

Legislation & Market for Glass Containers

The Recycling Imperative

9th April 2019

Joint FERVER – FEVE Meeting in Origgio, Italy

Key Speaking Points

- Implementation of the Packaging & Packaging Waste Directive
- Revision of the Packaging & Packaging Waste Directive
- EU Plastics Strategy & ramifications for glass
- Collection & Recycling of Glass Containers

***Implementation of the
PPWD***

ISSUE	DEADLINE	LEGAL TEXT	LEAD INSTITUTION	PRIORITY
Implementing act on the calculation methodology for the recycling targets	31.03.2019	PPWD	Commission & Member States	HIGH
Delegated act to calculate loss rates for different materials in view of the revised measurement point for real recycling rates	31.03.2019	WFD	Commission	HIGH
Implementing act for a common methodology to report on reuse	31.03.2019	WFD	Commission & Member States	HIGH
Implementing act for calculation rules to adjust recycling targets with reusable sales packaging figures	31.03.2019	PPWD	Commission & Member States	HIGH
Review the Essential Requirements for packaging, with a legislative proposal	31.12.2020	PPWD	Commission	HIGH
Guidelines on harmonised eco-modulated EPR fees	n/a	WFD	Commission	HIGH
Reporting on separate collection measures and challenges	31.12.2021	WFD	Member States	MEDIUM
Assess measures to encourage reuse and possible legislative proposal to encourage reuse of products	31.12.2024	WFD	Commission	MEDIUM
Review of reuse data and possible legislative proposal to encourage reuse of packaging	31.12.2024	PPWD	Commission	HIGH
Review targets for packaging, with a possible legislative proposal	31.12.2024	PPWD	Commission	MEDIUM
Ensure that all existing EPR schemes comply with the new minimum requirements for EPR	31.12.2022	WFD	Member States	HIGH
Address exemptions and conditions for the presence of heavy metals in packaging	Before June 2023	PPWD	Commission	HIGH
Ensure EPR schemes are established for all packaging	31.12.2024	PPWD	Member States	MEDIUM

New reporting rules on packaging recycling

- No longer the weight of materials collected for recycling minus significant losses
- Policymakers want to be more ambitious and more realistic about their recycling rates
- Now: the weight of **packaging waste recycled** shall be calculated as the weight of packaging that has become waste which, having undergone all necessary checking, sorting and other preliminary operations to remove waste materials that are not targeted by the subsequent reprocessing and to ensure high-quality recycling, **enters the recycling operation whereby waste materials are actually reprocessed into products**, materials or substances.

This point is translated as...

Material	Calculation Point
Glass	Sorted glass that does not undergo further processing before entering a glass furnace or the production of filtration media , abrasive materials , glass fibre insulation and construction materials .
Metals	Sorted metal that does not undergo further processing before entering a metal smelter or furnace
Plastic	Plastic separated by polymer that does not undergo further processing before entering pelletisation, extrusion, or moulding operations; Plastic flakes that do not undergo further processing before their use in a final product.
Paper / board	Sorted paper that does not undergo further processing before entering a pulping operation

Considerations for glass

- Collection for recycling > Sorting for recycling
- The CTP is not recognised as the « recycling operation »
- Ambitious (even more so for other materials?)
- Very ambitious for some countries, depending on what is a « loss »
- Delegated Act setting Average Loss Rates on materials still to be seen...

Towards more traceability

- Extended Producer Responsibility schemes used to have full control over the data « collection for recycling » and only took into account « significant losses » - lack of harmonised data across EU
- All end-of-waste material = recycling
- Non end-of-waste material may = recycling if it goes to specified destinations
- Glass recycling is destination-based, like for End-of-Waste – at the output of the CTP
- Now the Cullet Treatment Plants become key
  - To monitor weight of materials and losses per country of origin (input material)
  - To monitor the destination of the material (output material)

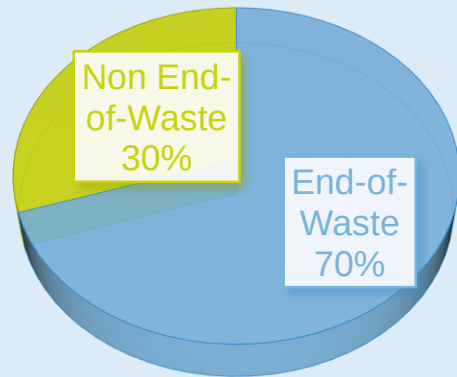
Clarify our waste flows

- In 2016, FEVE reported an EU average of 74% glass collected for recycling
- This means that 26% are not collected for recycling (i.e. end up in landfill, incineration, littering, breakage etc...)
- The new reporting rules will not change this – only improved collection!

