

EPR system performance in the European Union

A study commissioned by EUROOPEN

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europen

SHAPING A SUSTAINABLE
FUTURE FOR PACKAGING





Is the EU's **waste management infrastructure** today **fit for purpose** to deliver the PPWR's DfR and RaS objectives?



What these findings are built on



Incorporation of CIRCPACK recycling data

For the first time, our dataset covering 13 packaging materials is being made publicly available

Updated EUROSTAT data

Refreshed EUROSTAT data was made available and incorporated

System updates and changes

Danish EPR, Portuguese DRS, and more systems were updated or saw new fees

Deep dive into our own research

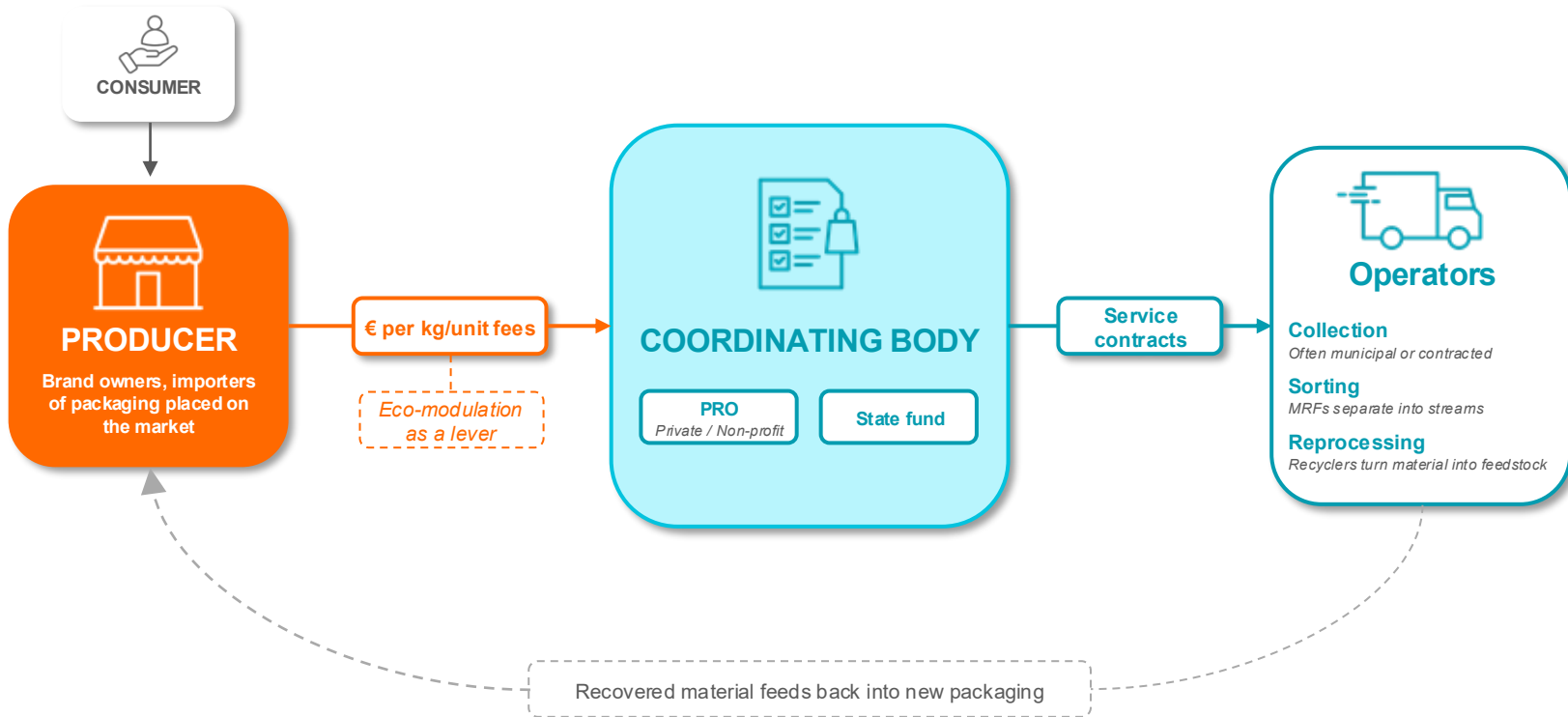
This study is published as a full analytical report, sufficient for assessing the efficacy of schemes.

