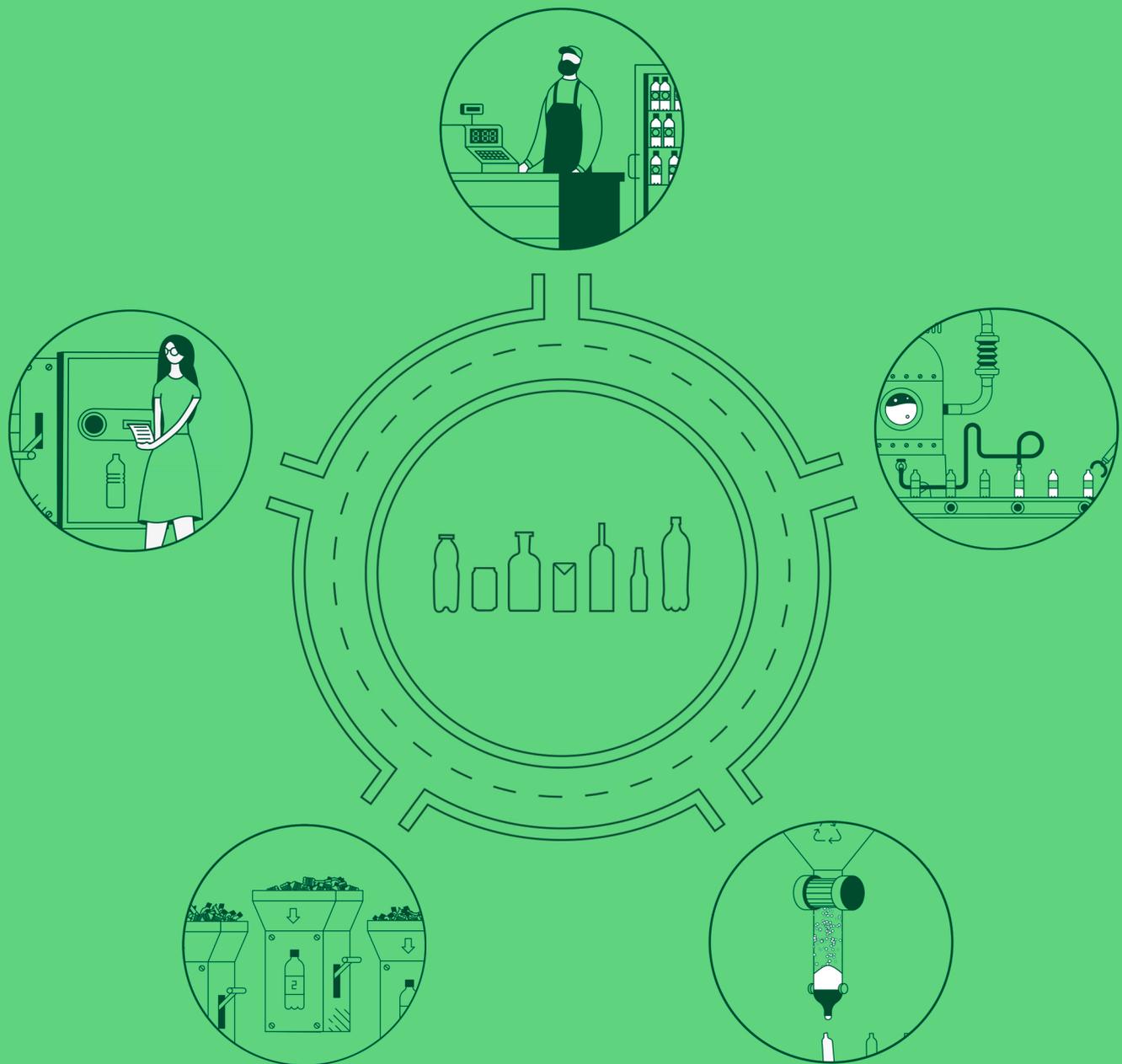


DEPOSIT SYSTEMS FOR ONE-WAY BEVERAGE CONTAINERS: GLOBAL OVERVIEW

2018



AUTHOR'S NOTE

This report was prepared by CM Consulting in association with Reloop Platform, and is intended to provide a comprehensive summary of 39 different deposit-return systems for one-way beverage containers in existence around the world.



CM Consulting Inc.

Working with industry, government, and not-for-profits, CM Consulting is recognized worldwide for the comprehensive information and analysis it provides – information that is relied upon to make informed policy and programming decisions. Established in 1998 by Clarissa Morawski, CM Consulting was founded on the principle that industry and consumers must assume greater responsibility for ensuring that the manufacture, use, reuse and recycling of their products and packaging has a minimum impact on the environment. CM Consulting specializes in waste minimization and Canadian stewardship policy with a specific focus on extended producer responsibility programs, cost and performance. The CM Consulting team consists of Clarissa Morawski (Principal), Jason Wilcox (Projects Manager), and Samantha Millette (Content Writer & Researcher).



Reloop Platform

Reloop is a broad platform of like-minded interests that share a common vision for a circular economy. The founding members of the organization bring together industry, government, and non-governmental organizations to form a network for advances in policy that create enabling system conditions for circularity across the European economy. With members coming from different sectors across Europe, the platform aims to work as a catalyst in order to generate economic and environmental opportunities for all stakeholders in the value chain. This includes producers, distributors, recyclers, academia, NGOs, trade unions, green regions, or cities. Reloop is born to connect stakeholders, allow for information-sharing to inform those stakeholders, and influence decision makers to adopt policy that works towards the implementation of policies and systems that promote a circular economy.

Disclaimer

CM Consulting and Reloop provide the information contained in this report in good faith, and every attempt has been made to ensure that all facts and analyses presented are as accurate as possible. The facts and data contained in this document are taken primarily from external sources, including publicly accessible annual reports released by program operators, stewardship agencies, or other involved entities. Other information was obtained through personal communication and e-mail correspondence. Users should be aware that CM Consulting or Reloop are not liable for the use or application of this research. There is no guarantee provided in respect of the information presented, and any mention of trade names or commercial products does not constitute endorsement or recommendation for use.

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GLOSSARY / ACRONYMS

CALIFORNIA REDEMPTION/REFUND VALUE (CRV): Similar to beverage container deposits in other jurisdictions. See “Deposit.”

CLEARING SYSTEM: The entity responsible for reconciling the deposits paid/redeemed.

CONSUMER CONTAINER FEE: A per unit non-refundable fee paid at the point of purchase. In Saskatchewan (Canada), the fee is called an Environmental Handling Charge. In Yukon, it is called a Recycling Fund Fee, and in the Northwest Territories it is called a Container Handling Fee. In other jurisdictions, like British Columbia, it is called a Container Recycling Fee. Unlike the others which are set by the government or other responsible entity, the Container Recycling Fee represents the net cost (net of unredeemed revenue) per container type.

DEPOSIT: A fee that is charged on applicable beverage containers at the point of purchase, which retailers are required to collect from consumers. Intended to act as an incentive to recycle, deposits refunded when the consumer returns the empty container to an authorized redemption centre or retailer for recycling.

HANDLING FEE (HF): A fee that is paid to redemption centers and retailers as compensation for receiving, paying out refunds for, sorting, and storing redeemed beverage containers. On a long-term basis, handling fees also cover expenses related to investments in reverse vending machines, electricity costs, space requirements, and additional personnel required to handle the containers. The fee is often paid by the bottler or distributor, but in some cases is paid by the state (e.g. California).

HDPE: High density polyethylene (plastic)

MATERIAL OWNER: The owner of the recyclable commodity (empty containers) that can sell the material to the market or keep the material to have it converted into raw material for new bottles or cans.

PET: Polyethylene terephthalate (plastic)

PROCESSING FEE: Per unit fee paid by beverage manufacturers to system operator

PROCESSING PAYMENT: The fee offered to processors to sort and market beverage containers. It is paid on a per unit basis.

PS: Polystyrene (plastic)

PVC: Polyvinyl chloride (plastic)

R2RC: Return to Redemption Center

UNREDEEMED DEPOSITS: The value of paid deposits on containers that have not been redeemed - possibly discarded in trash/as litter, recycled through other means, or lost.

OVERVIEW

As the problem of marine litter has steadily grown worse, there has been renewed interest in deposit-return for the recovery of single-use beverage containers. These systems see customers pay a small deposit when they purchase a can or bottle, which they get back when they return the container to a collection point for recycling.

