

EU 28 + EFTA (NORWAY / ICELAND)

135.1 million have access to DRS

<i>Country</i>	<i>Population 2019 (million)</i>	<i>Mandate Enacted</i>	<i>Mandate Implemented</i>
Croatia	4.1	2005	2006
Denmark	5.8	2000	2002, 2020 (Juices)
Estonia	1.3	2004	2005
Finland	5.5	N/A	1996, 2008 (PET), 2012 (Glass)
Germany	82.9	1991	2003
Iceland	0.3	1989	1989
Lithuania	2.8	2014	2016
Netherlands	17.1	2003	2005
Norway	5.3	1997	1999
Sweden	10.0	1982, 1991 (PET)	1984, 1994 (PET)

CROATIA

Population: 4.1 m

Website: <http://narodne-novine.nn.hr/clanci/sluzbeni/dodatni/437306.pdf>



LEGISLATIVE FRAMEWORK

- Mandate:** Ordinance on Packaging and Packaging Waste (88/2015) and Regulation on management of waste packaging (97/2015)
- Enacted:** 2005
- Implemented:** 2006
- Last updated:** 2015 (Comprehensive Amendment Act)
- Authority:** Ministry of Environment
- Targets:** In total, a minimum of 60% of packaging shall be separately collected and recovered, of which at least 55% and up to 80% shall be materially recycled. Material-specific recycling targets are the same as the European targets, and there are no targets specifically applicable to packaging covered by the DRS.

PROGRAM SCOPE

- Material:** Plastic (predominantly PET), metal (aluminum and tinplate), glass
- Beverage type:**
- Containers > 0.2 L (0.05 gal):** Alcohol (beer, wine, hard liquor) and non-alcohol beverages including juices, waters, soft drinks.
- Containers < 0.2 L (0.05 gal):** Milk drinks
- Excluded:** Milk and milk-containing beverages > 0.2 L (0.05 gal)

DEPOSITS AND FEES

- Deposit initiator:** Producer/Importer
- Deposit value:** 0.50 HRK (€ 0.06, USD\$ 0.07)
- Unredeemed deposits:** Environmental Protection and Efficiency Fund (FZOEU)
-
- Handling fees (2020):**
- Manual collection:** 0.05 HRK (€ 0.01, USD\$ 0.01) (25% VAT included)
- RVM collection:** 0.18 HRK (€ 0.02, USD\$ 0.02) (25% VAT included)

SYSTEM OPERATOR

Clearing system:

Centralized

System operator & administrator:

Environmental Protection and Efficiency Fund (FZOEU)

FZOEU, a public authority, is responsible for activities related to management of packaging and packaging waste more generally and the DRS in particular. The responsibilities of FZOEU related to the management of the DRS include returning to the retailers the deposit paid to the customers; paying out handling fees to retailers; collecting data and deposit amounts from the producers; entering into agreements with authorized collectors and agree on the manner of payment of collection and transport costs; entering into agreements with authorized recyclers and agree on the manner of selling collected packaging; and checking and approving compatibility of the packaging to be collected via RVM.

System finance:

Material revenues, unredeemed deposits, producer fees

REDEMPTION SYSTEM

Return-to-Retail:

Retailers $\geq 200 \text{ m}^2$ are obliged to take back. Retailers whose sales area is less than 200 m^2 may decide to participate in the DRS provided they are approved by FZOEU. Over 90% of collection is done manually.

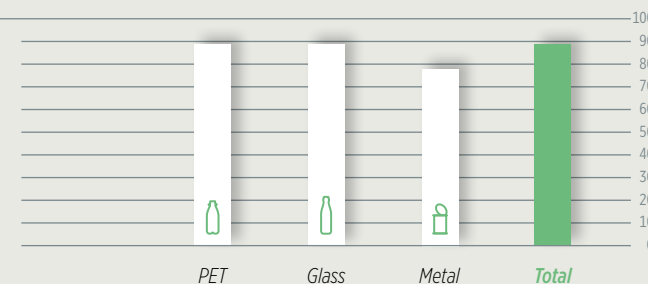
Material owner:

Environmental Protection and Efficiency Fund (FZOEU)

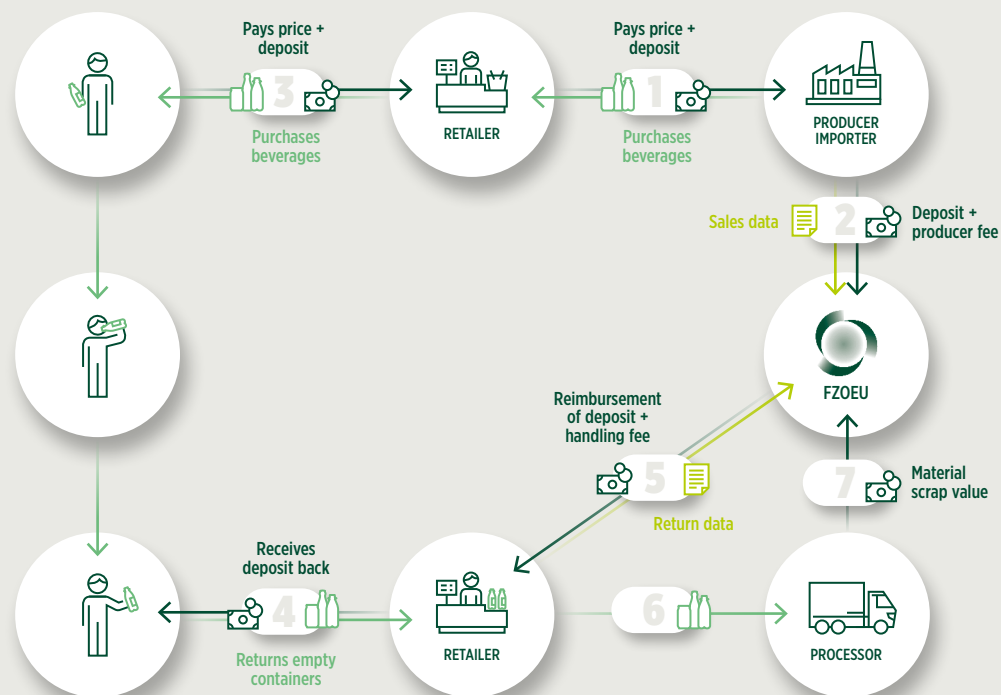
SYSTEM RESULTS (2019)

PET	89%
Glass	89%
Metal	79%

Total Return Rate: 89%¹



MONEY MATERIAL FLOW



¹ Due to the fact that Croatia's DRS is not based on the domestic bar code, the amount of collected packaging might include foreign beverage containers.

DENMARK

Population: 5.8 m

Website: <https://danskretursystem.dk>



LEGISLATIVE FRAMEWORK

Mandate:	Statutory Order on Deposits and Collection of Packaging for Beer and Certain Soft Drinks
Enacted:	2000
Implemented:	2002
Last Updated:	2020 (expansion to juices)
Authority:	Ministry of Environment
Targets:	None

PROGRAM SCOPE

Material:
Plastic (predominantly PET), metal (aluminum), glass

Beverage type:
Beer, carbonated drinks (soft drinks with an alcohol content of 0–0.5%), fermented drink products other than wine and alcohol beverages made from fruit (such as cider with an alcohol content < 10%), mixer products (spirits, wine or other fermented products mixed with other beverages such as soft drinks, cider or juice), mineral water, water, lemonade, iced tea, syrup, juice

Excluded:
Milk products and milk-based products, cocoa, wine and spirits, packaging containing >20 L (5.28 gal) as well as plastic containers > 10 L (2.64 gal) containing non-carbonated water, certain types of barrels or casks

DEPOSITS AND FEES

Deposit initiator:
Producer/Importer

Deposit value:

Metal, glass < 1 L (0.26 gal):	1 DKK (€ 0.13, USD\$ 0.15)
Plastic < 1 L (0.26 gal):	1.5 DKK (€ 0.2, USD\$ 0.22)
Metal, glass, plastic ≥ 1 L (0.26 gal):	3 DKK (€ 0.4, USD\$ 0.45)

Unredeemed deposits:
Dansk Retursystem A/S

Handling fees (2020):

Manual collection:

Metal:	6.2 øre (€ 0.008, USD\$ 0.009)
Plastic < 1 L (0.26 gal):	6.7 øre (€ 0.009, USD\$ 0.0097)
Plastic > 1 L (0.26 gal):	10.4 øre (€ 0.014, USD\$ 0.015)
Glass:	14.8 øre (€ 0.019, USD\$ 0.0214)

RVM with compaction:

Metal:	1.4 øre (€ 0.0019, USD\$ 0.0020)
Plastic < 1 L (0.26 gal):	1.8 øre (€ 0.0019, USD\$ 0.0026)
Plastic > 1 L (0.26 gal):	2.4 øre (€ 0.0032, USD\$ 0.0035)
Glass:	7.1 øre (€ 0.0095, USD\$ 0.0103)

Producer producer fees (2020):

Plastic:	€ 0.0093 (USD\$ 0.01) – € 0.0684 (USD\$ 0.0072)
Metal:	€ 0.0000 (USD\$ 0.00) – € 0.0067 (USD\$ 0.06)
Glass:	€ 0.0536 (USD\$ 0.058) – € 0.1986 (USD\$ 0.21)

SYSTEM OPERATOR

Clearing system: Centralized

System operator & administrator: Dansk Retursystem A/S

Founded in 2000, Dansk Retursystem is a private non-profit organization that has been granted the exclusive right to operate the Danish DRS until 2022 (subject for renewal every 6 years), on the conditions laid down in the Statutory Order no. 1129. The company was established by a number of breweries together with the Danish retail trade and is owned by the producers:

Dansk Retursystem Holding (85.62%),
owned by Carlsberg, Royal Unibrew, Thisted Bryghus and Bryggeriet Fuglsang

Harboes Bryggeri
(14.27%)

Bryggeriet Vestfyen
(0.1%)

Mineralvandsfabrikken Frem
(0.01%)

System finance: Material revenues, unredeemed deposits and administration fees

REDEMPTION SYSTEM

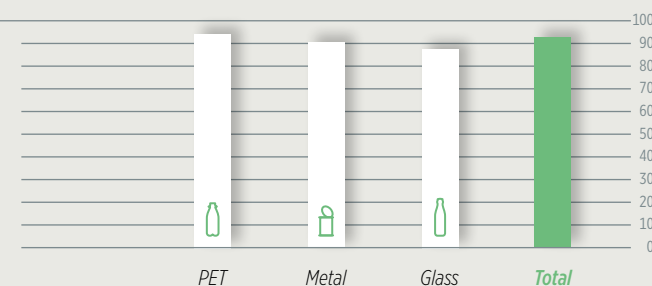
Return-to-Retail: Retailers with RVMs are required to accept all types of one-way packaging with the Danish deposit label. Stores without RVMs that sell beverages are required to accept the same types of packages as the ones they sell regardless of the brand. Ninety-five percent of collection is done through RVMs. In addition to returning containers to retailers, consumers can use a deposit return bank called "Pantstation" – a building designed for the sole purpose of accepting empty containers. Consumers can return a bag of up to 90 eligible bottles or cans (max 15 kg) at a time. The special deposit bags can be purchased at the Pantstation for a refundable deposit of 6 DKK per bag.

Material owner: Dansk Retursystem A/S

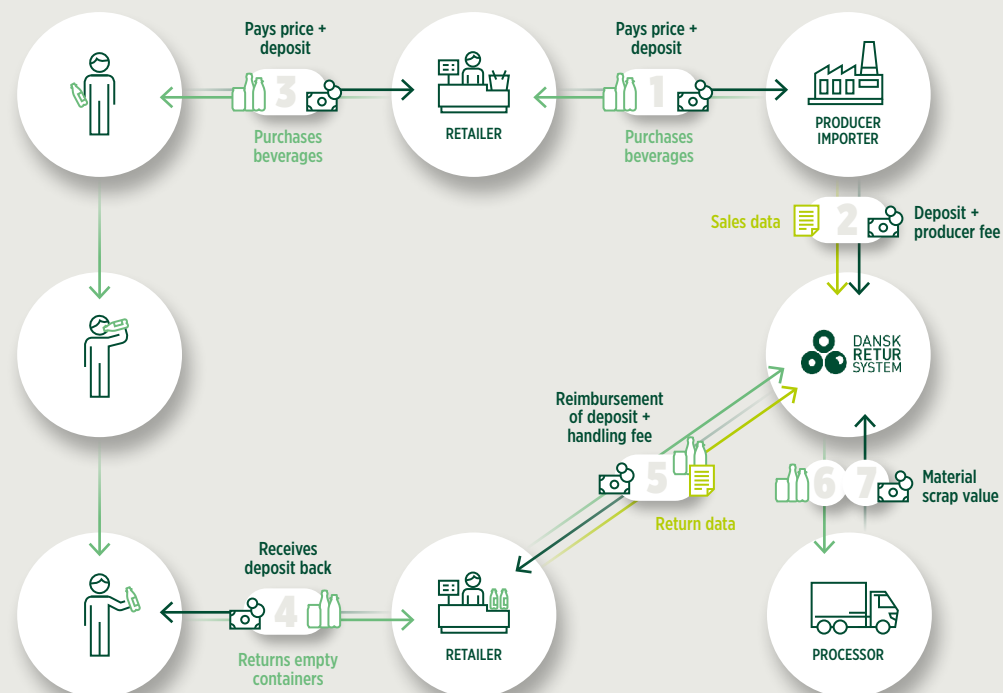
SYSTEM RESULTS (2019)

PET	94%
Metal	90%
Glass	88%

Total Return Rate: 92%



MONEY MATERIAL FLOW



ESTONIA

Population: 1.3 m

Website: www.eestipandipakend.ee



LEGISLATIVE FRAMEWORK

Mandate:	Packaging Act and Packaging Excise Duty Act
Enacted:	2004
Implemented:	2005
Authority:	Ministry of Environment
Targets:	Regarding general targets for all packaging, at least 60% of the total mass of packaging waste in a calendar year shall be recovered and 55–80% should be recycled. Material-specific targets: 70% recycling for glass; 60% recycling for metal; and 55% recovery, 45% recycling, and 22.5% reprocessing for plastic. A much higher target of 85% applies to PET and one-way glass covered by the DRS. For metal cans subject to the DRS, the recycling target is 50%.

PROGRAM SCOPE

Material:	Plastics (predominantly PET), metal (predominantly aluminum), one-way glass
Beverage type:	
Containers 100 ml to 3 L (0.02 gal to 0.79 gal):	Soft drinks, water, juice, juice concentrates, nectars, beer, cider, perry, low-alcohol ($\leq 6\%$ alcohol content) beverages
Excluded:	Strong alcohol beverages (vodka, wine, etc.), dairy products, glass jars, cartons (i.e. Tetra Pak)

DEPOSITS AND FEES

Deposit initiator:
Producer/Importer

Deposit value:
€ 0.10 (USD\$ 0.11)

Unredeemed deposits:
Eesti Pandipakend OÜ

Handling fees (2020):

Manual collection:
PET and Metal: € 0.0115 + VAT
One-way Glass: € 0.0130 + VAT

RVM without compaction (PET and Metal):
€ 0.0215 + VAT

RVM with compaction (PET and Metal):
€ 0.0331 + VAT

RVM collection (One-way Glass):
€ 0.0250 + VAT

SYSTEM OPERATOR

Clearing system: Centralized
System operator & administrator: Eesti Pandipakend OÜ



- The Estonian Association of Brewers – 25%
- The Association of Producers of Soft Drinks – 25%
- The Association of Importers of Soft Drinks and Beer – 25%
- The Estonian Retailers Association – 25%

Founded in 2005, Eesti Pandipakend is a state-accredited (by MoE), non-profit organization that was created to organize the activities related to the DRS and the recycling of one-way beverage containers subject to deposit. It is responsible for organizing the recovery of the collected packaging in Estonia; acceptance of returned packaging from retailers; and performance of packaging companies' obligations under the Packaging Excise Duty Act, including payment on behalf of the packaging company of excise duty on the packaging.