EPR schemes in Europe



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How EPR schemes work



How EPR fees are structured



Material	€/kg As of				
	1/1/2022	1/1/2023	1/1/2024	1/1/2025	1/1/2026
Glass	€0.05	€0.06	€0.10	€0.10	€0.10
Paper and cardboard	€0.022	€0.012	€0.017	€0.02	€0.02
Plastic 2019-#-2023 (regular-rate)	€0.70	€1.05	n/a	n/a	n/a
Plastic 2019-#-2023 (lower-rate) ²	€0.44	€0.79	n/a	n/a	n/a
Plastic rigid**	n/a	n/a	€1.22	€1.22	€1.22
Plastic flexible / not specified**	n/a	n/a	€1.32	€1.32	€1.32
Aluminium	€0.16	€0.16	€0.20	€0.30	€0.34
Other metals	€0.23	€0.25	€0.33	€0.36	€0.36
Wood	€0.02	€0.01	€0.02	€0.02	€0.02
Beverage cartons	€0.64	€0.70	€0.84	€0.88	€0.92
Reusable packaging (except system tariff)	n/a	€0.01	€0.02	€0.02	€0.02
Reusable drinking cups	n/a	n/a	0.28	€0.28	€0.28
Other material types	€0.02	€0.01	€0.02	€0.02	€0.02
General rate	€0.77	n/a	n/a	n/a	n/a

Source: Verpact, 2026
*Per the Plastic Rate Differentiation 2.0 - more information is found on this below

Material	Classification (determined by predominant material)	€/kg as of	
		1/1/2025	1/1/2026
Steel		0.05350	0.06490
Aluminium		0.18650	0.24340
Paper & cardboard	Paper/cardboard	0.21430	0.25810
	Brick	0.38000	0.46790
Glass		0.01640	0.02010
Plastic	Bottle and vial in clear PET	0.53520	0.70000
	PE/PP bottle and container	0.58870	0.77010
	Dark/colored PET bottle and container	0.56190	0.73510
	Rigid packaging (excluding B&F) in PE/PP	0.58870	0.77010
	Rigid packaging (excluding B&F) in PET	0.64220	0.84010
	Flexible PE packaging	0.58870	0.77010
	PS rigid packaging	0.64220	0.80510
	Complex packaging or other resins excluding PVC	1.07030	1.40010
	Packaging containing PVC	1.60550	2.10010
	Unprocessed materials from renewable resources and sustainably managed with recycling channel or organic recovery in development (wood, cork)	0.21430	0.25810
Other materials	Without recycling channel and energy recoverable (textile, other materials...)	0.80280	1.05010
	Without recycling channel and non recoverable (stoneware, porcelain, ceramics...)	0.93660	1.05010

Source: CITEO; B&F; Bottles and Flasks

Material	Classification	HUF/kg as of		
		2024	2025	2026
Plastic	Excluding plastic carrier bags	219	219	219
	Carrier bags (excluding plastic carrier bags made of biodegradable plastic)	219	219	219
	Plastic carrying bag made of biodegradable plastic	219	219	219
Composite	Excluding composite laminated beverage containers	168	168	191
	Laminated beverage containers	168	168	191
Metal	Excluding metal cans for beverages	186	186	186
	Cans for beverages	186	186	186
Paper	-	173	173	173
Wood, material of natural origin	-	19	22	
Glass	-	77	107	107
Other	-	129	129	129

Source: Hungary: ÖKO-Pannon Nonprofit Ltd.