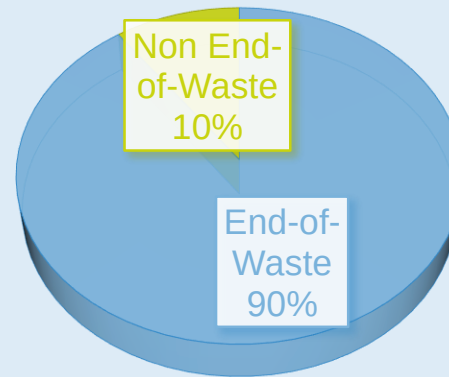


Where does glass collected for recycling go? 3 basic models

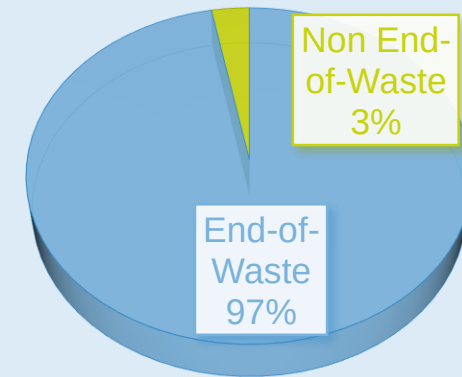
**GLASS COLLECTED
FOR RECYCLING – LOW
PURITY COLLECTION**



**GLASS COLLECTED
FOR RECYCLING – EU
AVERAGE**

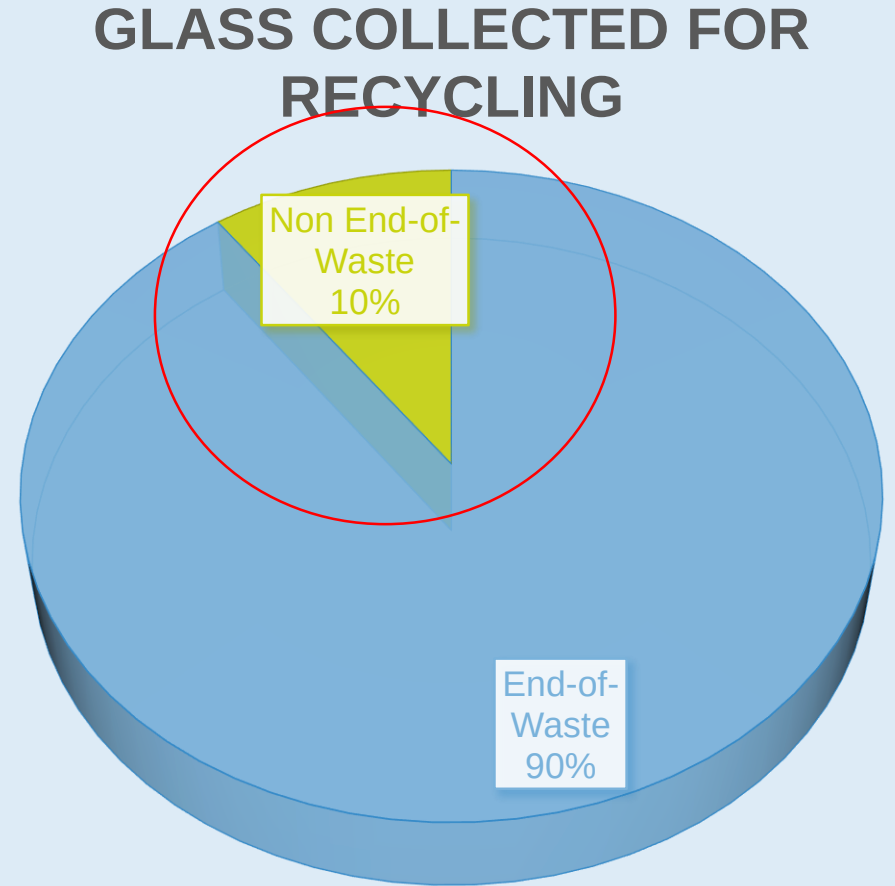


**GLASS COLLECTED
FOR RECYCLING – HIGH
PURITY COLLECTION**



Where does non end-of-waste glass collected for recycling go?

- How much material ends up in landfill or incineration?
- How much material ends up in applications that would not be considered to be recycling?
- How much material goes to filtration media, abrasive materials, construction materials, glass fibre insulation?
- What about backfilling?



The implementation challenge

- Establish our position as the **measurement method** to achieve reporting at the **calculation point**
- Support our arguments with verified data
- Specify the losses & recycling destinations of the material



What needs to happen

- 70% glass recycling by 2025 / 75% by 2030
  - According to new rules (with some derogations...)
  - More ambitious (but more accurate picture of reality?) than present day calculation methodology
- Improve quantity & quality of collection
- Limit CTP losses going to landfill (or other non-specified recycling destinations)
- Optimise sorting systems & technology to limit losses and improve quality, even in countries with poor collection systems
- Optimise cullet use in (container) glass furnaces

Industrial reality vs. political reality

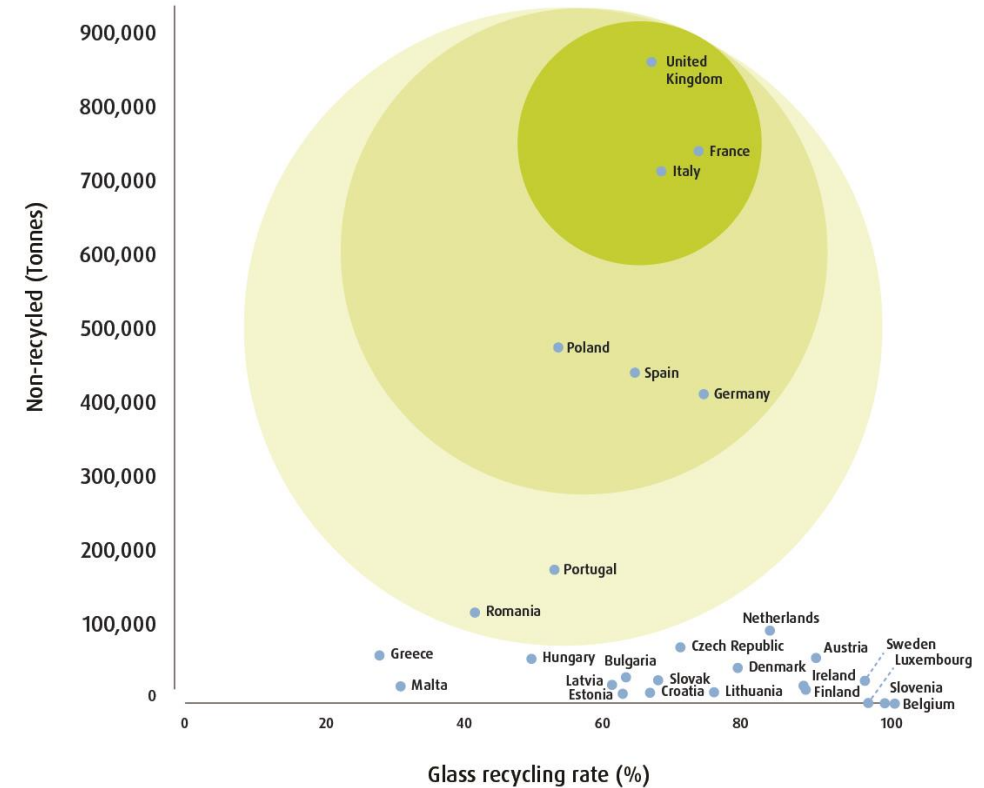
- Targets are by Member State
- Major yield gaps are not reflected in a target
- Double battle

TARGETING POTENTIAL FOR COLLECTING AND RECYCLING MORE GLASS ACROSS THE EU

● The greatest potential for collecting and recycling glass (600kT and above)

● The mid potential for collecting and recycling glass (300kT and above)

● The lower potential for collecting and recycling glass (100kT and above)



Source: Based on data from Eurostat

A close-up photograph of a laboratory rack filled with test tubes. The tubes are arranged in rows, with some containing a bright green liquid. In the foreground, a white pipette tip is visible, angled across the frame. The background is slightly blurred, emphasizing the tubes and the pipette tip.