System finance: Material revenues, unredeemed deposits, producer fees

REDEMPTION SYSTEM

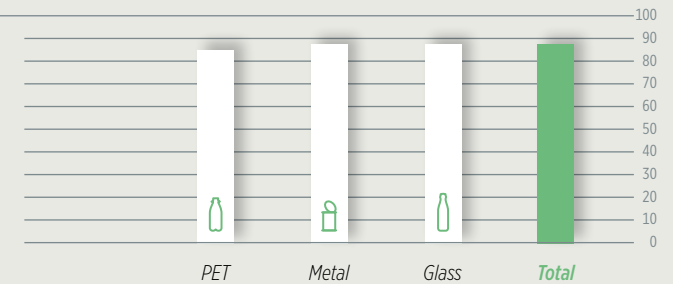
Return-to-Retail: Consumers can return containers subject to deposit and marked with deposit symbol to all locations where those are sold or to a collection point situated on retailer servicing ground. It is a requirement for retailers whose sales area is over 200 m² to take back the containers on their premises. If the sales area is between 20 – 199 m², the retailer can apply to its local municipality to be exempt from that obligation. All vendors under 20 m² of sales area are not obligated to take back deposit containers. Collection system is 94% automated / 6% manual. As of 2019, there were a total of 903 collection points, including 717 RVMs. There are also an additional 430 pick-up points at HoReCa locations.

Material owner: Eesti Pandipakend OÜ

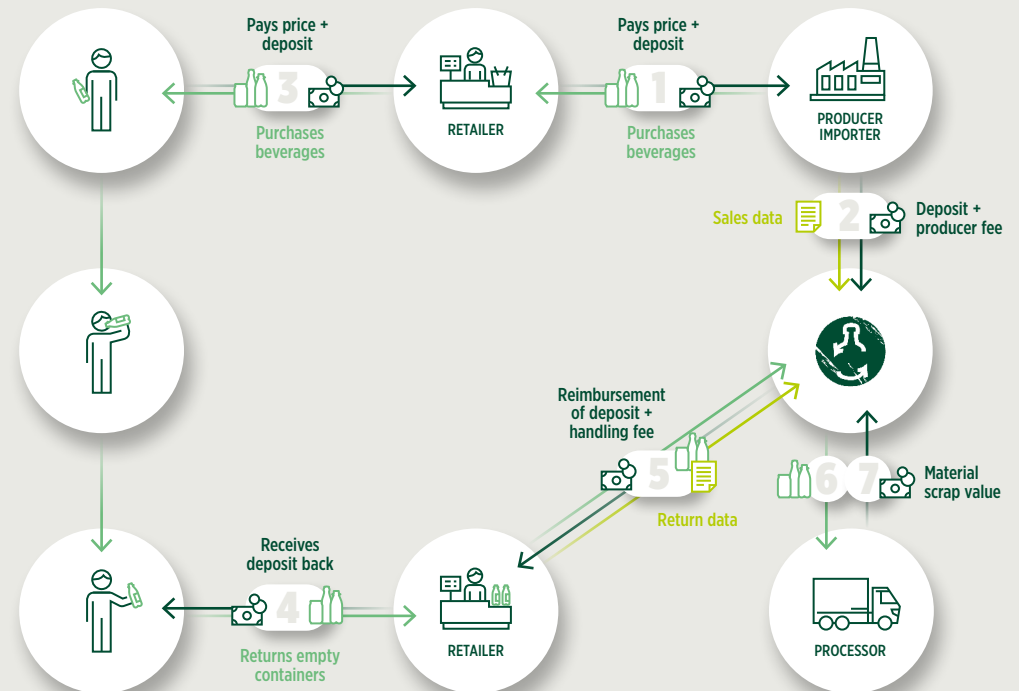
SYSTEM RESULTS (2019)

PET	86.9%
Metal	88.0%
Glass	87.3%

Total Return Rate: 87.2%



MONEY MATERIAL FLOW



FINLAND

Population: 5.5 m

Website: www.palpa.fi



LEGISLATIVE FRAMEWORK

Mandate: Decree 526 / 2013 (Government Decree on a return system for beverage containers), Waste Act 646 / 2011, and Act on Excise Duty on Certain Beverage Packaging 2037 / 2004

Enacted: Unknown

Implemented: 1996 (Cans) / 2008 (PET) / 2011 (Glass)

Authority: Ministry of Environment

Targets: Recycling of 90% by weight

PROGRAM SCOPE

Material: Plastic (predominantly PET), metal (aluminum), glass

Beverage type: Almost all soft drinks; water; beer; cider; sport drinks; juice and beverage concentrates; liquor / spirits / wine sold by Alko

Excluded: Milk

DEPOSITS AND FEES

Deposit initiator: Producer/Importer

Deposit value:

Plastic < 350 ml (0.09 gal): € 0.10 (USD\$ 0.11)

Plastic 350 ml to 999 ml

(0.09 gal to 0.263 gal): € 0.20 (USD\$ 0.22)

Plastic ≥ 1 L (0.264 gal): € 0.40 (USD\$ 0.45)

Metal: € 0.15 (USD\$ 0.17)

Glass: € 0.10 (USD\$ 0.11)

Unredeemed deposits: Suomen Palautuspakkaus Oy (PALPA)

Handling fees (2020):

Manual collection or RVM without compaction:

Plastic and Metal: € 0.01930 (USD\$ 0.021)

RVM with compaction:

Plastic: € 0.02850 (USD\$ 0.031)

Metal: € 0.02300 (USD\$ 0.025)

One-way Glass: € 0.01930 (USD\$ 0.021)

Producer fees (2020):

Plastic: € 0.017 (USD\$ 0.02) – € 0.116 (USD\$ 0.13)

Metal: € 0.005 (USD\$ 0.005)

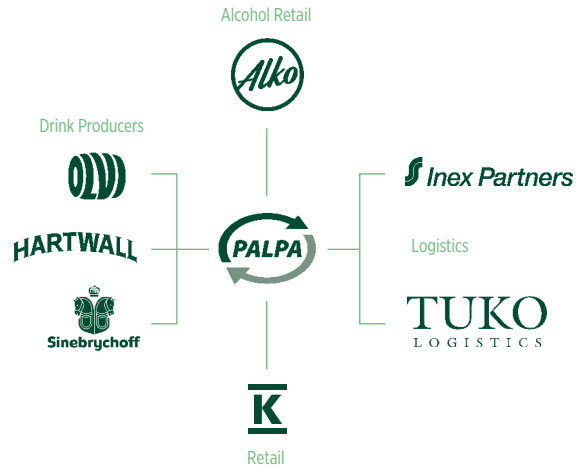
Glass: € 0.09 (USD\$ 0.10) – € 0.14 (USD\$ 0.15)

SYSTEM OPERATOR

Clearing system: Centralized

System operator & administrator: Suomen Palautuspakkaus Oy (PALPA)

PALPA is a not-for-profit company responsible for managing the DRS. Its responsibilities include the collection, recycling and / or reuse of the packaging covered by the system, and for managing the administration of the deposits, the development of their systems and the communications concerning their operations. The company is owned by retailers (50%) and beverage producers (50%), including Alko Oy, Inex Partners Oy, Kesko Oyj, Oy Hartwall Ab, Olvi Oyj, and Oy Sinebrychoff Ab.