Deposit-return systems (DRS) are a proven tool to collect high quantities of empty beverage containers for reuse and high-quality recycling, and are vital to achieving a circular economy. Over 130 million people in the EU alone live in countries with deposit-systems. It's also used in most Canadian provinces, 10 US states, and large portions of Australia. The latest jurisdiction to implement a container deposit program was New South Wales (NSW) on December 1, 2017. Other jurisdictions that have announced plans for, or that have implemented container deposit laws but whose programs are not yet operational and therefore not included in this report, include Scotland, Fiji, Guam, Turks & Caicos, Barbados, Western Australia (expected to start between 1 July 2019 and 1 January 2020), and Queensland (expected to start on 1 November 2018).

At a time when more and more jurisdictions are considering the implementation of DRS to achieve mandated recycling targets and reduce litter, CM Consulting (in association with ReLoop Platform) is pleased to release the first edition of *Deposit Systems for One-Way Beverage Containers: Global Overview (2016)*. This document provides a comprehensive summary of 39 deposit systems in different jurisdictions around the world.

Each deposit market profiled in this review is structured along the following key parameters (where information is available):

- Mandate (legal basis for the system)
- Program Scope (beverages and containers included in the system)
- Deposit and Fees (deposit amounts and different fees)
- System Operator (composition and tasks of the System Operator)
- Redemption System (beverage container take-back system)
- System Results (return rates)
- Money Material Flow (visual flow chart)

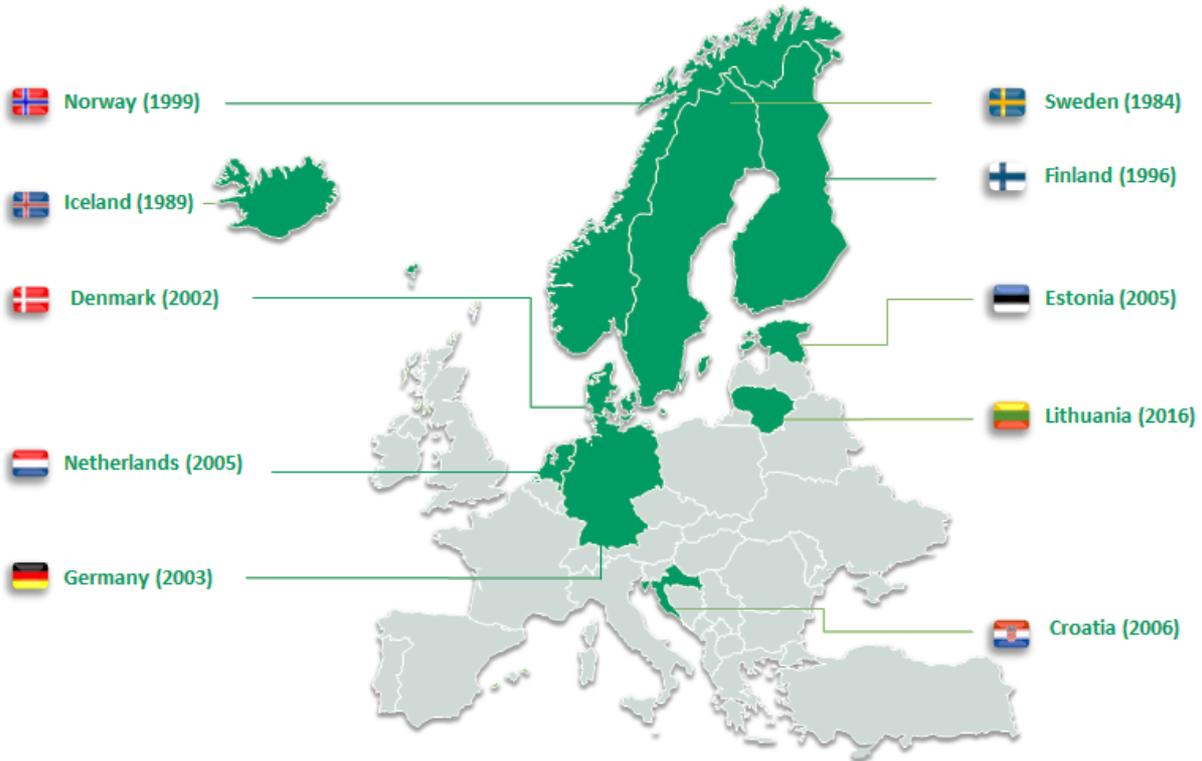
It is worth noting that all systems, with the exception of California (USA) and most Canadian provinces (Saskatchewan, Yukon, New Brunswick, Nova Scotia, Newfoundland, Northwest Territories, Ontario, Manitoba, and Prince Edward Island) have barcode-based recording systems. 'Barcode-based' means that the containers are recognized by the barcode and the information is recorded. This makes every container traceable and provides a clear picture on what is returned.

Information for this report was obtained from system operators, internal documents, government reports, as well as consultancy reports and includes the following sources: AB Svenska Returpack, Endurvinnslan HF, Suomen Palautuspakkaus Oy Palpa, Norsk Resirk AS, Dansk Retursystem A/S, Deutsche Pfandsystem GmbH, Eesti Pandipakend UÜ, Stichting Retourverpakkingen NL, Recycling Netwerk, Retorna, Zero Waste Scotland, Container Recycling Institute, CM Consulting, ELA Recycling Corporation, Environmental Protection Agency (EPA) South Australia, AluPro.



EU 28 + EFTA (NORWAY/ICELAND)

(133.1 million have access to DRS)



Country	Population (million)	Mandate Enacted	Mandate Implemented
1. Croatia	4.3	2005	2006
2. Denmark	5.6	2000	2002
3. Estonia	1.3	2004	2005
4. Finland	5.4	N/A	1996, 2008 (PET), 2012 (Glass)
5. Germany	81.9	1991	2003
6. Iceland	0.3	1989	1989
7. Lithuania	3.0	2014	2016
8. Netherlands	16.8	2003	2005
9. Norway	5.0	1997	1999
10. Sweden	9.5	1982, 1991 (PET)	1984, 1994 (PET)



CROATIA

Population: 4.3m

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



MANDATE

Ordinance on Packaging and Packaging Waste

Enacted:	2005
Implemented:	2006
	2015 Comprehensive amendment act (approved and published in summer 2015; not yet implemented)
Authority:	Ministry of Environment
Target:	95% collection target

PROGRAM SCOPE

Material:	Plastic (predominantly PET), metal (aluminum/tinplate), glass
Beverage type:	Juices; mineral water; other waters; beer; wine; hard liquor and milk drinks in volume < 0.2l
Excluded:	Dairy products

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Importer
Deposit value:	0.5 HRK (0.066€, USD\$0.07)
Unredeemed deposits:	Government Recycling Fund
Handling Fee (HF):	0.12 HRK (€0.02, USD\$0.02) for RVM accepted containers (25% VAT included); 0.10 HRK (€0.01, USD\$0.01) for manually accepted containers (25% VAT included)
Transport Fee:	<p>≤ 100 km: 100 HRK/t (€13.29/t, USD\$14.82/t) 100-200 km: 200 HRK/t (€26.58/t, USD\$29.60) 200-300 km: 300 HRK/t (€39.87/t, USD\$44.40) ≥ 300 km: 400 HRK/t (€53.16/t, USD\$59.20)</p> <p>Retailer responsible for organizing the transport of collected PET containers and cans to one of 24 authorized waste packaging management centers. Glass bottles go directly to recyclers.</p>

SYSTEM OPERATOR

Clearing System:	Centralized
System Operator & Administrator:	Environmental Protection and Efficiency Fund (Government Operated)

REDEMPTION SYSTEM

Return to Retail:	Retailers ≥ 200 m ² are obliged to take back. Collection is mostly manual. Retailers must sort containers by material type (50 PET bottles in yellow bags; 100 aluminum and/or steel cans in grey)
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bags; 40 glass bottles in green bags). If retailer uses RVMs, then big bags can be used for PET bottles (200) and cans (800).