Revision of the PPWD

Essential Requirements

- Laid out in 1994, backed by standards in early 2000s
- Set the market access conditions for packaging
- Launch of a 2 year study by the Commission to assess their effectiveness and whether they are fit-for-purpose
- Improving design for reuse and promoting high quality recycling, as well as strengthening their enforcement
- **Opportunity:**
  - Essential requirements in the 1990s were largely driven by the concept of “lightweighting”
  - Now, “recyclability” and “reusability” are the words of the day

Market access conditions to change

- Glass needs to be exemplary on recyclability
  - Essential Requirements: set the threshold as high as possible
    - Permanent material
    - Effective recycling
  - Extended Producer Responsibility:
    - Eco-modulated fees
- Market competition on effective recycling / recyclability of container packaging
- Reuse is also in the pipeline:
  - Member State data split between sales packaging and other packaging
  - COM to examine reuse data and propose policy (legislation?) to encourage reuse

In a challenging context

How do we guarantee
that

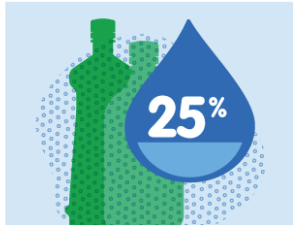
Does not become only
(EU-wide and nationally)



EU Plastics Strategy & Ramifications

The market pull

HOME FARMING MANUFACTURING **SUSTAINABLE PACKAGING** CONSUMERS POLICY RECOMMENDATIONS LIBRARY



25% recycled PET in soft drinks and water bottles

The European Commission has announced that by 2025, producers will be required to use 25% recycled PET in soft drink bottles.

Cambridge insight, policy influence, business impact

The University of Cambridge Sustainability Leadership Centre (CSL) brings together business, government and academia to find solutions to critical sustainability challenges.

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Head Office
1 Trumpington Street
Cambridge, CB2 1QA
United Kingdom
T: +44 (0) 1223 768650 E: info@csl.cam.ac.uk

EU Office
The Pericles Building
Rue de la Science 23
B-1050 Brussels, Belgium
T: +32 (0) 284 81 19
E: info@eu.csl.cam.ac.uk

South Africa
PO Box 393
Cape Town 8000
South Africa
T: +27 (0) 21 529 9802
E: info@sa.csl.cam.ac.uk

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NESTLÉ COMMITMENT ON RECYCLED PLASTICS

WE ARE COMMITTED TO INCREASE THE PROPORTION OF RECYCLED PLASTICS IN OUR PACKAGING BY 2025. IN THE EUROPEAN UNION WE WILL START WITH:



Category	Target	Pledge
BOTTLES	25%	Pledge: 25% rPET by 2025
PET LAYER IN LAMINATES	25%	Pledge: 25% rPET by 2025
CAPS ON GLASS JARS AND TINS	30%	Pledge: 30% rPP by 2025
TRAYS OF MEAT PRODUCTS	50%	Pledge: 50% rPET by 2025
SHRINK FILMS FOR DISPLAY TRAYS	50%	Pledge: 50% rPE by 2025

* Secondary raw materials need to be available in sufficient quantity and quality.

EUROPEAN SOFT DRINKS INDUSTRY SETS AMBITIONS FOR PACKAGING MORE SUSTAINABLE



producers will be a driving force for:



INNOVATING
and investing further in eco-design and research on non-fossil based packaging materials.

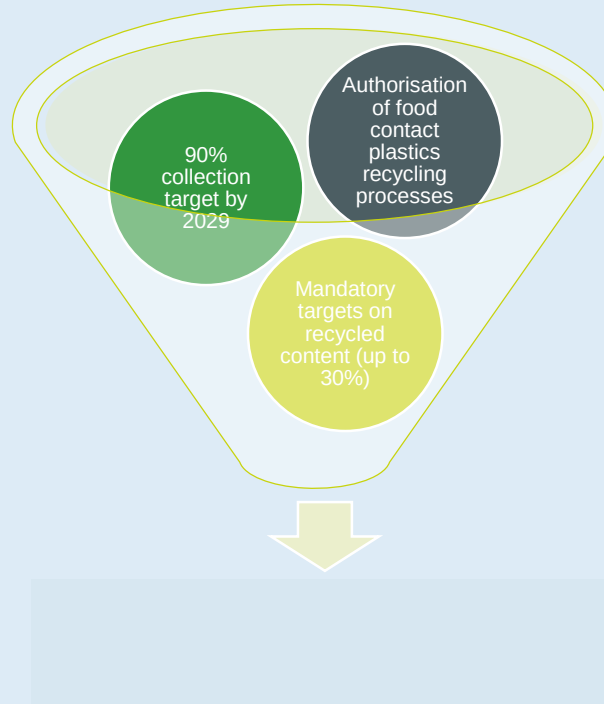


ENGAGING
with consumers and supporting initiatives that will encourage proper sorting and disposal of packaging.