System finance:

Material revenues, unredeemed deposits, producer fees

REDEMPTION SYSTEM

Return-to-Retail:

Any retailer selling deposit-bearing beverage containers is obliged to take back the empty containers. The law includes an exemption, whereby small retailers can refuse to accept packaging if the volume is disproportionately high in relation to its size. As of 2016, around 4,000 RVMs were in operation with 5,000 retail collection points for consumers and an additional 9,000 HORECA recycling points. Collection system is 95% automated / 5% manual.

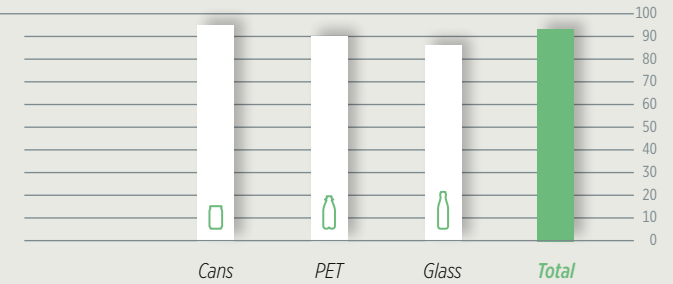
Material owner:

PALPA

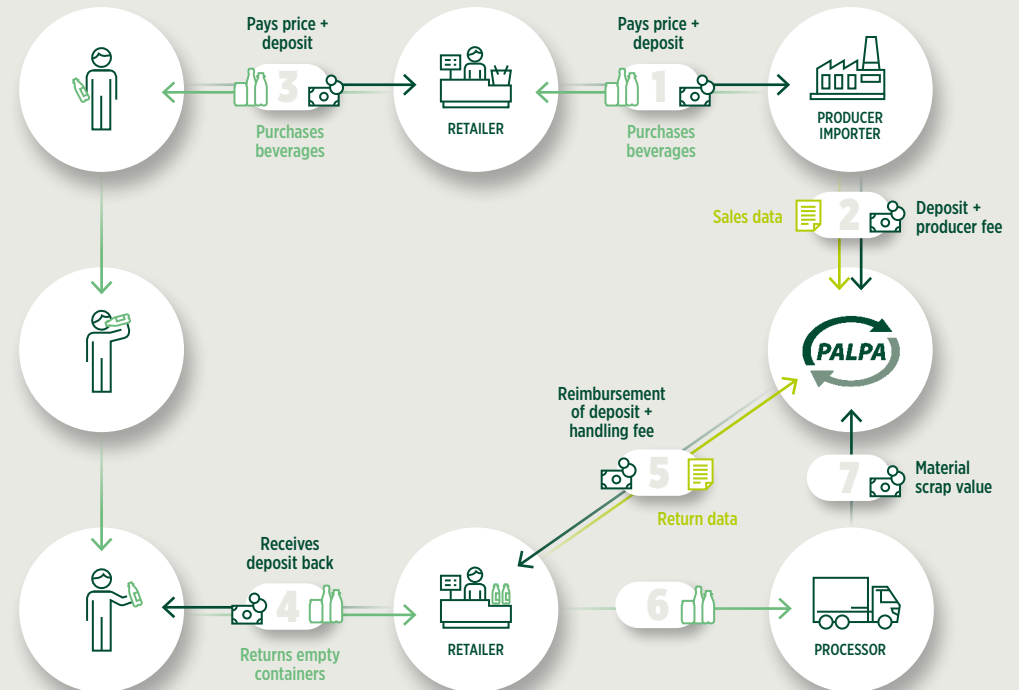
SYSTEM RESULTS (2019)

Cans	95%
PET	90%
Glass	87%

Total Return Rate: 93%



MONEY MATERIAL FLOW



GERMANY

Population: 82.9 m

Website: www.dpg-pfandsystem.de/index.php/en



LEGISLATIVE FRAMEWORK

Mandate:	German Packaging Law (VerpackG) (replaced the Packaging Ordinance)
Enacted:	1991
Implemented:	2003
Authority:	Ministry of Environment
Targets:	None

PROGRAM SCOPE

Material:
Plastic (predominantly PET), metal (aluminum), glass

Beverage type:
Containers 100 ml to 3 L (0.026 gal to 0.79 gal):
Water, beer and mixed drinks containing beer (incl. alcohol-free beer), carbonated/non-carbonated soft drinks, mixed alcohol drinks

Excluded:
Milk products (> 50% milk content), fruit and vegetable juices¹, products intended for child/baby consumption, wines, liquors, containers < 0.026 gal and > 0.79 gal), cartons, stand-up pouches

¹At the time of writing, enlarging the scope of the DRS to include juices is under discussion.

DEPOSITS AND FEES

Deposit initiator:
Producer/Importer

Deposit value:
€ 0.25 (USD\$ 0.28) (subject to VAT)

Unredeemed deposits:
Producers and retailers (for their private/white labels)

Handling fees:
None

SYSTEM OPERATOR

Clearing system:
Decentralized (There are several clearing service providers including CCR Clearing GmbH, Clearing Solution GmbH, Der Grüne Punkt – Duales System Deutschland GmbH, Intercycle GmbH, Interseroh Pfand-System GmbH, Reconsys Dienstleistungs-gesellschaft mbH, Remondis Recycling GmbH & Co. KG)

System operator:
Industry and retailers (in the case of private labels)

System administrator:
Deutsche Pfandsystem GmbH (DPG)²

²DPG is more of a standard setting organization than a system administrator. Established in 2005, Deutsche Pfandsystem GmbH (DPG) is a not-for-profit company that was founded to implement and organize the legally prescribed obligation of the DRS for one-way beverage containers. Its responsibilities involve operating a central database for deposit clearing and the management of the marking standards related to the deposit label (DPG security mark and barcode identification number). The company's shareholders include the German Retail Federation (50%) and the Federation of German Food and Drink Industries (50%).



50% German Retail Federation

50% Federation of German Food and Drink Industries



System finance:

Unredeemed deposits, material revenues, membership fees (every member of the DPG is required to pay a small annual fee which is dependent on the size of its operations)

REDEMPTION SYSTEM

Return-to-Retail:

Retailers and other final distributors of beverage containers subject to the deposit are required to take back one-way beverage containers, but only those of the same type that they sell, regardless of whether the packaging in question was sold by them or by another retailer (i.e. a retailer that only sells PET bottles is not obliged to take back aluminum or glass containers, but must accept all PET bottles regardless of their size or brand). Retailers with a surface area < 200 m² are exempt from this obligation; they only need to take back the packages of the products they are selling, without any cap. Retailers have the option of accepting containers via RVMs or automatically (collection is about 85% automated / 15% manual). There are approximately 135,000 collection locations.