Material owner:

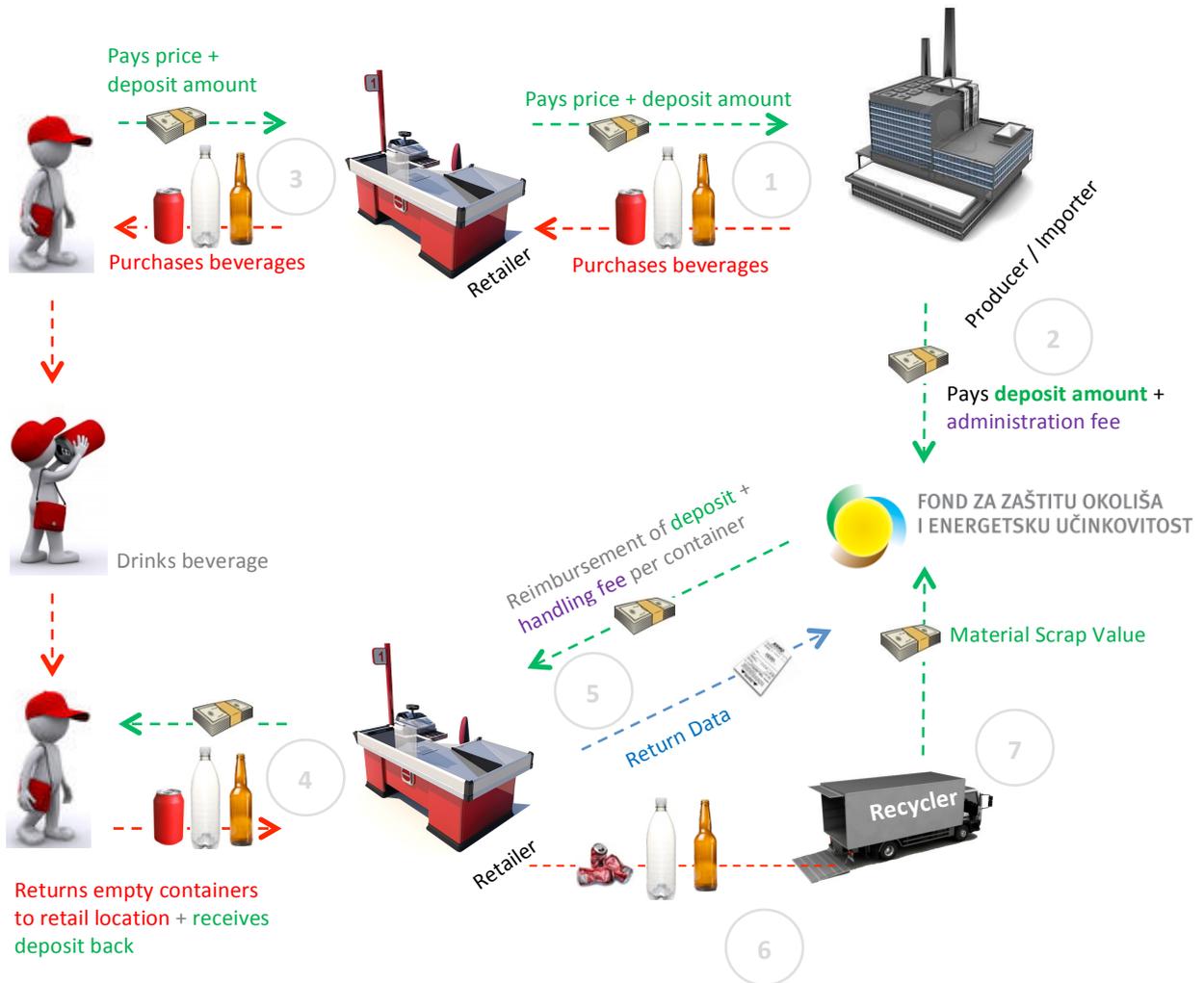
Environmental Protection and Efficiency Fund

SYSTEM RESULTS (2016)

Total Return Rate:

Up to 87%

MONEY MATERIAL FLOW





DENMARK

Population: 5.6m

Website: www.dansk-retursystem.dk



MANDATE

Statutory Order on Deposits and Collection of Packaging for Beer and Certain Soft Drinks

Enacted:	2000
Implemented:	2002
Last Updated:	2007
Authority:	Ministry of Environment
Target:	95% collection target

PROGRAM SCOPE

Material:	Plastic (predominantly PET), metal (aluminum), glass
Beverage type:	Beer (alcohol content > 0.5% by volume); carbonated soft drinks (alcohol content of 0–0.5%); energy drinks; mineral water; iced tea; ready-to-drink beverages (incl. lemonade, alcopops, energy drinks and cider products); mixer products where spirits, wine or other fermented products are mixed with other beverages such as soft drinks, cider, chocolate or juice (alcohol content 0.5% - 10%)
Excluded:	Fruit squash, juice, cocoa, wine and spirits, milk

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Importer
Deposit value:	Metal, glass, plastic < 1l: 1 DKK (€0.13, USD\$0.15) Plastic 0.5l: 1.5 DKK (€0.2, USD\$0.22) Metal, glass, plastic ≥ 1l: 3 DKK (€0.4, USD\$0.45)
Unredeemed deposits:	Dansk Retursystem A/S (remains partly in system for improvement and partly donated to charity)
<u>Handling Fee (HF):</u>	
Manual collection:	Metal: 6.2 øre (€0.008, USD\$0.009) Plastic < 1l: 6.7 øre (€0.009, USD\$0.0097) Plastic > 1l: 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 < 1l: 1.8 øre (€0.0019, USD\$0.0026) Plastic > 1l: 2.4 øre (€0.0032, USD\$0.0035) Glass: 7.1 øre (€0.0095, USD\$0.0103)
Producer administration fee:	Plastic: €0.02822 (USD\$0.03) - €0.03628 (USD\$0.04) Can: €0.01209 (USD\$0.01) - €0.05510 (USD\$0.06) Glass: €0.05510 (USD\$0.06) - €0.9273 (USD\$1.04)

SYSTEM OPERATOR

Clearing System: Centralized
 System Operator & Administrator: Dansk Retursystem A/S

Dansk Retursystem A/S is a private non-profit organization that has been granted the exclusive right to operate the Danish deposit return system through to 2013, as approved by Statutory Order no. 1129 (in Danish only) from the Danish Ministry of the Environment.



System Finance: Material revenue/unredeemed deposits/administration fee

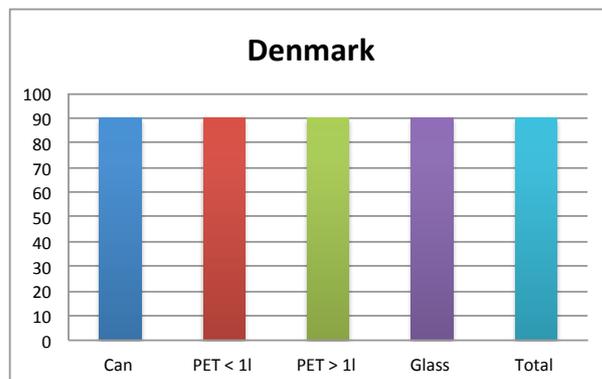
REDEMPTION SYSTEM

Return to Retail: Nearly 6,000 redemption locations. Collection system is 95% automated / 5% manual
 Material owner: Dansk Retursystem A/S

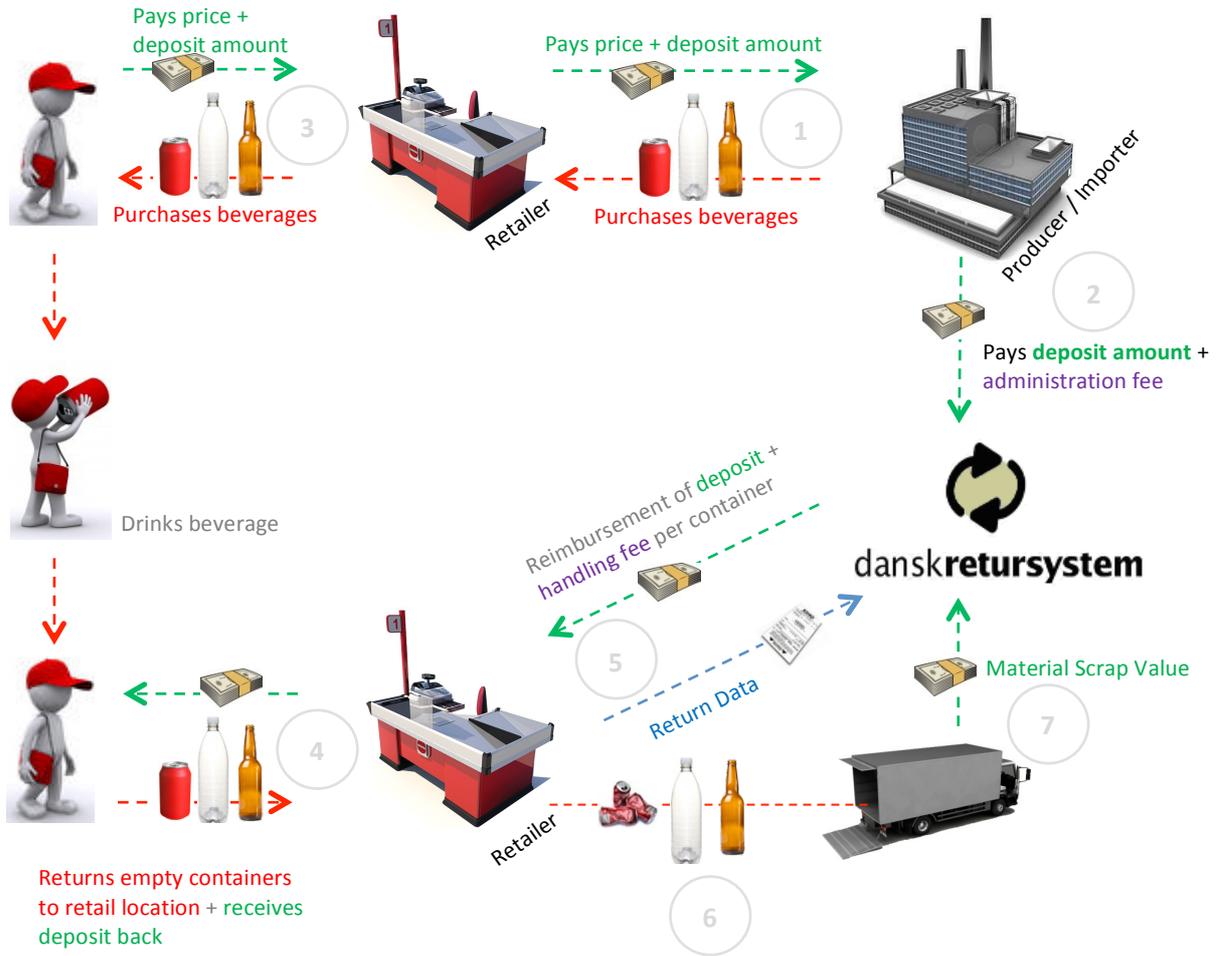
SYSTEM RESULTS (2016)