EUROPEAN FEDERATION OF BOTTLED WATERS

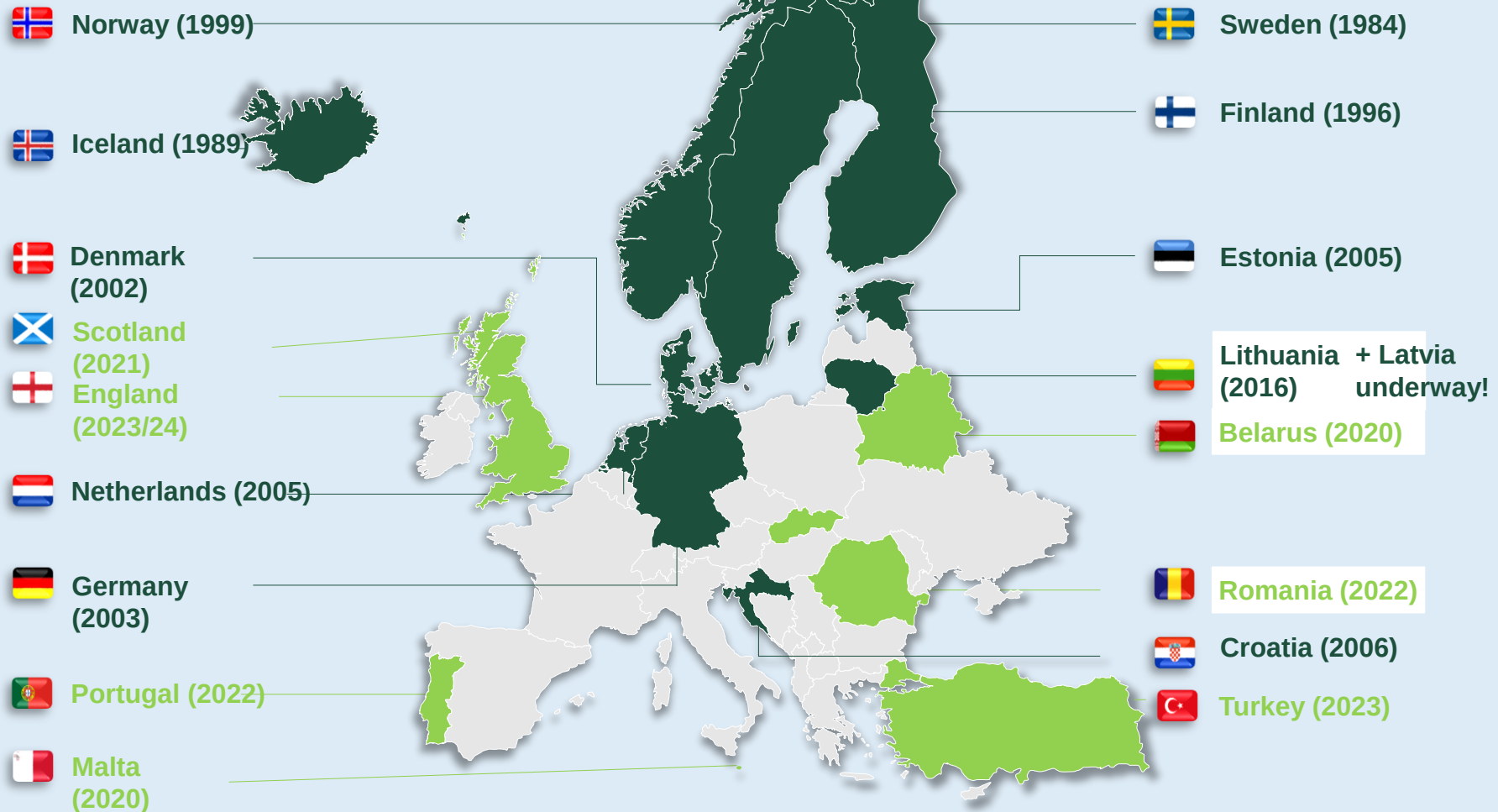
A game changer

- Single-Use Plastics Directive takes precedence over PPWD
- Product design rules for tethered caps
- Separate and specific targets:
  - 77% separate collection **for recycling** of PET bottles by 2025 / 90% by 2029
  - 25% **recycled content** for plastic beverage containers by 2025 / 30% by 2030

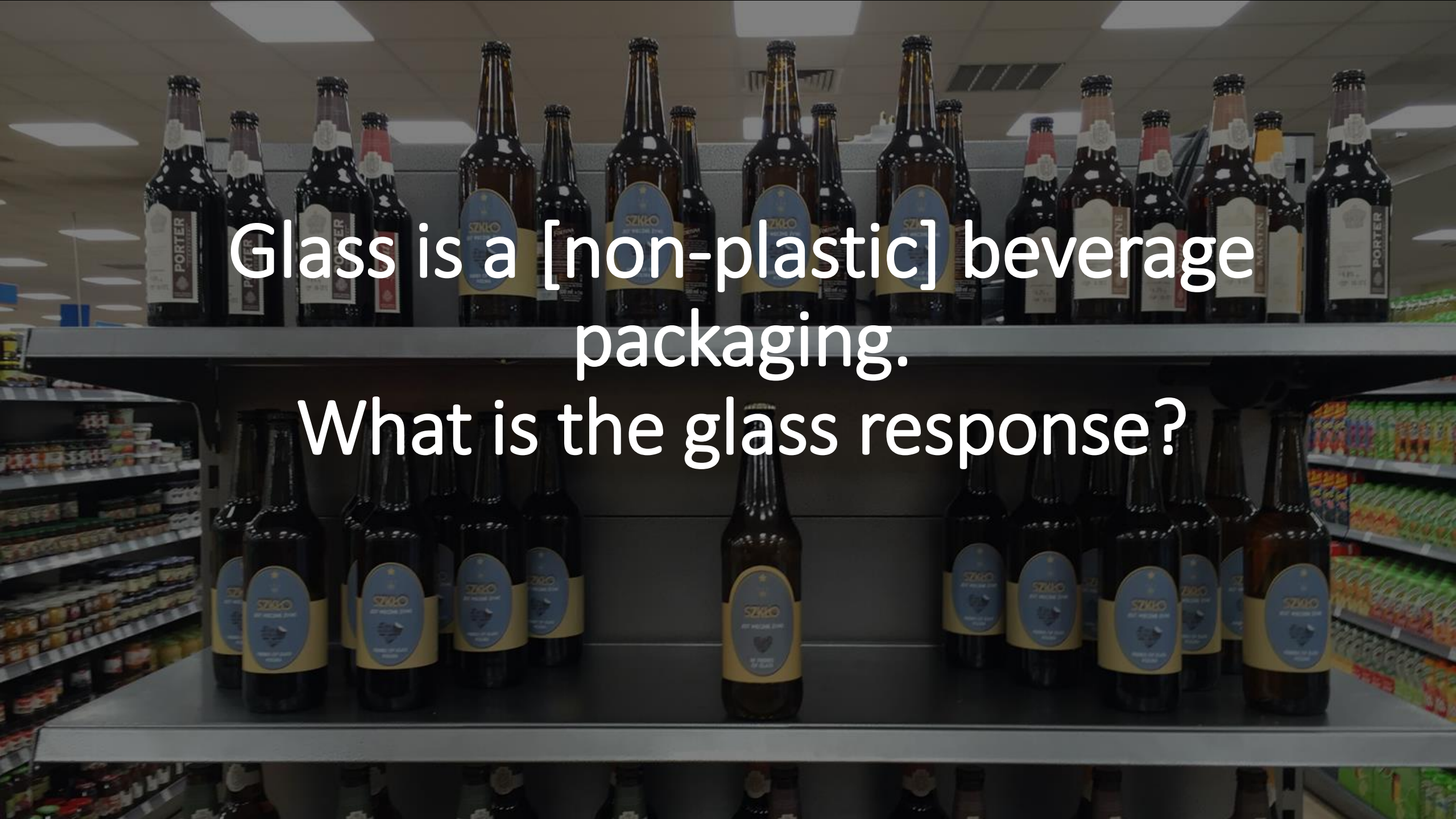


Deposits Heatmap... and spreading

European deposit return
systems implemented and
planned



Source: RELOOP Platform: <https://reloopplatform.eu/resources/reports/>

A photograph of a grocery store aisle with shelves of beer bottles. The text is overlaid on the image.

Glass is a [non-plastic] beverage packaging.

What is the glass response?