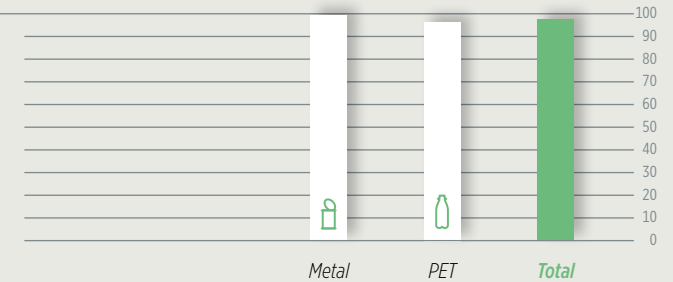
Material owner:

Retailers

SYSTEM RESULTS (2018)

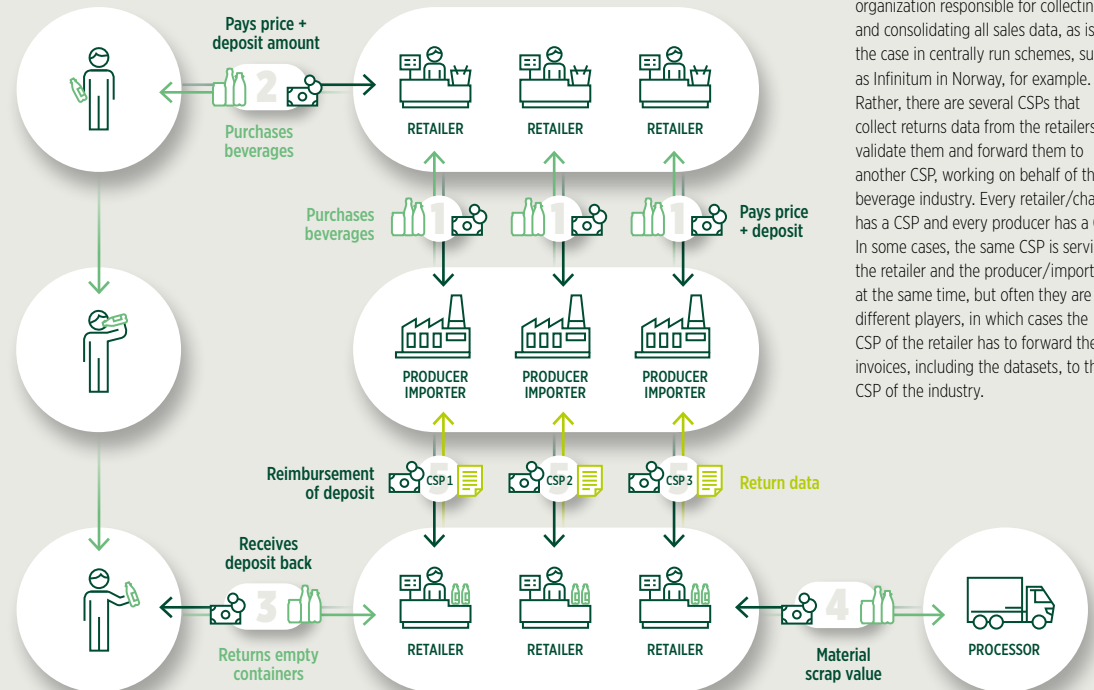
Metal	99.0%
PET	97.0%
Glass	unknown

Total Return Rate: 98.0%



MONEY MATERIAL FLOW

CSP = Clearing Service Provider



Note: In Germany, there is no central organization responsible for collecting and consolidating all sales data, as is the case in centrally run schemes, such as Infinitum in Norway, for example. Rather, there are several CSPs that collect returns data from the retailers, validate them and forward them to another CSP, working on behalf of the beverage industry. Every retailer/chain has a CSP and every producer has a CSP. In some cases, the same CSP is servicing the retailer and the producer/importer at the same time, but often they are different players, in which cases the CSP of the retailer has to forward the invoices, including the datasets, to the CSP of the industry.

ICELAND

Population: 0.3 m

Website: www.endurvinnslan.is



LEGISLATIVE FRAMEWORK

Mandate:	Law No. 52/1989 and Regulation 368/2000
Enacted:	1989
Implemented:	1989
Authority:	Ministry of Environment
Targets:	90% collection for aluminum cans and PET bottles and 85% for glass

PROGRAM SCOPE

Material:	Plastic (predominantly PET), metal (aluminum), glass
Beverage type:	All ready-to-drink beverages; wine and liquor
Excluded¹:	Milk and milk products, juice extract

¹ The government is currently pushing to remove these exceptions and add these products to the system.

DEPOSITS AND FEES

Deposit initiator:	Producer/Importer
Deposit value:	16 ISK (€ 0.11, USD\$ 0.12)
Unredeemed deposits:	Endurvinnslan Hf

Handling fees (2020):
3 ISK (€ 0.02, USD\$ 0.02)

SYSTEM OPERATOR

Clearing system:
Centralized

System operator & administrator:
Endurvinnslan Hf

Endurvinnslan is responsible for managing the collection of all one-way beverage containers, refunding the deposit to the consumer, preparing collected containers for export and selling it for recycling. The company is owned by the state (Ministry of Finance); the state alcohol and tobacco company of Iceland (Vín-búöin), the Icelandic association of local authorities (Samband íslenskra sveitarfélaga), two metal treatment companies (Alkan and Elkam), Icelandic scout association (Bandalag íslenskra skáta), Icelandic association of merchants (Kaupmannasamtök Íslands), and two Icelandic drink companies (Ölgeröin and Coca-Cola).



- Breweries and producers of Coca-Cola/Pepsi 20%
- Alcohol monopoly 20%
- Department of the Environment 18%
- Trade organizations 20%
- Other owners 22%

System finance:

Material revenues, unredeemed deposits, producer fees

REDEMPTION SYSTEM

Return to Depot:

Consumers can return empty deposit-bearing beverage containers to 60 return facilities operated by Endurvinnslan. There are currently 10 automated locations and it is planned to expand the use of RVMs to other centers in the coming years. The remaining majority of return facilities are not equipped with RVMs so the returned containers must be counted and sorted manually.

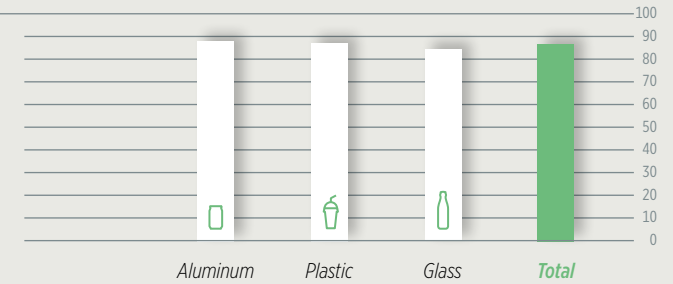
Material owner:

Endurvinnslan Hf

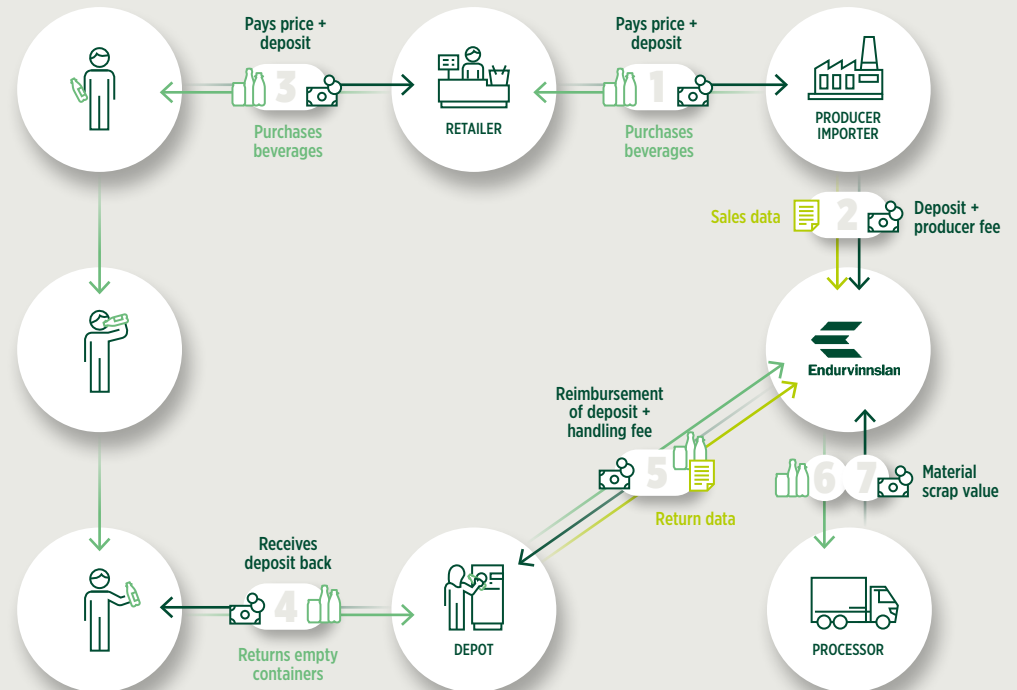
SYSTEM RESULTS (2019)

Aluminum	88.4%
Plastic	87.3%
Glass	83.8%

Total Return Rate: 87.4%



MONEY MATERIAL FLOW



LITHUANIA

Population: 2.8 m

Website: <http://grazintiverta.lt/en/for-business/#>



LEGISLATIVE FRAMEWORK

Mandate: The Law on Packaging and Packaging Waste
Enacted: 2014
Implemented: 2016
Authority: Ministry of Environment
Targets: The goal in 2016 was to collect 55% of all one-way containers introduced to the market. This target was increased for the following years: 70% by 2017, 80% by 2018, 85% by 2019, and 90% by 2020. The same targets apply to all container types.

