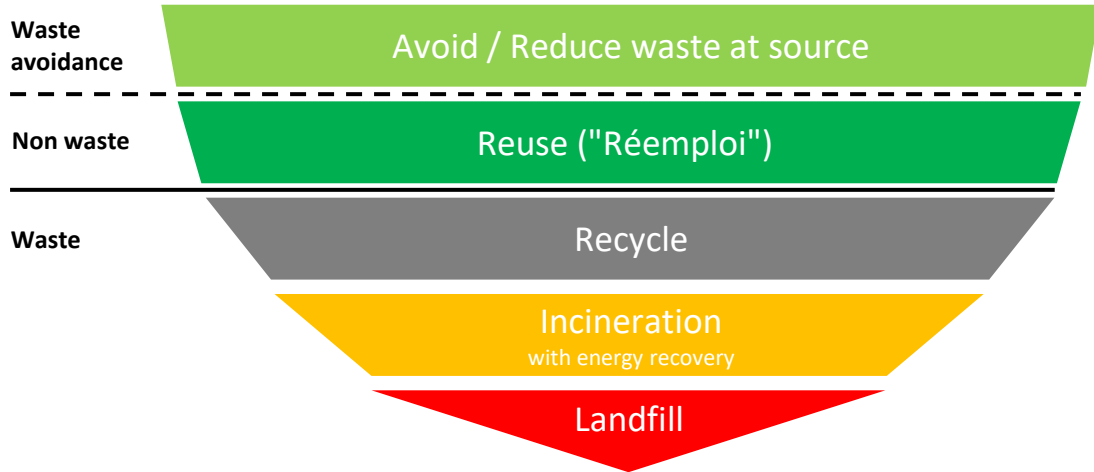
## Circular Economy: Definition

Throw-away society → Circular economy model?

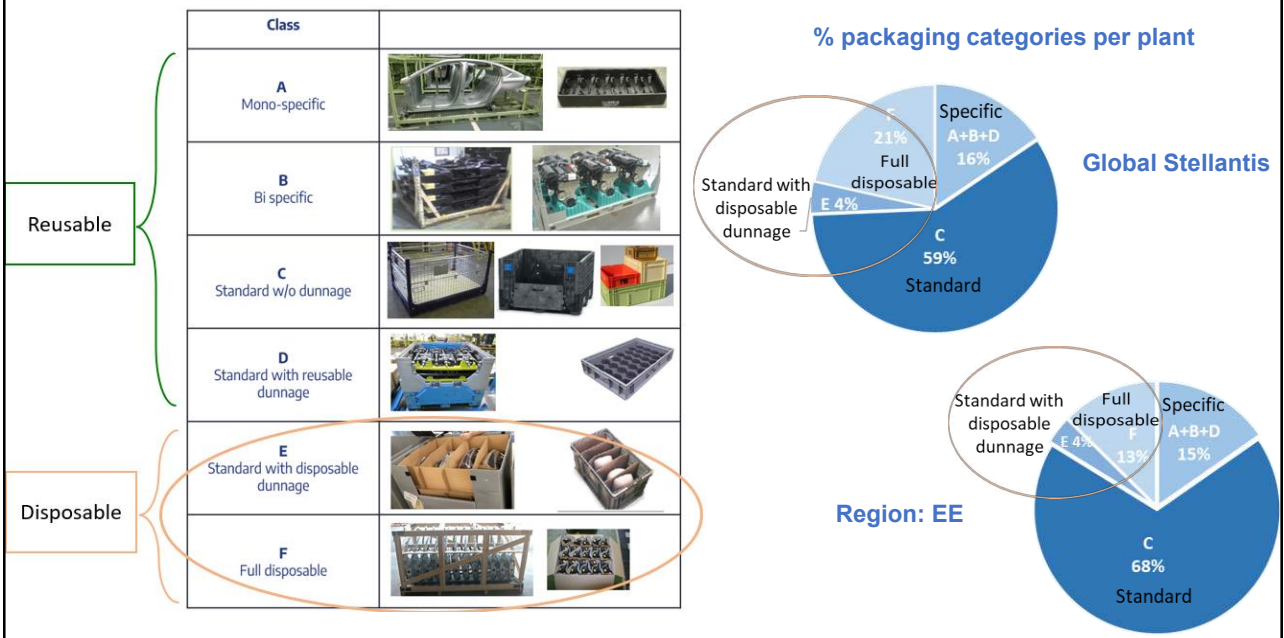
**Misleading : it's not a circle that can only be closed by recycling.**