Countries operating mandatory deposits on one-way glass beverage packaging

Mandatory DRS for one-way glass beverage containers have been introduced in 6 EU MS:

Denmark 2002

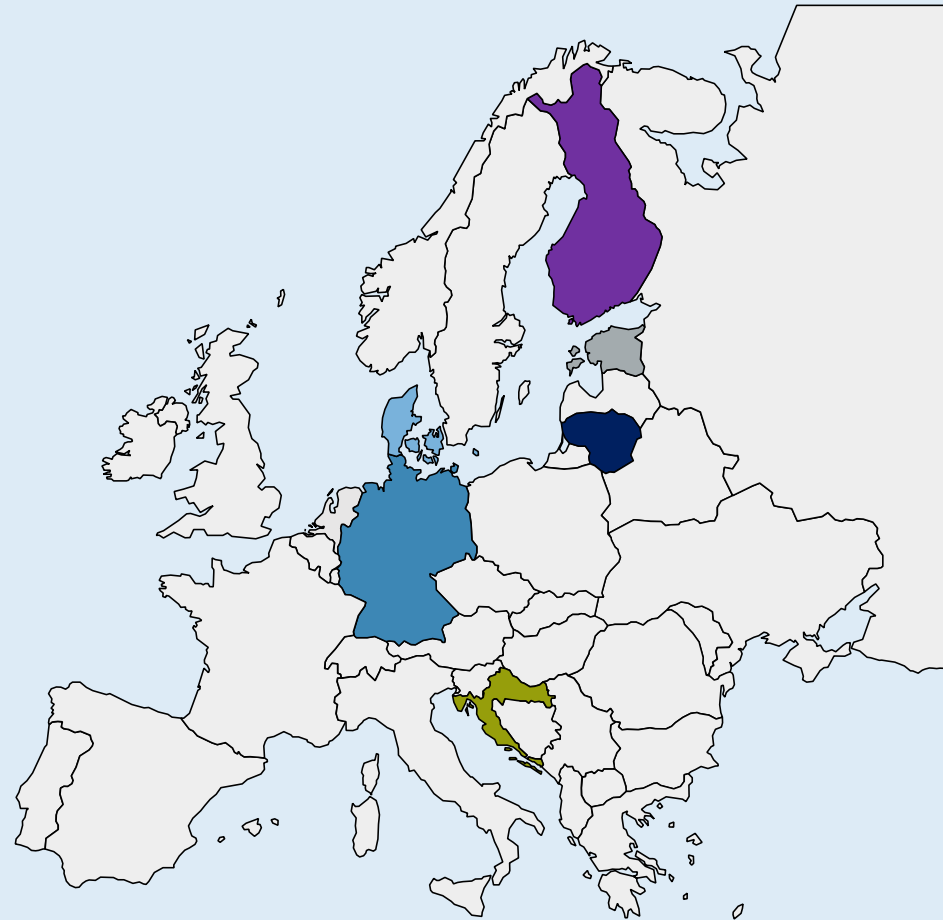
Germany 2003

Estonia 2005

Croatia 2006

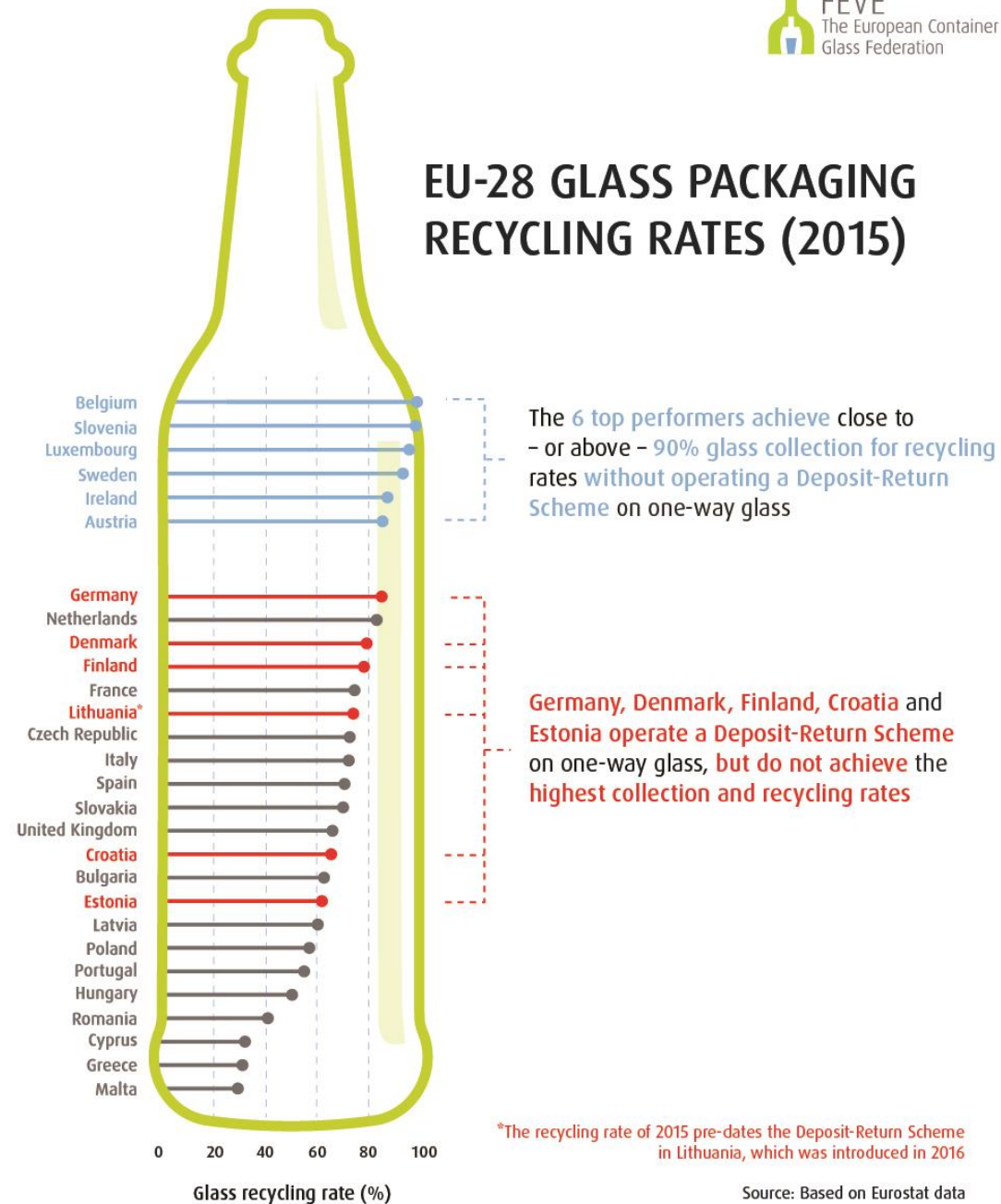
Finland 2012

Lithuania 2016

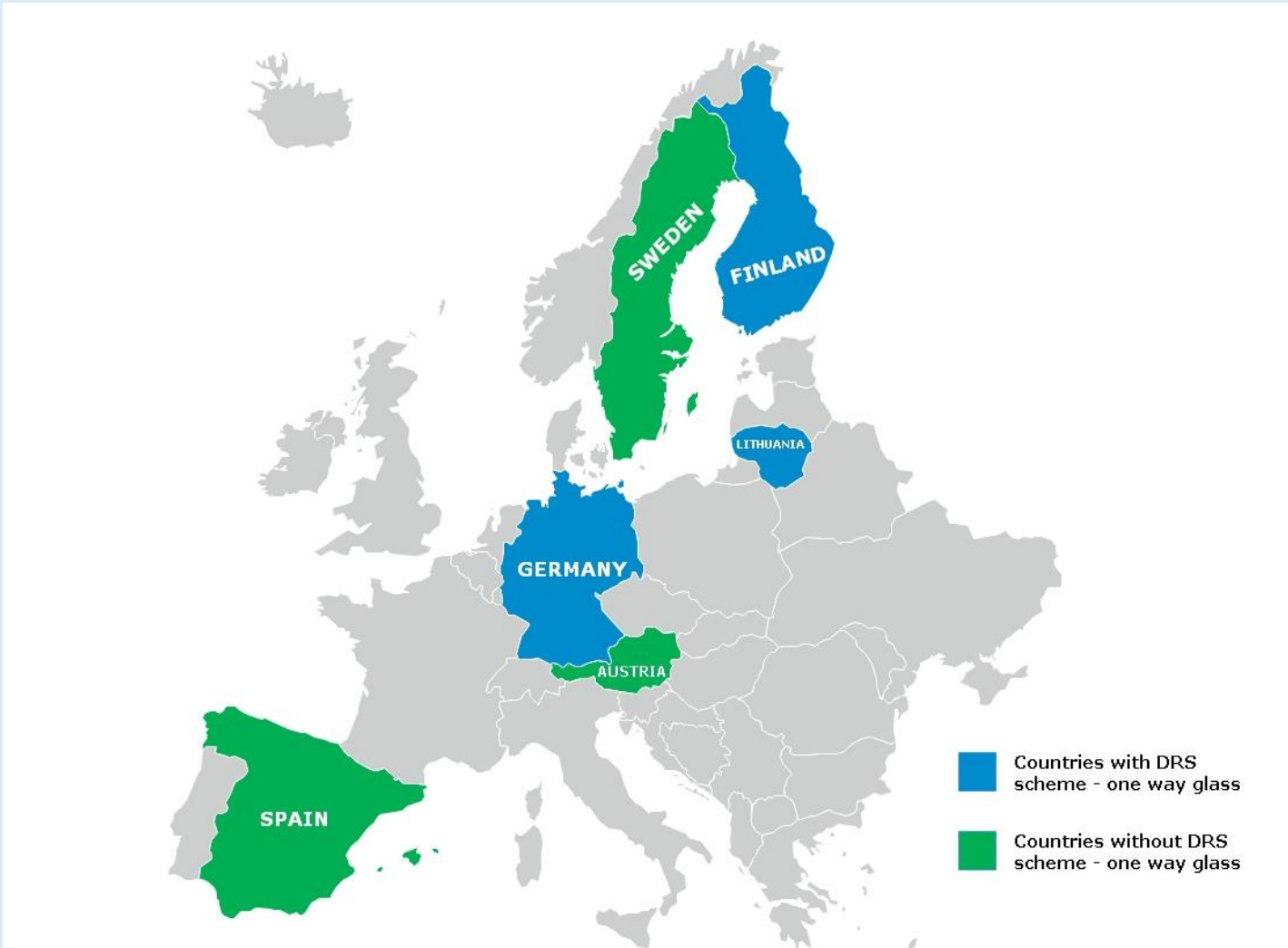


Is it essential?

EU-28 GLASS PACKAGING RECYCLING RATES (2015)



« Raise the Glass » Study



OAKDENE HOLLINS
RESEARCH & CONSULTING

GlobalData.

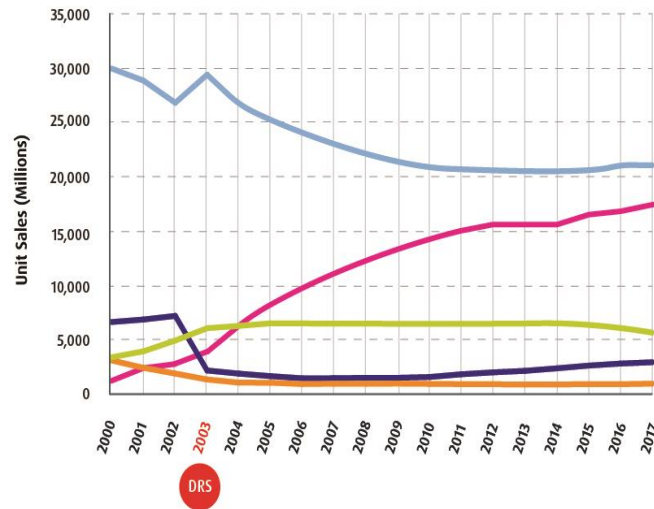
- Beer
- Water
- Soft Drinks

EVOLUTION OF MANDATORY DEPOSIT-RETURN SCHEMES ON SINGLE-USE BEVERAGE PACKAGING