PROGRAM SCOPE

Material: Plastic, metal, one-way glass

Beverage type:

Containers > 100 ml (0.026 gal) to < 3 L (0.79 gal):

Beer and beer cocktails, cider and other fermented beverages, mixed alcohol and non-alcohol beverages, all types of water, juice and nectars. Fruit wines and wine-product cocktails are included when sold in plastic and metal packaging.

Excluded: Milk, wine and spirits

DEPOSITS AND FEES

Deposit initiator: Producer/Importer

Deposit value¹: € 0.10 (USD\$ 0.11)

Unredeemed deposits: Užstato Sistemose Administratorius (USAD)

¹ Deposit is VAT-free in Lithuania

Handling fees (2020):

Manual collection or RVM without compaction:

PET: € 0.0159

Metal: € 0.0138

Glass: € 0.0199

RVM with compaction:

PET: € 0.0193

Metal: € 0.0144

Glass: € 0.0328

Producer fees (2020):

PET: € 0.027

Metal (aluminum): € 0.009

Metal (steel): € 0.029

Glass: € 0.029

SYSTEM OPERATOR

Clearing system: Centralized

System operator & administrator: Officially there are two system operators, USAD and Užstatas. However, Užstatas has not yet initiated its activities and therefore USAD is de facto the only operator.

USAD is a not-for-profit organization whose founding members include large beverage producers: the Lithuanian Association of Breweries; the Association of Lithuanian Trade Enterprises; and the Lithuanian Natural Mineral Water Manufacturers' Association. Combined, the founding organizations are responsible for more than 80% of total beverage containers sold in Lithuania. USAD's main responsibilities include supplying the means of collection to

retailers; paying out handling fees to retailers; organizing the transportation of collected containers to the counting center; inspecting and preparing packaging for processing; selecting processors for recycling the packaging; acting as the centralized clearinghouse for deposits; and carrying out public information and awareness raising campaigns.



System finance: Material revenues, unredeemed deposits, producer fees

REDEMPTION SYSTEM

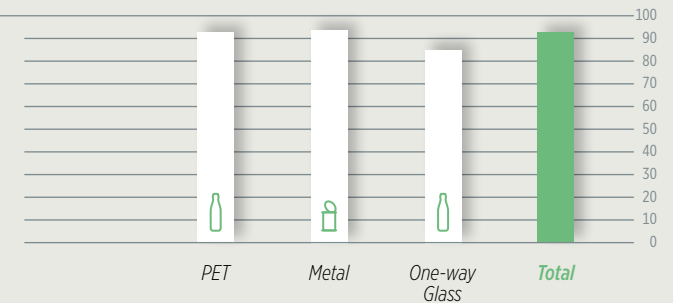
Return-to-Retail: Retailers of deposit-bearing beverage containers are required to accept empty containers and return the deposit, regardless of whether they sell the products in identical packaging. The law stipulates that collection shall be organized at the trading venues, or nearby sites that are no further than 150 m away. Retailers with a shop area up to 300 m² (in bigger cities) and up to 60 m² (in smaller cities and rural areas) are exempt from this obligation. All other retailers of beverage containers subject to the deposit are allowed to participate in the system on a voluntarily basis. At the beginning of 2018, there were a total of 2,713 collection points, of which 1,006 used RVMs (900 RVMs were owned by the manufacturer (compensated by USAD) and 106 were owned by the retailers themselves).

Material owner: USAD

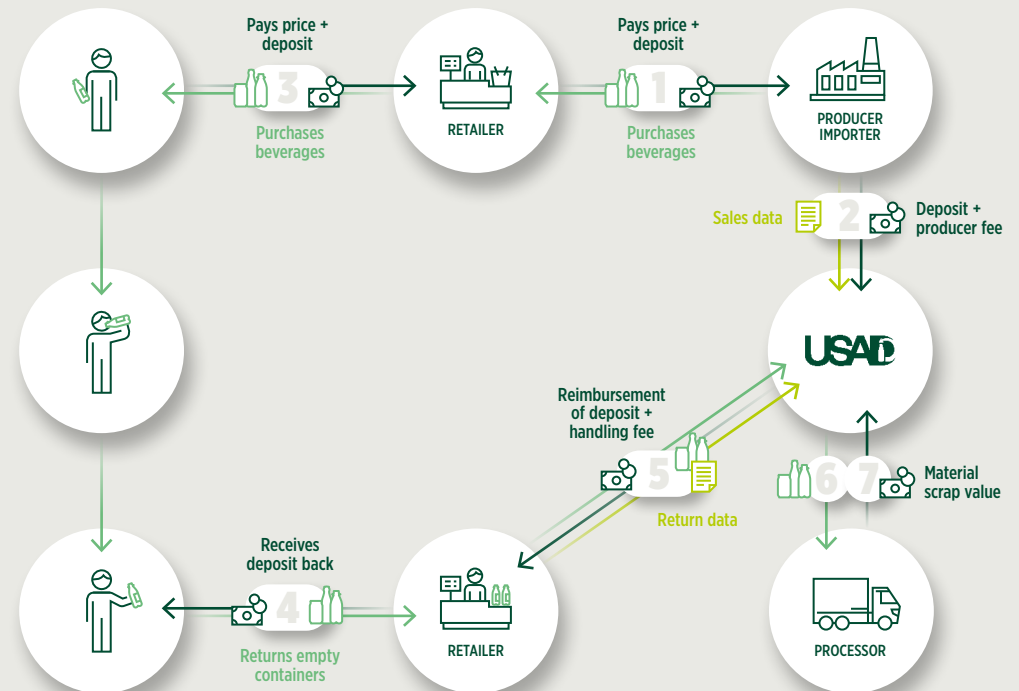
SYSTEM RESULTS (2019)

PET	92%
Metal	93%
One-way Glass	85%

Total Return Rate: 92%



MONEY MATERIAL FLOW



THE NETHERLANDS

Population: 17.1 m

Website: www.retourverpakking.nl



LEGISLATIVE FRAMEWORK

Mandate: Packaging Management Decree (Besluit Beheer Verpakkingen) and Generally Binding Declaration (Afvalfonds Verpakkingen)

Enacted: 2004

Implemented: 2005

Last updated: 2014/2017/2020

Authority: Ministry of Infrastructure and Water Management

Targets:

Initially, the Decree on management of packaging and paper and board of 2005 included a collection target of 95% for plastic beverage packaging > 0.5 L and 55% for plastic bottles ≤ 0.5 L. However, this was never enforced and at the end of 2010 the relevant articles were removed from the Decree. The 2014 Decree does not set specific targets for packaging collected through the DRS, however it sets national recycling targets for 2015 for packaging materials as follows: 45% of plastics, 90% of glass, and 85% of metal. The general targets for plastics (not DRS-specific) are increased each year by 1% until 2022, when the targets will be fixed at 52% for plastics.