Total Return Rate: 90%

Can: 90%
 PET < 1l: 90%
 PET > 1l: 90%
 Glass: 90%



MONEY MATERIAL FLOW





ESTONIA

Population: 1.3m

Website: www.eestipandipakend.ee



MANDATE

Packaging Act	
Enacted:	2004
Implemented:	2005
Authority:	Ministry of Environment
Target:	PET and one-way glass (deposits) - 85% recycling of the total mass of packaging waste per calendar year Can (deposits) - 50% recycling of the total mass of packaging waste per calendar year

PROGRAM SCOPE

Material:	Plastics (mainly PET), metals (aluminum/steel), glass
Beverage type:	Soft drinks; water; beer; cider; juice; juice concentrates; nectars; low-ethanol alcoholic beverages (up to 6% volume)
Excluded:	Strong alcoholic beverages (vodka, wine, etc); glass jars; Tetra Pak

DEPOSITS AND FEES

Deposit (initiated by Producer/Importer):

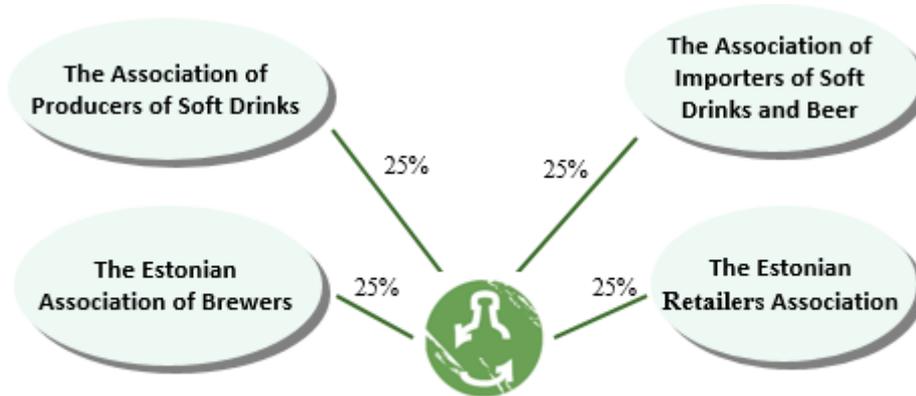
Metal, plastics, glass (all sizes):	€ 0.10 (USD\$0.11)
Unredeemed deposits:	Eesti Pandipakend OÜ (producer responsibility organization)

Retail Handling Fee:

Manual collection (PET/Can)	€0.0105/packaging unit + VAT
Manual collection (one-way glass)	€0.0120/packaging unit + VAT
RVM without compaction (PET/Can)	€0.0215/packaging unit + VAT
RVM with compaction (PET/Can)	€0.0310/packaging unit + VAT
RVM collection (one-way glass)	€0.0234/packaging unit + VAT

SYSTEM OPERATOR

Clearing System: Centralized
 System Operator & Administrator: Eesti Pandipakend OÜ



System Finance: Material revenue, unredeemed deposits, packages handling fee

REDEMPTION SYSTEM

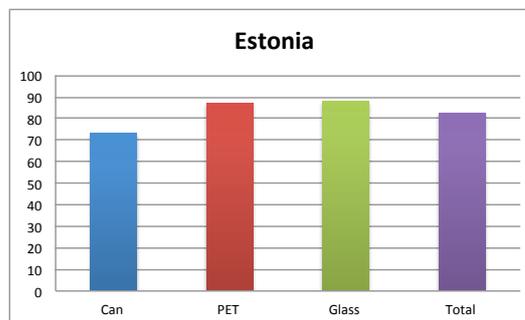
Return to Retail
 Retailers selling deposit containers are required to take back the containers on their premises. If retailer sales area is over 200m² it is a must, if it is between 20-200m², retailer can apply to get freedom from that obligation, that is analyzed and decided by the local municipality. Urban vendors under 20m² of sales area are not obligated to take back deposit containers. Collection system is 94% automated / 6% manual.

Material owner: Eesti Pandipakend OÜ

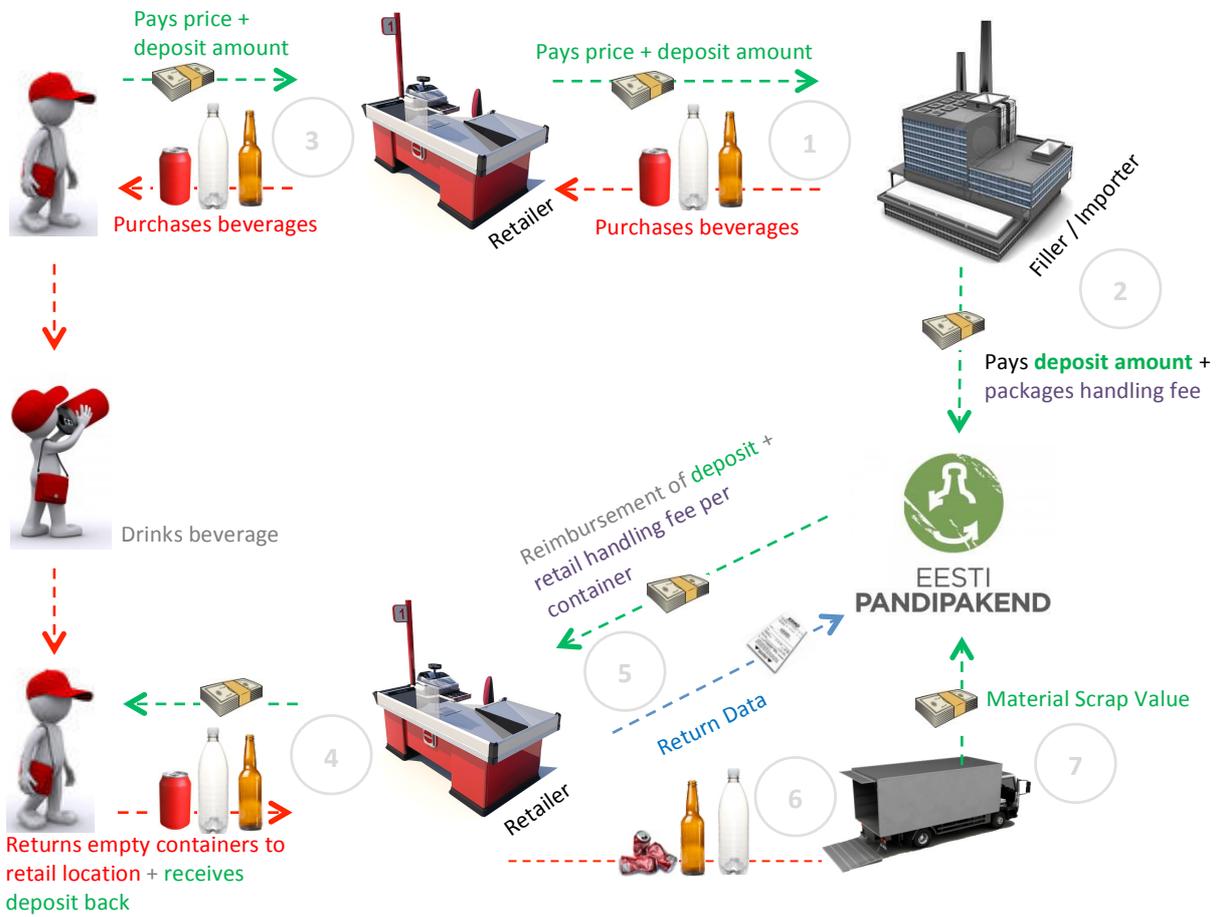
SYSTEM RESULTS (2017)