Material	Urban stream			
	2024 €/kg	2025 €/kg	2026 €/kg base	2026 €/kg bonus
Vidrio	0.0258	0.0694	0.0868	0.0781
Plastic	0.2960	0.4471	0.5432	0.4889
Paper and Cardboard	0.1477	0.2602	0.3104	0.2794
Beverage Cartons	0.2784	0.4376	0.5140	0.4626
Steel	0.1985	0.3547	0.5219	-
Aluminium	0.0658	0.0892	0.0399	0.0359
Wood	0.0996	0.0515	0.0599	-
Other Materials	0.2679	0.2821	0.5799	-

Source: Ponto Verde, 2026. VAT not incl.

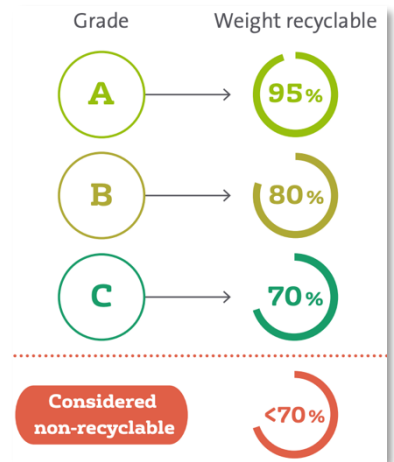
Promotion of packaging minimisation

Fee differentiation based on packaging format, e.g.

- Flexible vs rigid
- Multi- vs mono- material
- Multi- vs mono- layer

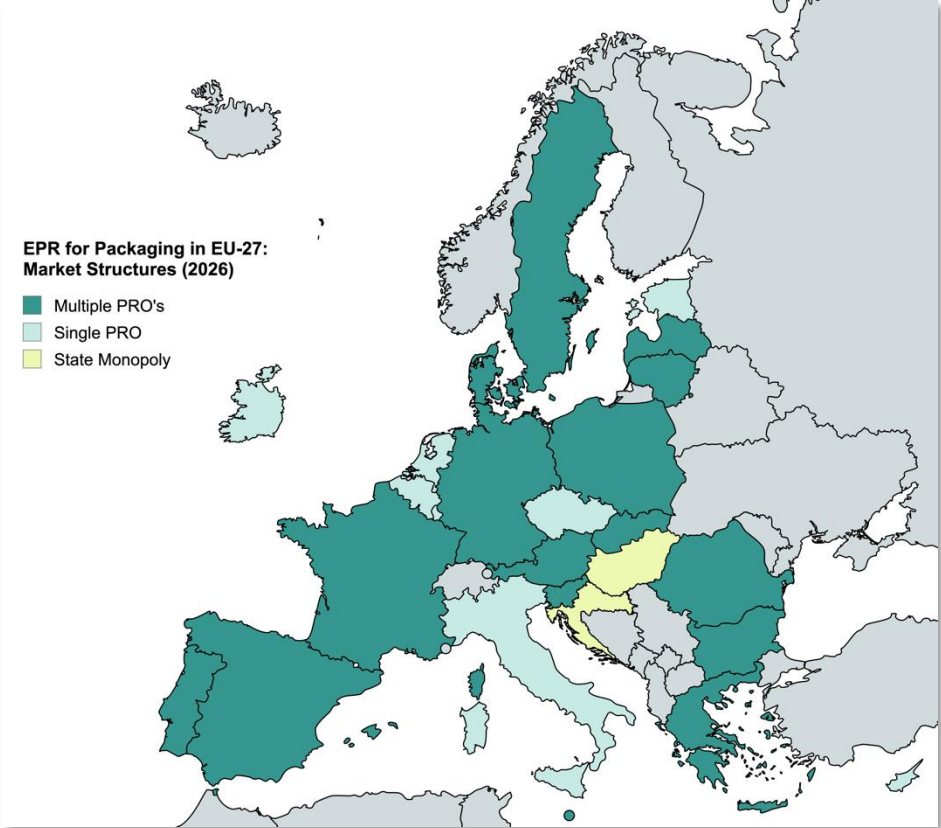
Bonus/malus associated with environmentally friendly changes

- Overall recyclability
- Labelling for separate collection
- Recycled content levies or rebates
- Specific colour or material uses