PROGRAM SCOPE

Material¹:

Plastic (predominantly PET)

Beverage type¹:

Containers ≥ 0.8 L (0.21 gal):

Soft drinks, water

Excluded:

Medical drinks, wine (and fruit wine), spirits, moderately alcohol beverages, cartons (those intended for beverages and consist of at least 80% paper or paperboard), glass, metal cans, small plastic bottles, containers ≤ 100 ml (0.026 gal), beverage packaging in which the producer or importer can demonstrate on an annual basis < 500,000 units of consumer packagings be made available

¹In April 2020, the Dutch State Secretary for Infrastructure and Water Management announced that a DRS for small plastic bottles (< 1 L (0.26 gal)) would come into effect on July 1, 2021, with a minimum deposit value of € 0.15. The Dutch authorities are also working on deposit legislation for beverage cans.

DEPOSITS AND FEES

Deposit initiator: Producer/Importer

Deposit value: € 0.25 (USD\$ 0.28)

Unredeemed deposits: Producer/Importer

Handling fees: None

Producer fees (2020): € 0.01 plus € 0.02

SYSTEM OPERATOR

Clearing system: Centralized

System operator & administrator:

Foundation Return Packaging Netherlands (Stichting Retourverpakkingen Nederland) (SRN)

For the majority of deposit-bearing containers, there is one system in which several supermarkets are connected. This is operated by SRN, which is a not-for-profit organization established by the soft drink and mineral water suppliers in cooperation with the food trade. In addition to SRN, Aldi and Lidl have established their own closed-loop systems where deposit bottles (around 110 million) from the SRN system are not accepted. Besides counting and sorting containers, the SRN handles the transfer of deposit and handling fees (VBR – Vergoeding Behandling extra Retouremballage) between producers and retailers.

System finance: Administration fees

REDEMPTION SYSTEM

Return-to-Retail:

The take-back of empty beverage containers and the refund of the deposit must occur at the same place where containers of the same material are marketed (or in the “immediate vicinity”). Retailers with a surface area < 200 m² are exempt from this obligation as they can limit the take-back to containers of the same type as marketed by the point of sale. Collection system is 89% automated / 11% manual. In 2017, there was a total of 4,200 RVMs across the Netherlands.

Material owner: Producer

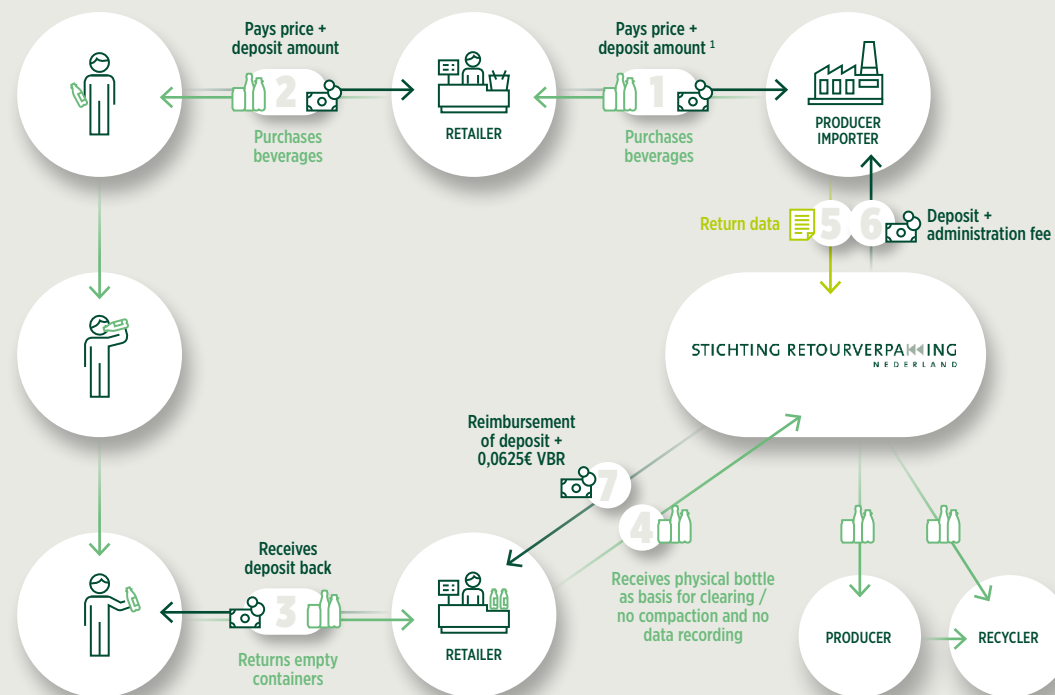
SYSTEM RESULTS (2018)

PET 95%

Total Return Rate: 95%



MONEY MATERIAL FLOW



NORWAY

Population: 5.3 m

Website: <http://infinitem.no/infinitem/>



LEGISLATIVE FRAMEWORK

Mandate: Regulations relating to the Recycling of Waste

Enacted: 1997

Implemented: 1999

Last Updated: 2018 (deposit increase)

Authority: Norwegian Environment Agency

Target: To be exempt from the environmental tax, the return rate for cans and plastic bottles must be 95%.

PROGRAM SCOPE

Material:

Plastic (predominantly PET, HDPE), metal (aluminum/tinplate)

Beverage type:

All (the regulation does not regulate the type of beverage product covered by DRS)

Excluded:

Glass

DEPOSITS AND FEES

Deposit initiator:

Producer/Importer

Deposit value:

Plastic, metal ≤ 0.5 L (0.13 gal): 2 NOK (€ 0.16, USD\$ 0.18)

Plastic, metal > 0.5 L (0.13 gal): 3 NOK (€ 0.25, USD\$ 0.26)

Unredeemed deposits:

Infinitem

Handling fees (2020):

RVM with compaction:

Plastic: 0.25 NOK

Metal: 0.20 NOK

Manual or RVM without compaction:

Plastic: 0.10 NOK

Metal: 0.05 NOK

Producer fees (2020):

Aluminum: 0.00 NOK (€ 0.00, USD\$ 0.00)

Steel: 0.21 NOK (€ 0.02, USD\$ 0.08)

PET: 0.18 NOK (€ 0.02, USD\$ 0.02)

HDPE: 0.18 NOK (€ 0.02, USD\$ 0.02)

In addition to the producer fees, above, producers wanting to join the Infinitem system are required to pay a one-time registration fee for the company and a fee for each new packaged product placed on the market.

SYSTEM OPERATOR

Clearing system: Centralized

System operator & administrator: Infinitem

System finance:

Material revenues, unredeemed deposits, producer fees

Established in 1996 under the name Norsk Resirk, Infinitem began operations in 1999 and is owned by the beverage producers and Norwegian grocery producers. Infinitem's ownership is divided as follows:

- Virke Kiosk og Bensin (1.5%)
- Dagligvareleverandørens Servicekontor (7.5%)
- NHO Mat og Drikke (7.5%)
- COOP Norge AS (15.0%)
- Dagligvarehandelens Miljøforum AS (33.5%)
- Bryggeri- og Drikkevareforeningens Servicekontor AS (35%)

REDEMPTION SYSTEM

Return-to-Retail:

All retailers selling deposit-bearing beverages are required to take-back empty containers. Retailers must register with Infinitem but can decide how to organize the collection on their premises – either with a RVM or through manual collection. There are approximately 3,700 RVM collection points in Norway (97% of the total collection) and 12,000 manual collection points (3% of total collection).