GERMANY

A POLICY TO KEEP REFILLABLES IN THE MARKET

GERMAN PACKAGING MARKET FOR BEER, SOFT DRINKS & BOTTLED WATER, 2000-2017



Refillable Glass
Non-refillable PET
Non-refillable Glass
Refillable PET
Non-refillable Metal

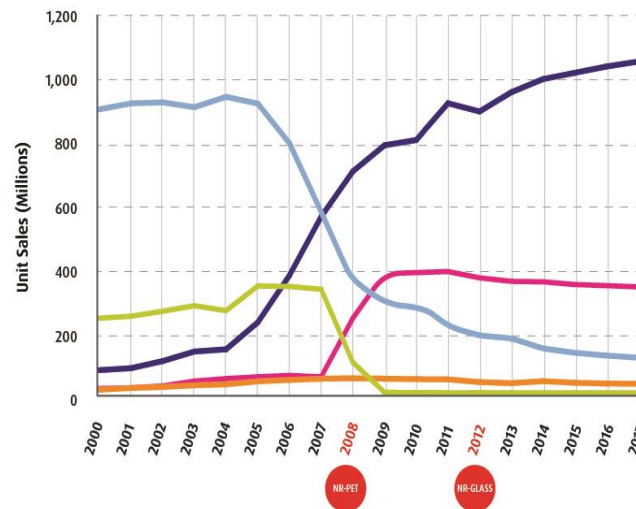
DRS

Deposit-Return Scheme introduced in 2003 for NR-Glass, NR-Metal and NR-PET

FINLAND

A POLICY TO ACCOMPANY THE SWITCH FROM REFILLABLES TO SINGLE-USE PACKAGING

FINNISH PACKAGING MARKET FOR BEER, SOFT DRINKS & BOTTLED WATER, 2000-2017



Refillable Glass
Non-refillable PET
Non-refillable Glass
Refillable PET
Non-refillable Metal