PPWR: Lower grade, higher fees

EPR Implementation across Europe

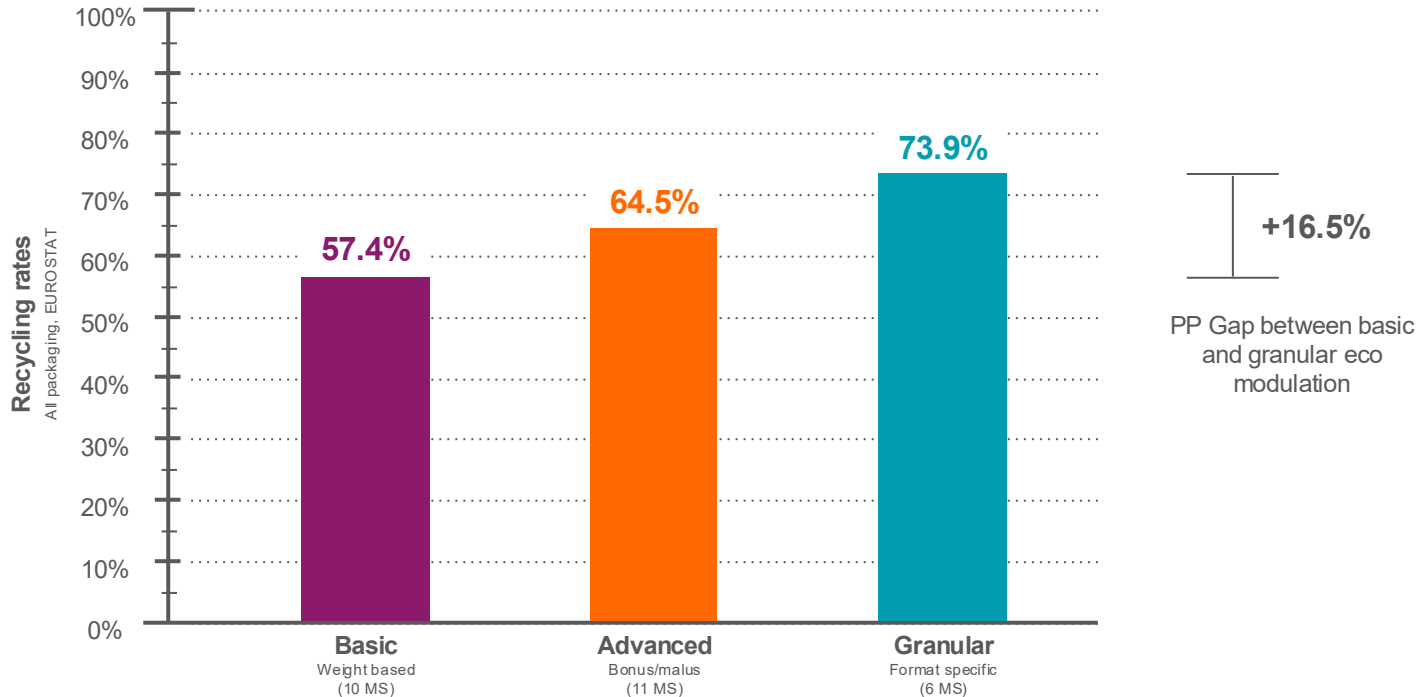


Findings



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➤ Fee structure, not fee level, is a significant indicator of recycling performance

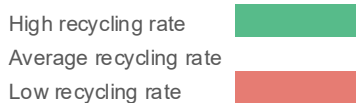


Infrastructural barriers



Underperformance is mostly driven by infrastructure, not packaging formats

Collection and sorting remains the **primary bottleneck** across the European Union