Total Return Rate: 82.7%

Can 73%
 PET 87%
 Glass 88%



MONEY MATERIAL FLOW





FINLAND

Population: 5.4m

Website: www.palpa.fi



MANDATE

Excise Tax on One-Way Beer and Soft Drink Containers

Implemented: 1996 (Cans) / 2008 (PET) / 2012 (Glass)
 Authority: Ministry of Environment
 Target: 80% collection

PROGRAM SCOPE

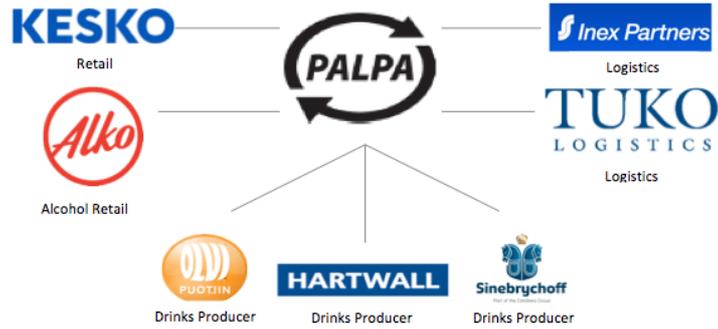
Material: Plastic (predominantly PET), metal (aluminum), glass
 Beverage type: Almost all soft drinks; water; beer; cider; long drinks; sport drinks; juice; liquor/spirits/wine sold by Alko
 Excluded: Milk

DEPOSITS AND FEES

Deposit: Initiated by Producer/Importer
 Deposit value: Plastic < 0.5l: €0.10 (USD\$0.11)
 Plastic 0.5l - 1l: €0.20 (USD\$0.22)
 Plastic > 1l: €0.40 (USD\$0.45)
 Metal: €0.15 (USD\$0.17)
 Glass: €0.10 (USD\$0.11)
 Unredeemed deposits: Suomen Palautuspakkaus Oy (PALPA)
Handling Fee:
 Manual collection or
 RVM without compaction: Metal/Plastic/Glass: €0.027 (USD\$0.030)
 RVM with compaction: Metal/Plastic/Glass: €0.03 (USD\$0.033)
 Producer administration fees: Plastic: €0.01720 (USD\$0.02) – €0.11568 (USD\$0.13)
 Metal: €0.00935 (USD\$0.01)
 Glass: €0.08640 (USD\$0.10) – €0.13680 (USD\$0.15)

SYSTEM OPERATOR

Clearing System: Centralized
 System Operator & Administrator: Suomen Palautuspakkaus Oy (PALPA)
 System Finance: Material revenue/Unredeemed deposits/Administration Fee



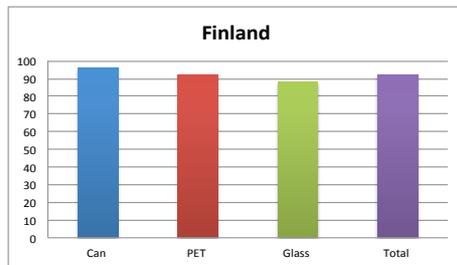
REDEMPTION SYSTEM

Return-to-Retail: 5,815 retail recycling points / 8,758 HORECA recycling points / 343 shared recycling points. Collection system is 95% automated / 5% manual.

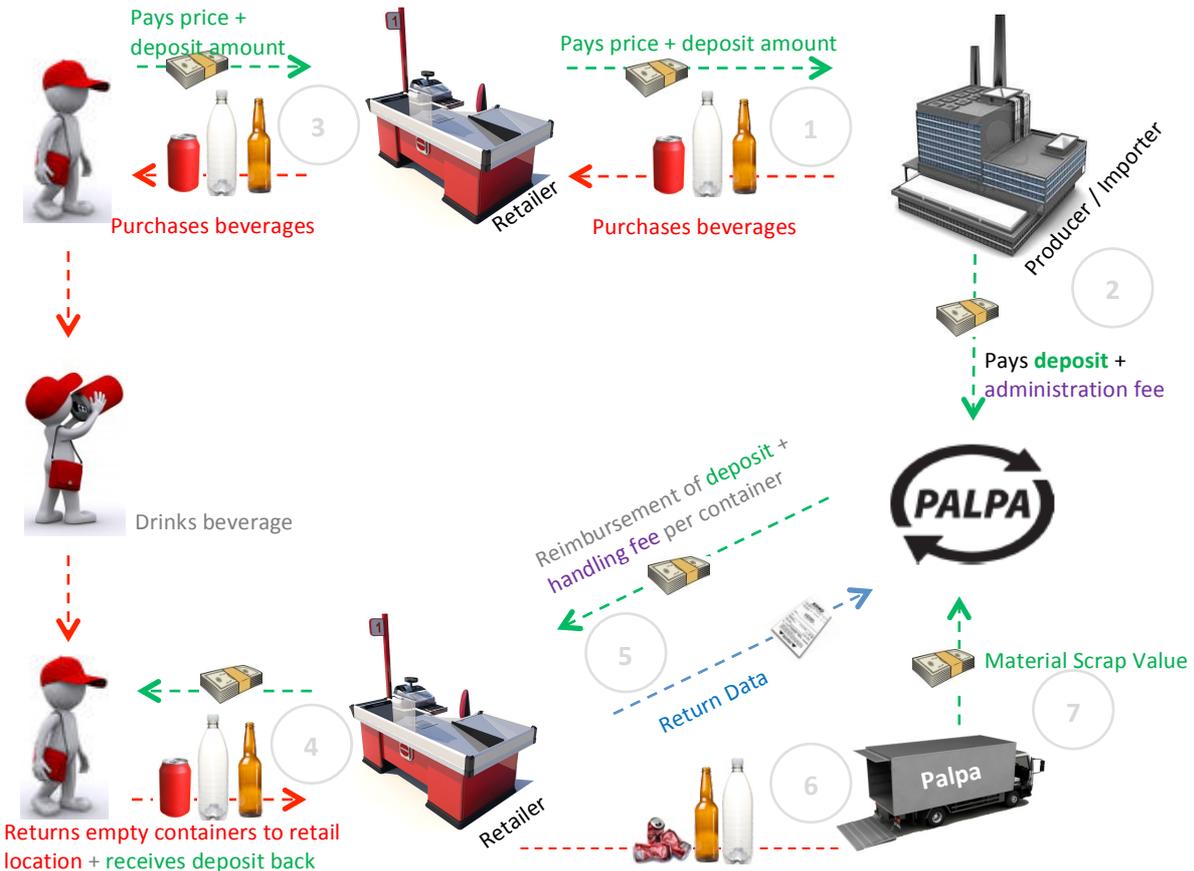
Material owner: Suomen Palautuspakkaus Oy (PALPA)

SYSTEM RESULTS (2016)

Total Return Rate:	92%
Can	96%
PET	92%
Glass	88%



MONEY MATERIAL FLOW





GERMANY

Population: 81.9m

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



MANDATE

Packaging Ordinance	
Enacted:	1991
Implemented:	2003
Authority:	Ministry of Environment

PROGRAM SCOPE

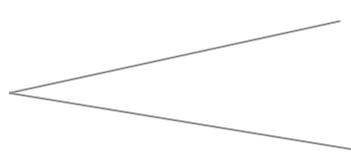
Material:	Plastic (predominantly PET), metal (aluminum), glass
Beverage type:	Water (mineral water carbonated or non-carbonated, spring water, healing water, table water, water with additives, e.g. aroma, caffeine, oxygen, all other drinkable waters); beer & mixed drinks containing beer (incl. alcohol free beer); carbonated/non-carbonated soft drinks; mixed alcoholic drinks
Excluded:	Milk products; fruit and vegetable juices; dietetic products exclusively for babies; containers <0.1l and > 3l

DEPOSITS AND FEES

Deposit	Initiated by Producer/Importer
Deposit value:	Metal, plastic, glass (0.1l – 3l): €0.25 (USD\$0.28)
Unredeemed deposits:	Remains with filler / producer
Handling Fee:	No handling fee, but retailer owns material