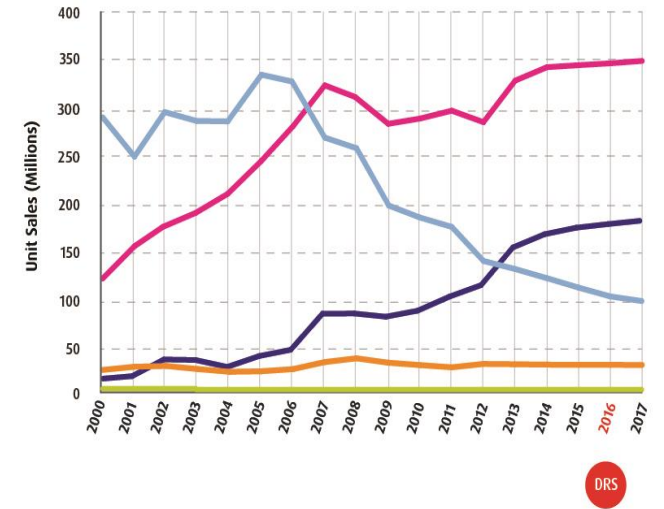
NR-PET NR-GLASS

Deposit-Return Scheme introduced in 2008 for NR-PET and in 2012 for NR-Glass
Finland introduced a Deposit-Return Scheme for NR-metal in 1996

LITHUANIA

A POLICY TO DRIVE UP COLLECTION RATES FOR SINGLE-USE PACKAGING ITEMS

LITHUANIAN PACKAGING MARKET FOR BEER, SOFT DRINKS & BOTTLED WATER, 2000-2017



Refillable Glass
Non-refillable PET
Non-refillable Glass
Refillable PET
Non-refillable Metal

DRS

Deposit-Return Scheme introduced in 2016 for NR-Glass, NR-Metal and NR-PET

Systems – Germany vs. Austria

- Well-established bottle bank system and consumer bring-back culture
- Competing EPR schemes + DRS
- Reuse quota and voluntary scheme on refillables

- Well-established bottle bank system and consumer bring-back culture
- Single EPR scheme for glass
- Industry-led voluntary scheme on refillables

Systems – Finland vs. Sweden

- A voluntary scheme for refillable glass
  - A deposit-return scheme on single-use beverage containers, including glass, PET and cans
  - A bottle bank system for glass, with approx. 1850 bottle banks across the country
  - Intelligent RVMs that can separate containers by material (PET, alu, glass) and they can separate glass by type (with deposit one-way, without deposit one-way, refillable)
-
- A lot of systems for [small] amounts of glass...



- A voluntary scheme for refillable glass
- A well-established bottle bank system and consumer bring-back culture
- At the moment, c. 70% of glass is collected from recycling stations, with c. 30% from households.

Systems – Finland vs. Sweden

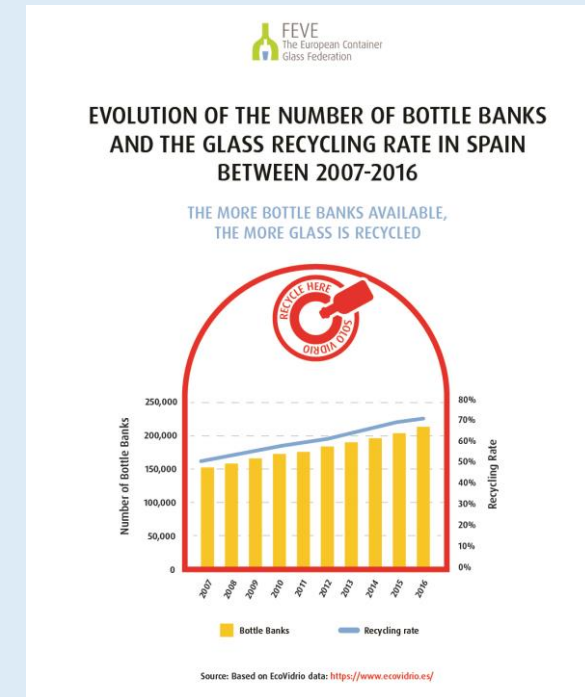
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- By 2021, at least 60% of EPR packaging must be collected from households.
- By 2025, 100% has to be collected from households. Households will be provided with new bins to collect the glass separately.

Systems – Lithuania vs. Spain

- A deposit-return scheme on single-use beverage containers, including glass, PET and cans introduced in 2016
- A technology offer based on “pay-per-use” = best to include all materials to extend the scope, but main target was PET & cans
- Split system for glass means less efficiency for the EPR scheme: 10,000 tonnes of glass are diverted through the DRS... but with a collection rate of 83% in 2017
- DRS had a much bigger impact on PET collection & recycling than on one-way glass



- Investment into the bottle bank system and consumer bring-back culture
- Single EPR scheme for glass

Our main learnings

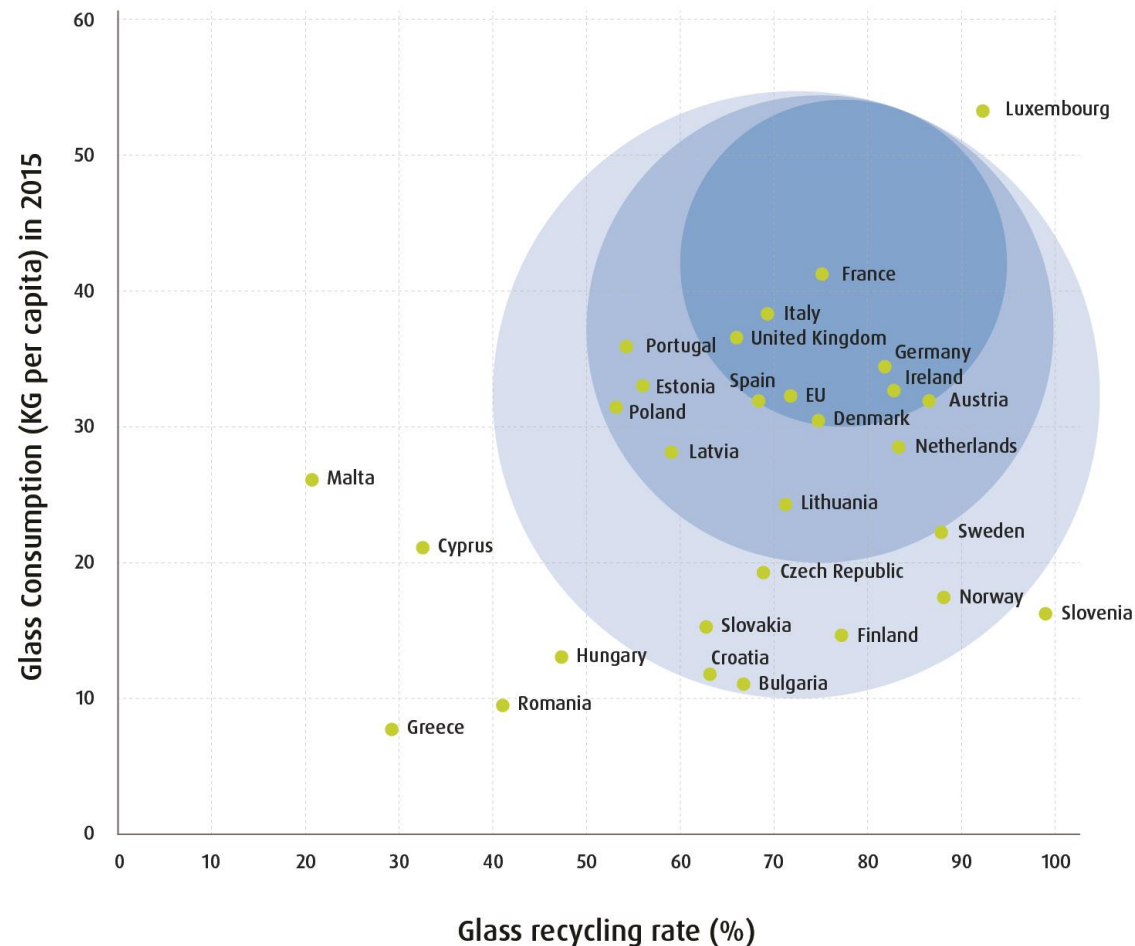
- The learnings do not go into the detail of glass recycling in terms of quality
- Highlights that collection systems do have an impact on the market
- DRS on single-use usually interacts on glass reuse in those product categories that are covered
- Glass recycling does not require DRS to reach close to 100%, BUT:
  - Each market is different and evolving
  - There is no single European approach, even on bottle banks
  - Municipalities are looking to maximise space in cities
  - Higher attention to beverage packaging driven by plastics / on-the-go debate
  - Political gain & quick response vs. traditional system