## Circular Economy: The Waste Management Hierarchy



## What about automotive packaging? Example of Stellantis containers



## Types of waste generated

### Disposable packs (mainly overseas flows)



### Disposable dunnage



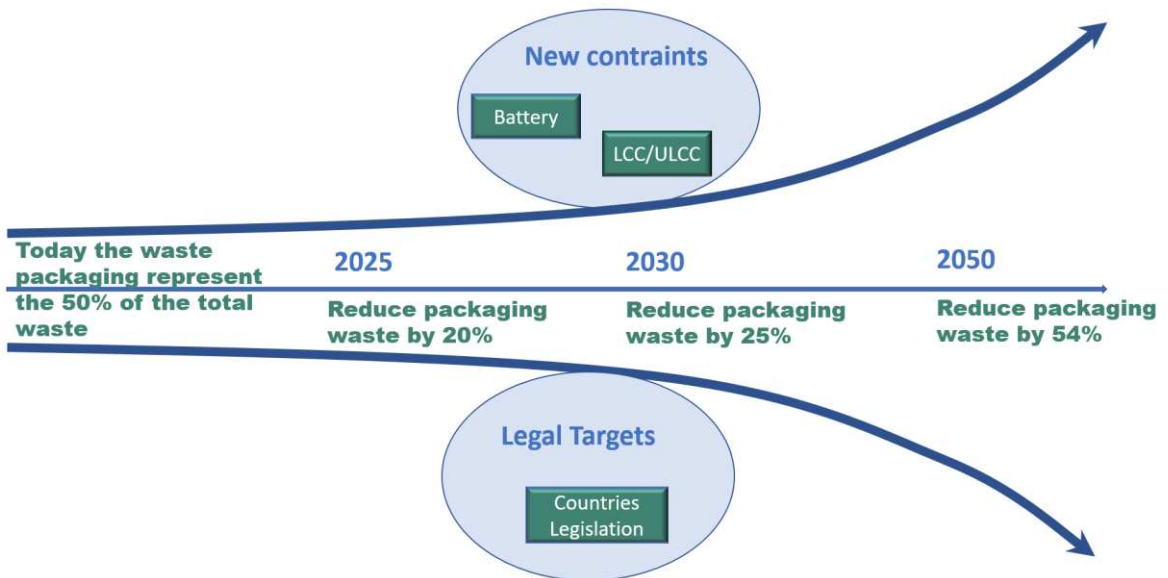
### Order of magnitude for car manufacturers' single-use packaging waste in Europe (by weight)