Country	Glass	Steel	Rigid Alu	Paper	Complex paper	Rigid plastics	Flexible plastics
Austria	Average	High	Average	Average	Low	High	Low
Belgium	High	High	High	Average	High	High	High
Bulgaria	Low	Low	Low	Average	Low	Low	Low
Croatia	Average	Low	Low	Average	Average	Average	Low
Cyprus	Average	Average	Average	Average	Average	Average	Low
Czechia	Average	Average	Low	High	Average	Average	Average
Denmark	Average	Average	Average	Low	Average	High	Average
Estonia	Average	Average	High	Average	Average	Low	Low
Finland	Average	Average	Average	High	High	Average	Average
France	Average	Average	Average	Average	Average	Average	Average
Germany	High	High	High	High	High	High	High
Greece	Low	Average	Low	Low	Low	Low	Low
Hungary	Low	Low	Low	Low	Low	Low	Low
Ireland	Average	Average	Average	Average	Average	Average	Average
Italy	Average	Average	Average	Average	Average	Average	Average
Latvia	Average	Low	Low	Average	Average	Average	Average
Lithuania	Average	Low	Average	Average	Average	Low	Low
Luxembourg	Average	Average	Average	Average	High	High	High
Malta	Average	Low	Low	Low	Low	Low	Low
Netherlands	High	High	Average	Average	Average	High	Average
Poland	Average	Average	Average	Average	Average	Low	Low
Portugal	Low	Low	Low	Low	Low	Low	Low
Romania	Low	Average	Low	Low	Low	Low	Low
Slovakia	Average	Average	Low	Low	Low	Low	Low
Slovenia	High	Low	Low	Low	Low	Low	Low
Spain	Average	Average	Average	Average	High	Average	Average
Sweden	High	Average	Average	Low	Low	High	Average

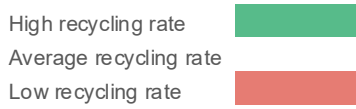
Infrastructural barriers



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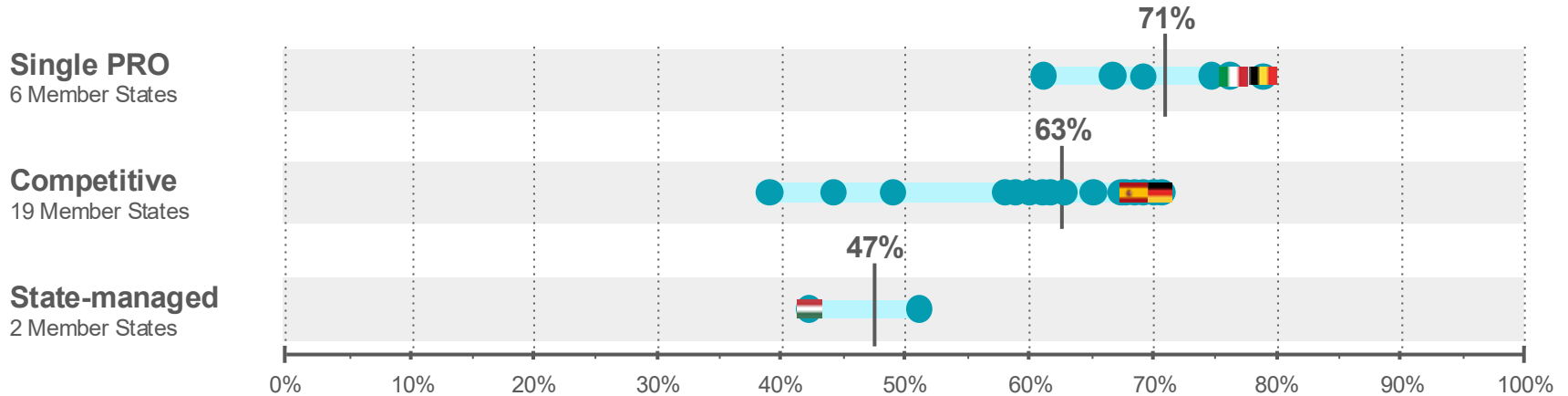
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Austria	Light	Light	Light	Light	Light	Light	Light
Belgium	High	High	High	High	High	High	High
Bulgaria	Low	Low	Low	Low	Low	Low	Low
Croatia	Low	Low	Low	Low	Low	Low	Low
Cyprus	Low	Low	Low	Low	Low	Low	Low
Czechia	Light	Light	Light	Light	Light	Light	Light
Denmark	Light	Light	Light	Light	Light	Light	Light
Estonia	Light	Light	Light	Light	Light	Low	Low
Finland	Light	Light	Light	Light	Light	Light	Light
France	Light	Light	Light	Light	Light	Light	Light
Germany	High	High	High	High	High	High	High
Greece	Low	Low	Low	Low	Low	Low	Low
Hungary	Low	Low	Low	Low	Low	Low	Low
Ireland	Light	Light	Light	Light	Light	Light	Light
Italy	High	High	High	High	High	High	High
Latvia	Light	Light	Light	Light	Light	Light	Light
Lithuania	Light	Light	Light	Light	Light	Light	Light
Luxembourg	Light	Light	Light	Light	Light	Light	Light
Malta	Low	Low	Low	Low	Low	Low	Low
Netherlands	Light	Light	Light	Light	Light	Light	Light
Poland	Light	Light	Light	Light	Light	Light	Light
Portugal	Low	Low	Low	Low	Low	Low	Low
Romania	Low	Low	Low	Low	Low	Low	Low
Slovakia	Light	Light	Light	Light	Light	Light	Light
Slovenia	Light	Light	Light	Light	Light	Light	Light
Spain	Low	Low	High	Low	High	High	High
Sweden	Light	Light	Light	Light	Light	Light	Light