SYSTEM OPERATOR

Clearing System:	Decentralized
System Administrator:	Deutsche Pfandsystem GmbH
System Operator:	Retail and Industry



German Retail Association 50%



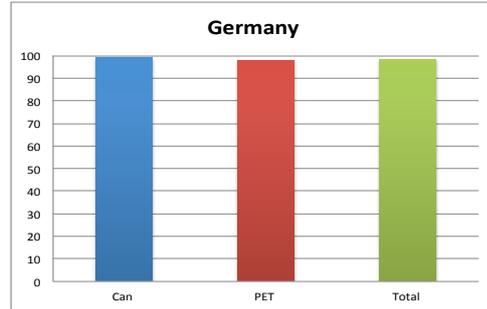
German Food Association 50%

REDEMPTION SYSTEM

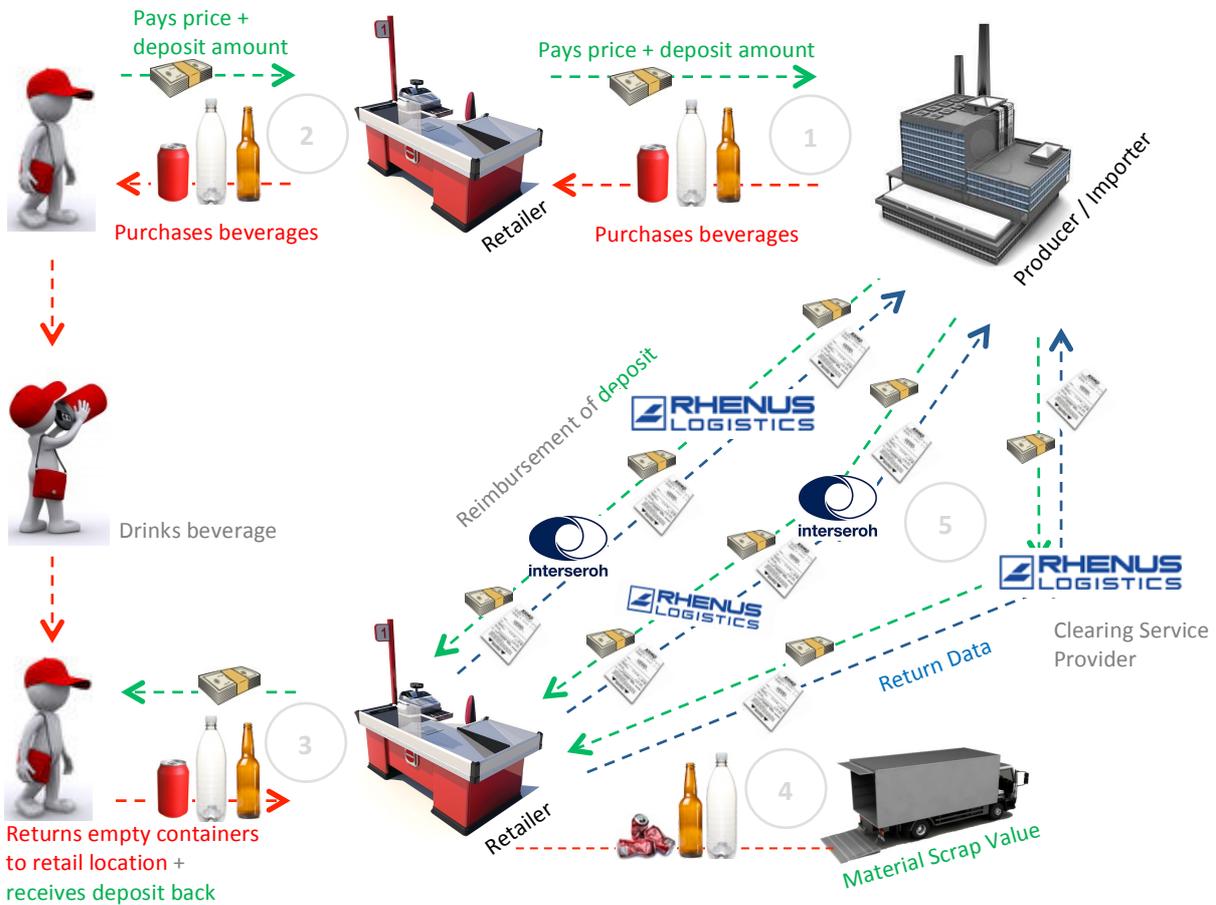
Return-to-Retail:	Approx. 135,000 Retailers are only obliged to take back the material fractions they sell. Retailers < 200m ² are only obliged to take back the brands they sell. Collection system is 80% automated / 20% manual
Material owner:	Retail

SYSTEM RESULTS (2015)

Total Return Rate:	98.4%
Can	99%
PET	98%



MONEY MATERIAL FLOW





ICELAND

Population: 0.3m

Website: www.endurvinnslan.is



MANDATE

Law No. 52/1989	
Enacted:	1989
Implemented:	1989
Authority:	Ministry of Environment

PROGRAM SCOPE

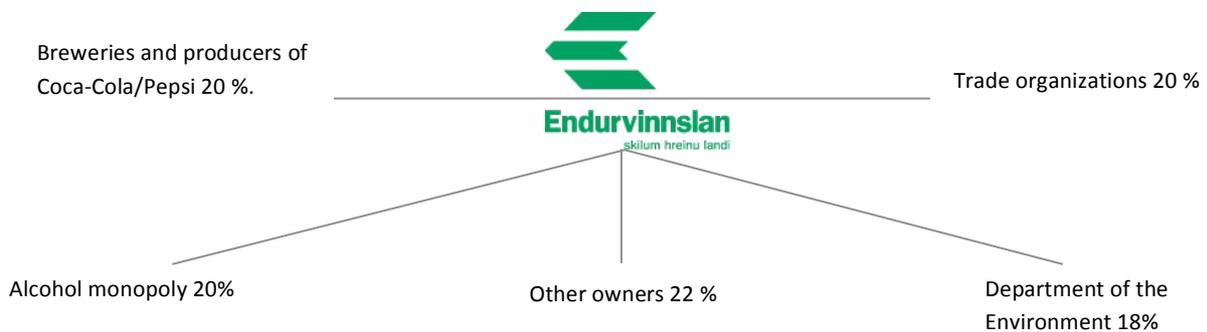
Material:	Plastic (predominantly PET), metal (aluminum), glass
Beverage type:	All ready-to-drink beverages; wine and liquor
Excluded:	Milk and milk products; juice extract

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Importer
Deposit value:	Metal, plastic, glass: 16 ISK (€0.11, USD\$0.12)
Unredeemed deposits:	Endurvinnslan Hf
Handling Fee (HF):	N/A

SYSTEM OPERATOR

Clearing System:	Centralized
System Operator & Administrator:	Endurvinnslan Hf
System Finance:	Material revenue / unredeemed deposits / administration fee