**20 to 30 kg of packaging waste / vehicle**  
(without suppliers upstream packaging waste)

Carton	~ 40 %
Wood	~ 40 %
Plastic	< 20 %
Other	< 10%

Recycling	~ 80 %
Incineration	~ 20%
Landfill	very few

## Stellantis Packaging Waste targets



# Packaging Regulations

Year	Date of introduction	Category	Area	R2/N2C - Origin	Content
2019	27th Feb 2019	Sorting / RECYCLING	FR	All	AGDC Article 103 - Decret 2019-1339
2020	1st January	WARNING / INFORMATION	FR	EU	EU Directive 2018/853
2020	1st April	PLASTIC	FR	All	PLASTIC Act 2020
2020	1st January	PLASTIC	FR	All	AGDC Article 11 - Decret 2020-152
2020	1st January	PLASTIC	FR	All	July 7/2022
2020	1st January	WARNING / INFORMATION	FR	All	Directive (EU) 2019/904 (SUP) - 2020/217
2020	1st January	WARNING / INFORMATION	FR	EU	Directive (EU) 2019/904 (SUP) - 2020/217
2020	1st January	REP	FR	All	AGDC Article 104 - Decret 2020-161
2020	1st January	REP	FR	All	AGDC Article 105 - Decret 2020-161
2020	1st December 2021	PLASTIC	FR	All	Spanish Law 22/2022, of 27 of December, regarding single-use packaging, packaging waste and material content
2020	1st January 2025	WARNING / INFORMATION	FR	EU	AGDC Article 11 - Decret 2022-748
2020	1st January 2025	WARNING / INFORMATION	FR	EU	AGDC Article 11 - Decret 2022-748
2020	1st January	RECYCLED WASTE / RE-USE	FR	All	AGDC Article 107 - Decret 2020-161
2020	1st January	PLASTIC	FR	All	AGDC Article 11 - Decret 2020-152
2020	1st December	PLASTIC	FR	All	AGDC Article 9 - Decret 2020-152
2020	1st December	PLASTIC	FR	All	AGDC Article 9 - Decret 2020-152
2020	1st December	RECYCLED WASTE / RE-USE	FR	All	AGDC Article 107 - Decret 2020-161
2020	1st December	RECYCLED WASTE / RE-USE	FR	All	AGDC Article 9
2020	12 months after entry into force (PPWR)	RECYCLED WASTE / RE-USE	FR	All	PPWR Article 21
2020	12 months after entry into force (PPWR)	RECYCLED WASTE / RE-USE	FR	EU	PPWR Article 20
2020	12 months after entry into force (PPWR)	RECYCLED WASTE / RE-USE	FR	EU	PPWR Article 20
2020	1st January	REP	FR	All	Directive 2018/853
2020	1st January	Sorting / RECYCLING	FR	All	Directive 2018/853 + PPWR Act. 46
2020	1st January	RECYCLED WASTE / RE-USE	FR	All	AGDC Article 107 - Decret 2020-161
2020	1st January	RECYCLED WASTE / RE-USE	FR	All	AGDC Article 11 - Decret 2020-152
2020	12 months after entry into force (PPWR)	WARNING / INFORMATION	FR	All	PPWR Article 11
2020	12 months after entry into force (PPWR)	WARNING / INFORMATION	FR	All	PPWR Article 11
2020	12 months after entry into force (PPWR)	WARNING / INFORMATION	FR	All	PPWR Article 13
2020	12 months after entry into force (PPWR)	WARNING / INFORMATION	FR	All	PPWR Article 16
2020	1st January	PLASTIC	FR	All	PPWR Article 7
2020	1st January	RECYCLED WASTE / RE-USE	FR	EU	PPWR Article 20
2020	1st January	Sorting / RECYCLING	FR	All	PPWR Article 6
2020	1st December	Sorting / RECYCLING	FR	All	Directive 2018/853 + PPWR Act. 46
2020	1st January	Sorting / RECYCLING	FR	All	AGDC Article 11
2020	1st January	PLASTIC	FR	All	PPWR Article 7
2020	1st January	PLASTIC	FR	All	AGDC Article 11
2020	1st January	RECYCLED WASTE / RE-USE	FR	EU	PPWR Article 20



Multiple national laws moving in the same direction...  
... but without harmonization.

# Packaging & Packaging Waste European Regulation: main impacts



Project. When validated, will be directly applicable without the need for national transpositions.

Eco-conception / Recycling	Reuse ("Réemploi")	Extended Producer Responsibility
<p><b>2025:</b> packaging weight and volume minimized (certification!)</p> <p><b>FR:</b> 0% unnecessary plastic packaging 100% single-use plastic recyclable</p> <p><b>2030:</b></p> <ul style="list-style-type: none"> <li>- 100% « designed for recycling »</li> <li>- Plastic packaging : 35% of post-consumer recycled content</li> </ul> <p><b>2035:</b></p> <ul style="list-style-type: none"> <li>- 100% recycled at scale</li> </ul> <p><b>2040:</b></p> <ul style="list-style-type: none"> <li>- Plastic packaging : 65% of post-consumer recycled content</li> </ul> <p><b>FR:</b> no more single-use plastic</p>	<p><b>FR:</b> % of reused packaging to be placed on the market (5% 2023 --&gt; 10% 2027)</p> <p>Obligation for reusable transport packaging (except for carton boxes):</p> <p><b>2025:</b></p> <ul style="list-style-type: none"> <li>- Within same Group in Europe</li> <li>- Between 2 players in same country</li> </ul> <p>Other cases (2 players in ≠ countries) :</p> <p><b>2030:</b></p> <ul style="list-style-type: none"> <li>- 30% transport packaging</li> <li>- 10% pallet wrapping/strapping</li> </ul> <p><b>2040:</b></p> <ul style="list-style-type: none"> <li>- 90% transport packaging</li> <li>- 30% pallet wrapping/strapping</li> </ul>	<p><b>2025:</b> EPR for Industrial and Commercial Packaging</p> <p>Responsibility not yet clear: placing on the market the packaging or the packaged product?</p> <p>Of little interest in our sector???</p> <p>Customers (and not producers) of packaged parts, already:</p> <ul style="list-style-type: none"> <li>- Sort their packaging waste (legal obligation)</li> <li>- Use private contracts for collection and recycling</li> </ul> <p>Strong administrative and economic risk</p>