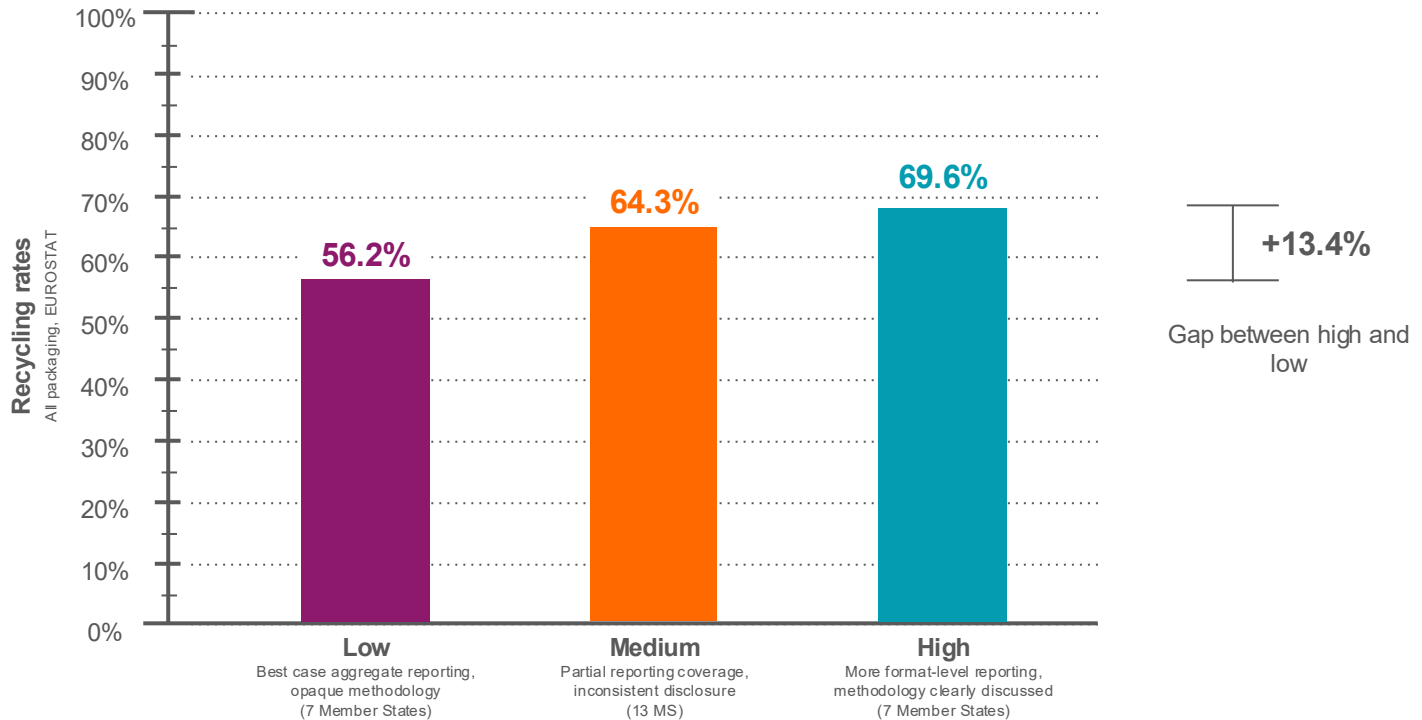
Recycling rates detail CIRCPACK household material flows. Averages are shown per material category.