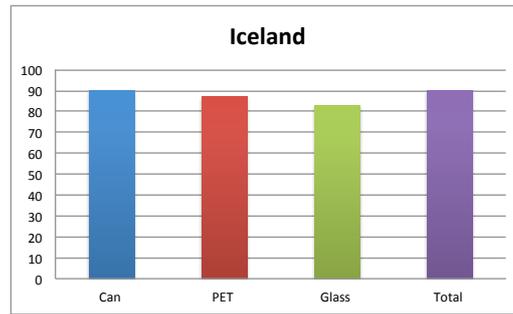


REDEMPTION SYSTEM

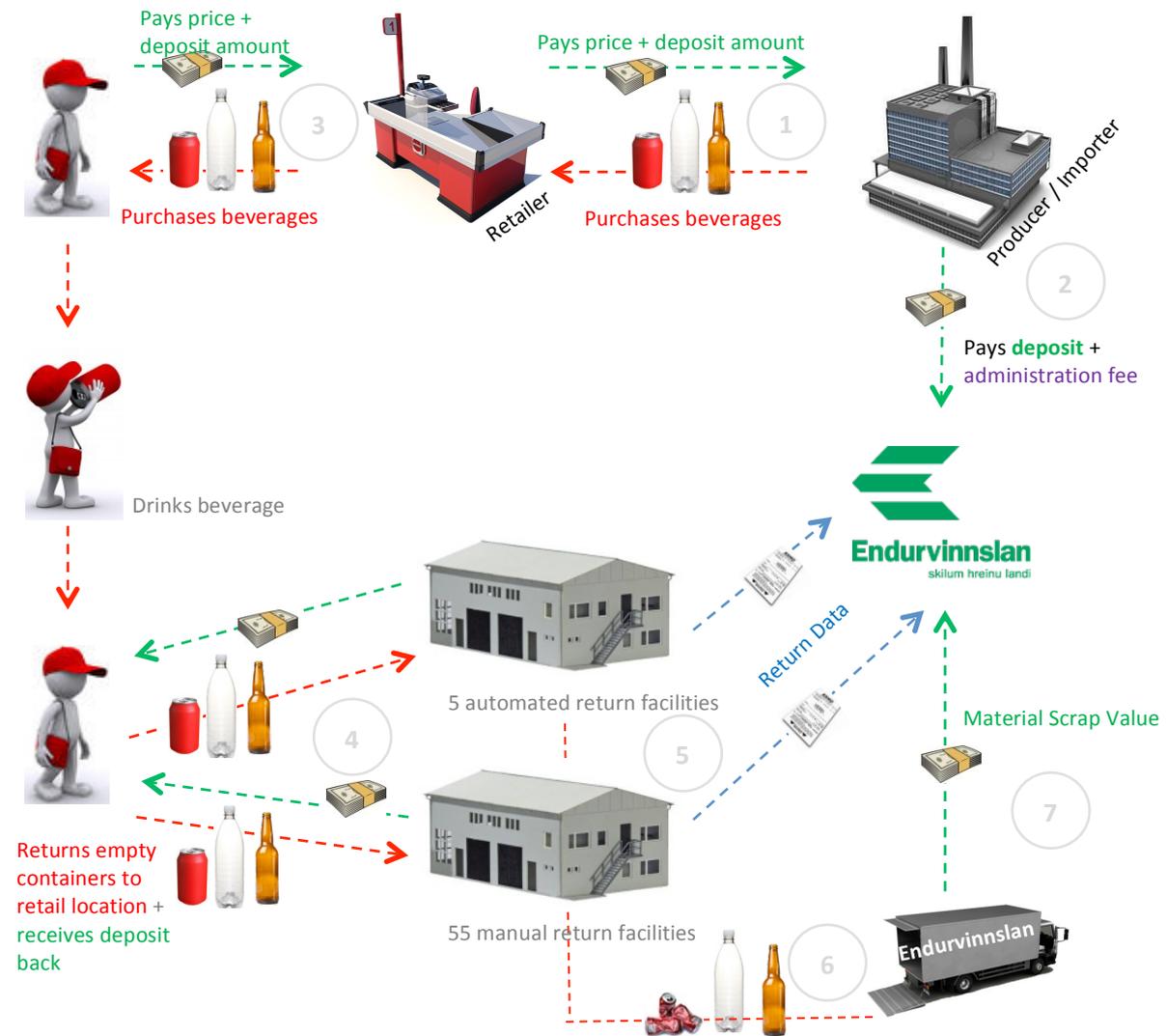
Return to Depot:	60 return facilities operated by central organization (55 manual facilities and 5 automated facilities (no need for consumer to sort))
Material owner:	Endurvinnslan Hf

SYSTEM RESULTS (2014)

Total Return Rate:	90%
Can	90%
PET	87%
Glass	83%



MONEY MATERIAL FLOW





LITHUANIA

Population: 3.0m

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



MANDATE

Packaging and Packaging Waste Management Act

Enacted:	2014
Implemented:	2016
Authority:	Ministry of Environment
Target:	90% packaging recycling by 2025

PROGRAM SCOPE

Material:	Plastic, metal, glass 0.1l - 3l
Beverage type:	Beer and beer cocktails; cider and other fermented beverages; mixed alcoholic and non-alcoholic beverages; all types of water; juice and nectars sold in glass, plastic, and metal (tin) packaging. Fruit wines and wine-product cocktails are included when sold in plastic and metal packaging.
Excluded:	Milk, wine and spirits

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Importer
Deposit value:	€0.10 (USD\$0.11)
Unredeemed deposits:	Užstato Sistemos Administratorius (USAD)
<u>Handling Fee:</u>	
RVM with compaction:	€0.028
RVM without compaction:	€0.015
Manual:	€0.028

SYSTEM OPERATOR

Clearing System:	Centralized
System Operator & Administrator:	USAD
System Finance:	Material revenue / Unredeemed deposits / Administration Fee



Lithuanian Association of Breweries



Association of Lithuanian Trade Enterprises



Lithuanian Natural Mineral Water Manufacturers' Association

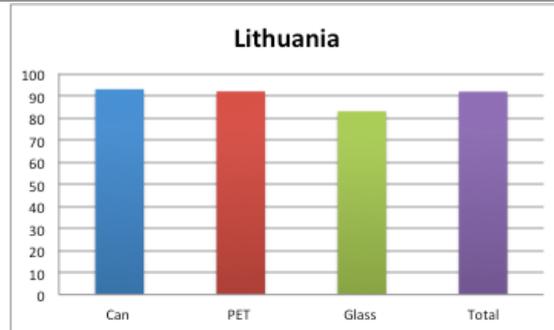
REDEMPTION SYSTEM

Return-to-Retail: Containers can be returned for a refund of the deposit in all shops with an area of >300m²

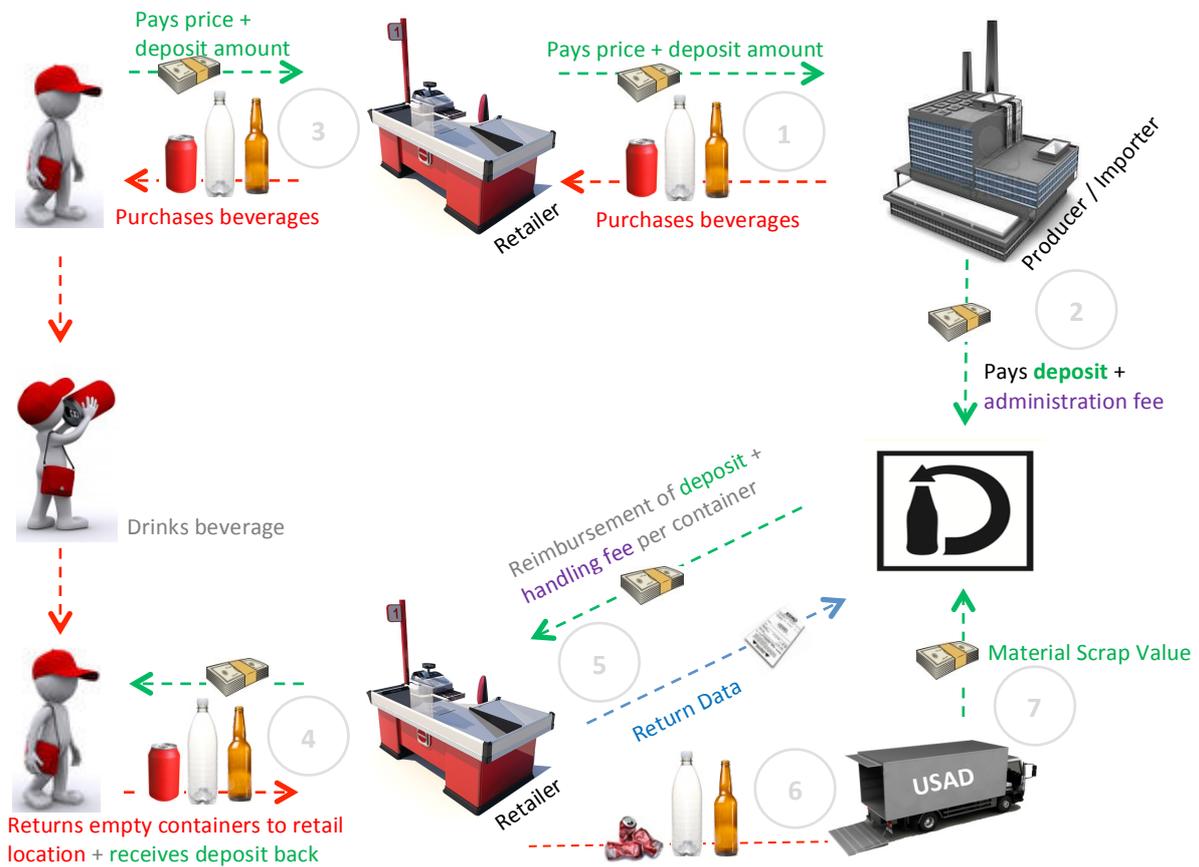
Material owner: USAD

SYSTEM RESULTS (2017)