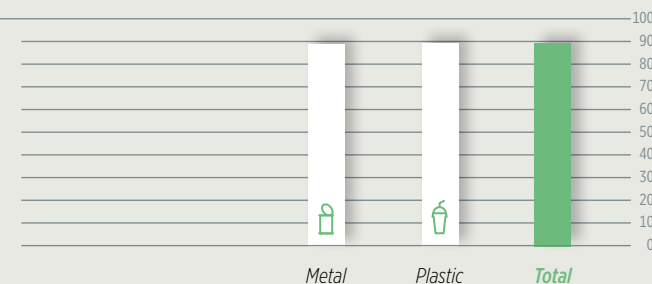
Material owner:

Infinitem

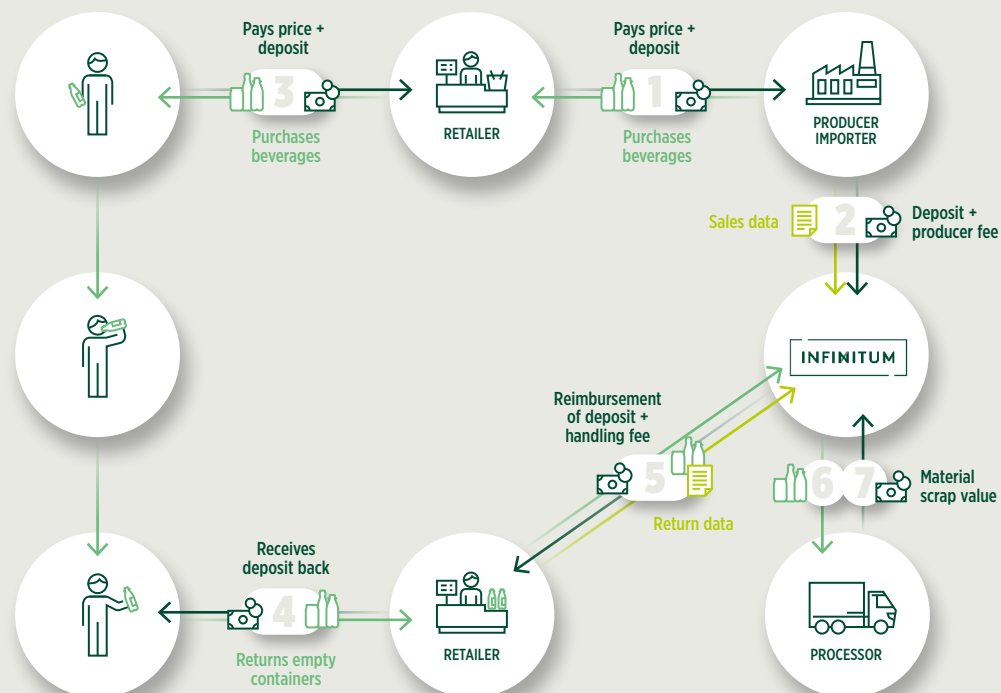
SYSTEM RESULTS (2019)

Metal 89.5%
Plastic 89.4%

Total Return Rate: 89.5%



MONEY MATERIAL FLOW



SWEDEN

Population: 10.0 m

Website: www.pantamera.nu



LEGISLATIVE FRAMEWORK

- Mandate:** Law on Recycling of Aluminum Beverage Containers, Law on Recycling of Certain Beverage Containers (PET), Ordinance on the Return System for Plastic Bottles and Metal Cans
- Enacted:** 1982, 1991, 2005
- Implemented:** 1984, 1994, 2006
- Authority:** Swedish Board of Agriculture
- Targets:** 90% collection target for all metal cans and PET bottles included in the DRS

PROGRAM SCOPE

Material: Plastic (predominantly PET), metal (aluminum/tinplate)¹

Beverage type: All ready-to-drink beverages including beer, soft drinks, cider, bottled water

Excluded: Drinks that contain ≥ 50% dairy products, vegetable/fruit/berry juice (since 2018, juice manufacturers can voluntarily join the Returpack system)

¹Note: The historical two laws governing aluminum can and PET bottle recycling had narrower definitions: drink packaging made of aluminum, and bottles that are made of polyethylene terephthalate. The definition in the new law (Ordinance 2005:220) that replaced the existing laws have broader definitions (packaging made of 'metal' and 'primarily of polymer material').

DEPOSITS AND FEES

Deposit initiator: Producer/Importer

Deposit value:

Metal: 1 SEK (€ 0.11, USD\$ 0.12)
Plastic ≤ 1 L (0.26 gal): 1 SEK (€ 0.11, USD\$ 0.12)
Plastic > 1 L (0.26 gal): 2 SEK (€ 0.22, USD\$ 0.24)

Unredeemed deposits: AB Svenska Returpack

Handling fees (2020):

Manual collection:

Metal: 0 SEK (€ 0.00, USD\$ 0.00)
Plastic: 0.2 SEK (€ 0.02, USD\$ 0.02)

RVM without compaction:

Metal: 0.174 SEK (€ 0.016, USD\$ 0.017)
Plastic ≤ 1 L (0.26 gal): 0.258 SEK (€ 0.023, USD\$ 0.025)
Plastic > 1 L (0.26 gal): 0.345 SEK (€ 0.031, USD\$ 0.033)

RVM with compaction:

Metal: 0.19 SEK (€ 0.017, USD\$ 0.018)
Plastic ≤ 1L (0.26 gal): 0.316 SEK (€ 0.029, USD\$ 0.031)
Plastic > 1L (0.26 gal): 0.503 SEK (€ 0.045, USD\$ 0.049)

Producer fees:

Plastic ≤ 1L (0.26 gal): 0.22 SEK (€ 0.020, USD\$ 0.021)
Plastic > 1L (0.26 gal): 0.52 SEK (€ 0.047, USD\$ 0.050)

Producers also have to pay an affiliation fee of 10,000 SEK (which goes directly to the Swedish Board of Agriculture), as well as sorting fees for each packaging marked with a company's barcode.

SYSTEM OPERATOR

Clearing system: Centralized

System operator & administrator: AB Svenska Returpack (Pantamera)

Returpack was established in 1982 to operate the DRS for aluminum cans which began in 1984. When a similar requirement for PET bottles was introduced, Returpack integrated these containers in the already existing system. Returpack is a privately-owned, not-for-profit company and is the only existing deposit system operator approved by the Swedish government. Its owners include representatives from the brewery sectors (50%) and retailer associations equally shared between small (25%) and large (25%) retailers.

System finance:

Material revenues, unredeemed deposits, administration fees

REDEMPTION SYSTEM

Return-to-Retail:

There is no legal obligation for retailers to take-back empty beverage containers; joining the system is voluntary. There are 14,000 collection points (including supermarkets, small cafes, restaurants, airports, etc.) and 95% of returns take place at food retail markets. In addition to returning empty containers to retailers, consumers can use a deposit return bank (Pantamera Express) to take back their bottles and cans. In 2018, there were 30 such machines. Returpack also uses a mobile collection station (Pant-o-Bil) to facilitate the return of beverage containers at festivals. The collection system is 96% automated/4% manual.

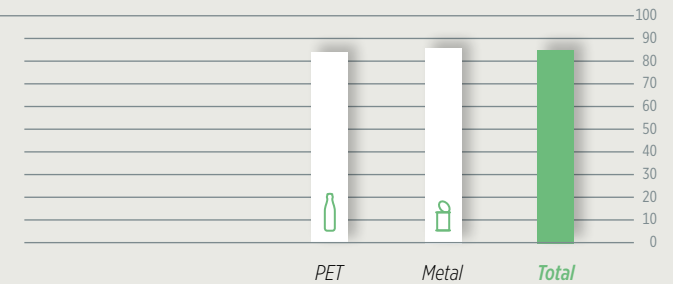
Material owner:

AB Svenska Returpack (Pantamera)

SYSTEM RESULTS (2019)

PET	84.1%
Metal	85.8%

Total Return Rate: 84.9%



MONEY MATERIAL FLOW