## Examples of Renault Group actions (1/2): New types of reuse

### Project to reuse used wooden pallets

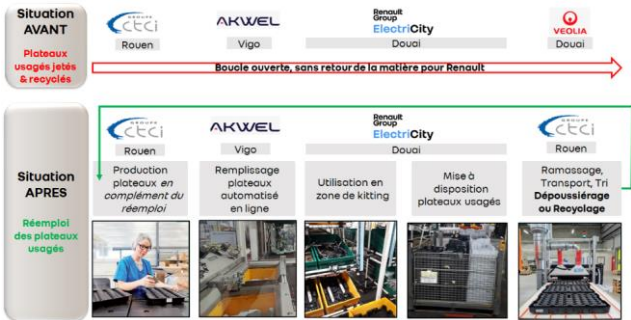


### Reuse of thermoformed plastic trays



Door handles  
Mégane E-TECH :

GALIA standard box  
+ specific tray



## Examples of Renault Group actions (2/2): Packaging Material Policy

- Document published in May 2023 for our bought-out parts suppliers and sent to more than 9000 contacts.
- **Informer about Renault Group targets:**
  - Reduce packaging waste by 20% before 2030
  - Gradually phase out single-use plastic
  - 100% of packaging genuinely recyclable
- **Design principles and choice of packaging material to encourage:**
  - Reuse
  - Waste reduction
  - Sorting and easy disassembly of materials, especially for all single-use items
  - Recycling

Guiding principles

Packaging design in general

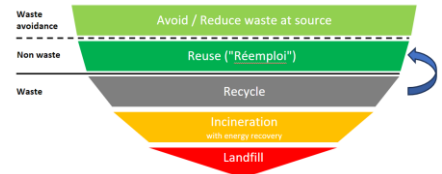
Plastic items

Plastic materials

Solutions to avoid

## Examples of Stellantis actions (1/3): Reuse / Retrofit of durable packaging instead of recycling

- **Reuse** of packaging exists since many years through the use of standard packaging.
- Today process is extended to specific packaging
  - End of production vehicles
  - Adapted to a new project (= **retrofit**)
  - Process fully integrated in our project
  - Good results



- **Example of recent project :**



Rear outer door panel



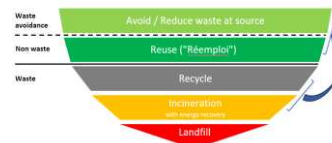
Front Fender



Hood Panel

- **Some roadblocks to be dealt with**
  - Normative changes
  - Availability in time with project

## Examples of Stellantis actions (2/3): Reuse of racks in Overseas Flows, Waste reduction through reuse



### Returnable wooden boxes (tested):



#### TESTED FLOW:

- Gearboxes from Europe to South America

#### PROS:

- Brings savings compared to strict one-way flow
- Aim is to maximize the reuse of wood
- Compatible with any flow (smooth or irregular)

#### CONS:

- "Only" reuse the wooden parts of the box
- Necessitates from sender and client a robust coordination

### Durable packaging (test ongoing):



#### TEST:

- Gearboxes from Europe to South America again, with a reuse opportunity

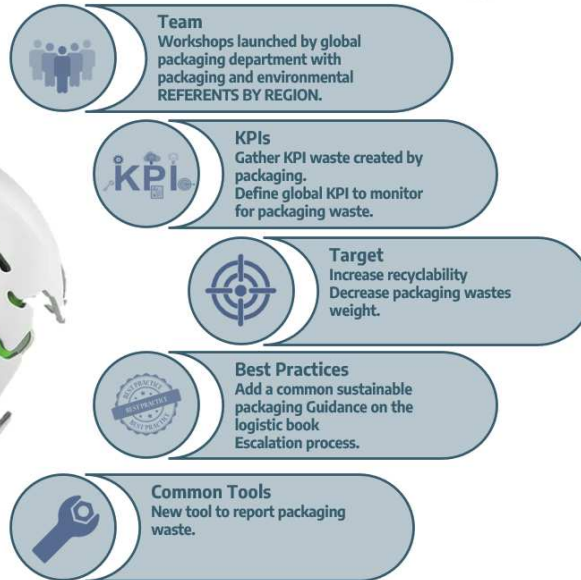
#### PROS:

- Brings savings compared one way flow
- No waste

#### CONS:

- Compatibility with irregular flow
- Necessitates from sender and client a robust coordination

## Examples of Stellantis actions (3/3): Global Packaging Waste Elimination WG



## Conclusion

- **Continue regulatory monitoring**
- **Strong impacts for Packaging**
  - New design
  - Innovative solutions
  - Data management and IT/IS
- **Collaborative work between all involved partners**
  - OEM
  - Parts suppliers
  - Packaging suppliers and distributors