Governance quality matters more than governance model



Avg

High-transparency systems perform better by 13.4 percentage points



➤ The current system doesn't facilitate tracking where the money goes, and what it improves



No consistent public reporting requirement on downstream allocation across the EU.

PROs disburse to municipalities or contractors without comparable downstream visibility.

What ties high performers together



Four design parameters separate the high performers

1. Granular fee structures

Eco modulation which targets specific materials or formats, and recycled content, directly

2. Consolidated operational responsibility

A single coordinating body with accountability for the success of the value chain

3. Format level data reporting

Reporting at format level, not only broad material categories. This is a precondition for all findings.

4. Transparent methodology disclosure

Publicly documented methodologies and rates that can be mapped to physical recovery.

System examples



	Glass	Steel	Alu	Paper	C. Paper	R. Plastics	F. Plastics
	93%	100%	91%	84%	45%	51%	29%

Belgium

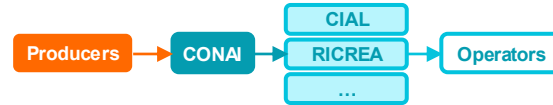
Single-PRO (FostPlus)



	Glass	Steel	Alu	Paper	C. Paper	R. Plastics	F. Plastics
	74%	84%	62%	74%	36%	40%	20%

Italy

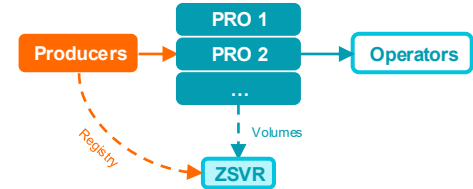
Single-PRO consortium (CONAI)



	Glass	Steel	Alu	Paper	C. Paper	R. Plastics	F. Plastics
	80%	92%	94%	85%	45%	51%	19%

Germany

Competitive multi-PRO system



	Glass	Steel	Alu	Paper	C. Paper	R. Plastics	F. Plastics
	34%	30%	42%	64%	22%	24%	2%

Hungary

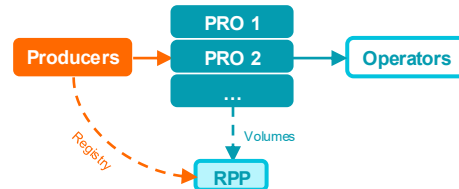
State-run monopoly (MOHU)



	Glass	Steel	Alu	Paper	C. Paper	R. Plastics	F. Plastics
	64%	72%	61%	70%	39%	37%	15%

Spain

Competitive multi-PRO system



Closing



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➤ The PPWR fills several of the structural gaps this study identifies

1. Harmonised Design for Recycling calculations

Looks to replace today's patchwork of schemes with one A/B/C method.

2. Mandatory eco-modulation

Codifies what the highest-performing systems already do

3. Extended reporting obligations

Move toward the format-level data granularity this study links to better outcomes

Four achievable design parameters



1. Granular fee structures

Eco modulation which targets specific materials or formats, and recycled content, directly

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3. Format level data reporting

Reporting at format level, not only broad material categories. This is a precondition for all findings.

4. Transparent methodology disclosure

Publicly documented methodologies and rates that can be mapped to physical recovery.

EPR **system design choices**, not **fee levels**,
get Member States closer to the PPWR's
targets.

THANK YOU!

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