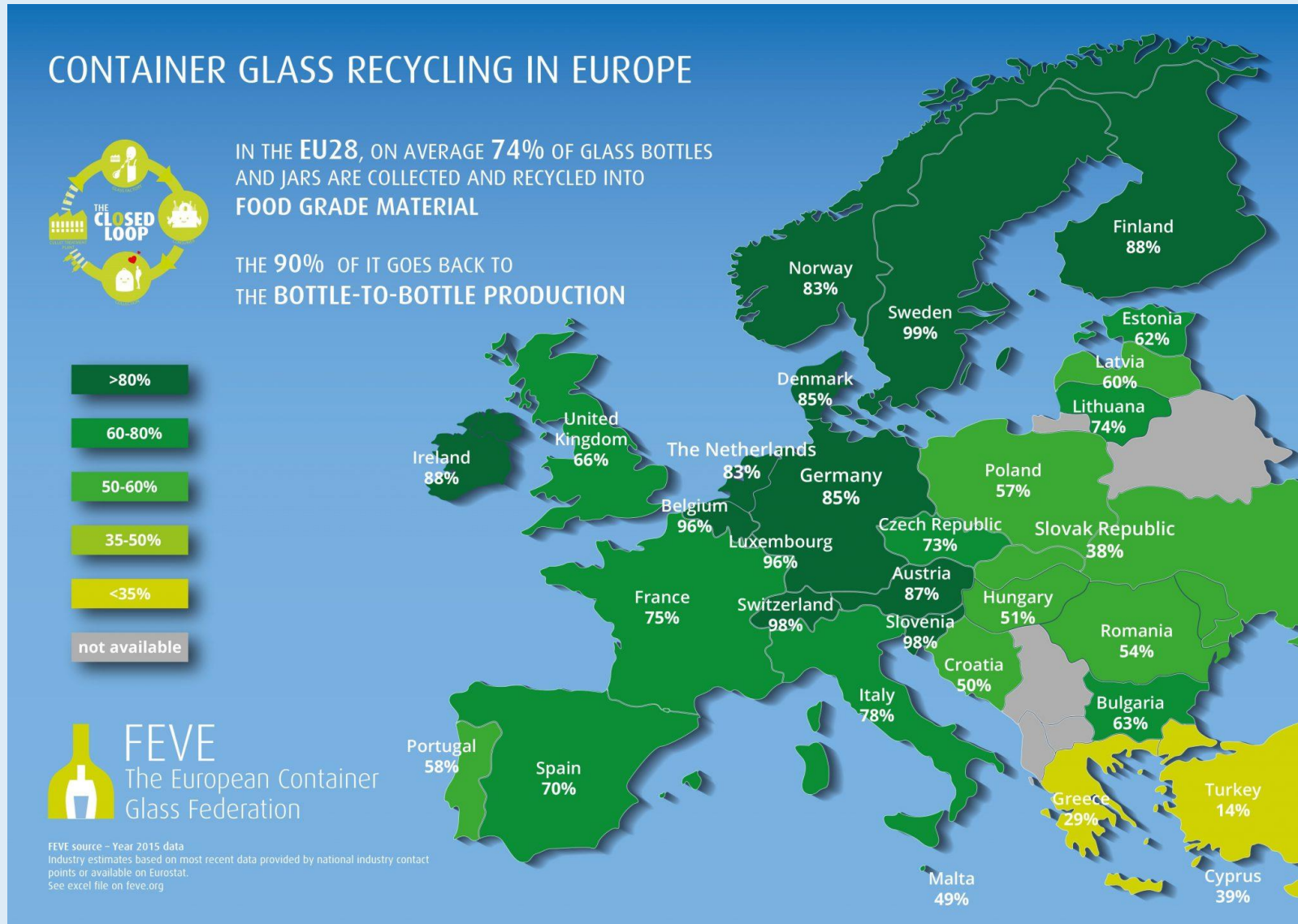
Collection & Recycling of Glass Containers

STRONG CORRELATION BETWEEN GLASS CONSUMPTION AND GLASS RECYCLING THAT REQUIRES FURTHER INVESTMENT TO CLOSE THE LOOP

- 60% and above glass recycling rate with 30KG per capita and above of glass consumption in 2015
- 50% and above glass recycling rate with 20KG per capita and above of glass consumption in 2015
- 40% and above glass recycling rate with 10KG per capita and above of glass consumption in 2015



Glass recycling: strong and stagnating





The recycling imperative: taking glass collection & recycling to new heights

Cooperation essential



- Establishing harmonised and accurate reporting on recycling rates
- Closing the 26% gap in collection without compromising on quality:
  - Ensuring more quality untreated cullet to the gate of the CTP
  - Ensuring more supply of FRC to the container glass furnace
- Raising the bar on glass recycling rates:
  - Ensuring effective recycling & recyclability
  - Guaranteeing leadership on material stewardship in the circular economy



FEVE
The European Container
Glass Federation

THANK YOU