Total Return Rate:	91.9%
Can	93%
PET	92%
Glass	83%



MONEY MATERIAL FLOW





THE NETHERLANDS

Population: 16.8m

Website: www.retourverpakking.nl



MANDATE

Verpakkingsverordening Productschap Dranken

Enacted:	2003
Implemented:	2005
Target:	95% for PET bottles

PROGRAM SCOPE

Material:	Plastic (>0.5l predominantly PET)
Beverage type:	Soft drinks; water
Excluded:	Medical drinks; wine; spirits; moderately alcoholic beverages; cartons, which are intended for beverages and consist of at least 80% paper or paperboard; packages intended for direct sale with a drink; drink containers with a capacity of ≤ 1 deciliter; beverage packaging in which the producer or importer can demonstrate on an annual basis < 500,000 units of consumer packagings be made available

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Importer
Deposit value:	€0.25 (USD\$0.28)
Unredeemed deposits:	Producer / Importer
Handling Fee:	None

SYSTEM OPERATOR

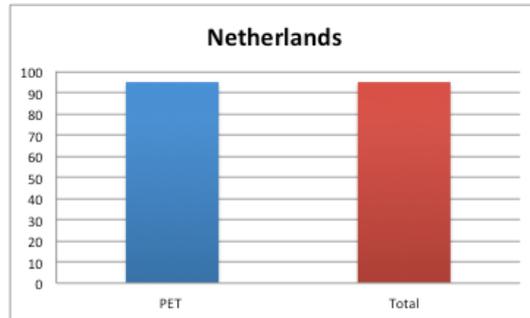
Clearing System:	Centralized
System Operator & Administrator:	Stichting Retourverpakkingen NL

REDEMPTION SYSTEM

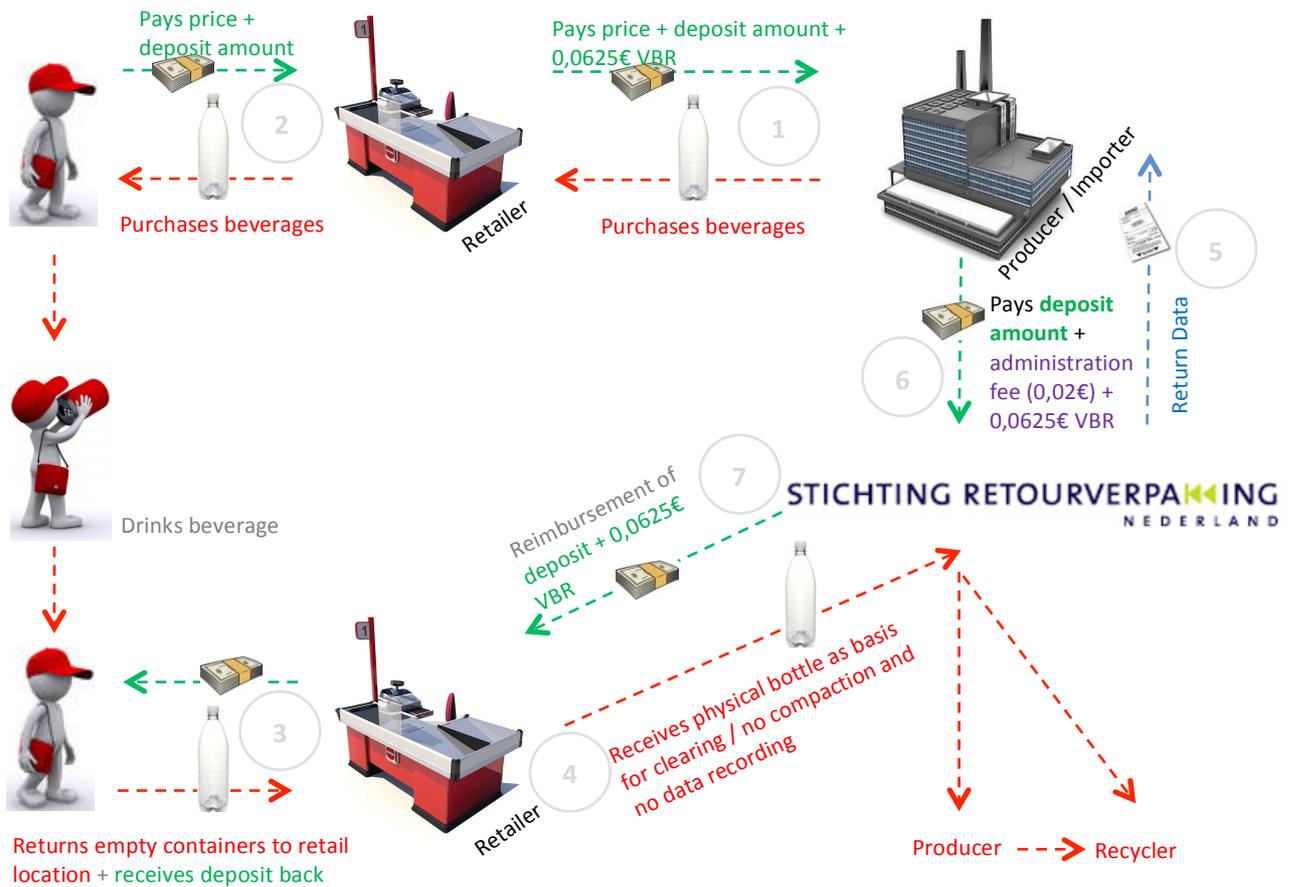
Return to Retail	Collection system is 89% automated / 11% manual
Material owner:	Beverage producers

SYSTEM RESULTS (2016)

Total Return Rate:	95%
PET	95%



MONEY MATERIAL FLOW





NORWAY

Population: 5.3m



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

MANDATE

Product Control Act / Regulations relating to the recycling of waste

Enacted:	1997
Implemented:	1999
Authority:	Norwegian Climate and Pollution Authority
Target:	95% for cans and recyclable PET bottles to be exempt from Eco Tax

PROGRAM SCOPE

Material:	Plastic (predominantly PET, HDPE), metal (aluminum/tinplate)
Beverage type:	Beer; carbonated beverages; wine; liquor; non-carbonated beverages; fruit and vegetable juices, concentrates, milk products. The regulation does not regulate type of product

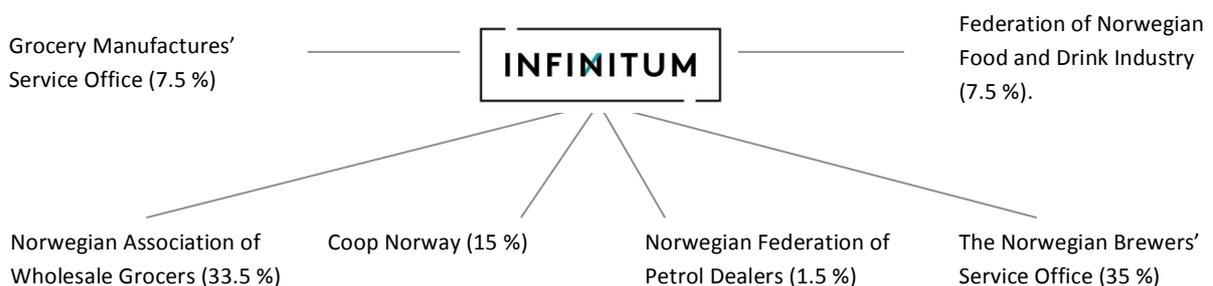
Excluded:

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Importer
Deposit value:	Plastic, metal ≤ 0.5l: 2,- NOK (€0.21, USD\$0.25) Plastic, metal > 0.5l: 3,- NOK (€0.31, USD\$0.38)
Unredeemed deposits:	Infinitem AS (formerly Norsk Resirk)
Handling Fee:	RVM with compaction: Plastic 0,25 NOK, Can 0,20 NOK Manual og RVM without compaction: Plastic 0,10 NOK, Can 0,05 NOK
EPR cost/fee:	Alu can 0,0012 NOK, Plastic bottles 0,18 NOK

SYSTEM OPERATOR

Clearing System:	Centralized
System Operator & Administrator:	Infinitem AS
System Finance:	Material revenue / unredeemed deposits / EPR fee



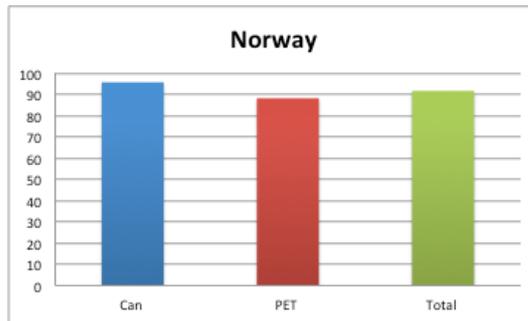
REDEMPTION SYSTEM

Return-to-Retail 3 500 grocery stores with RVM, 97 % of the total collection.
11 500 manual collection-/return points, 3% of total collection.

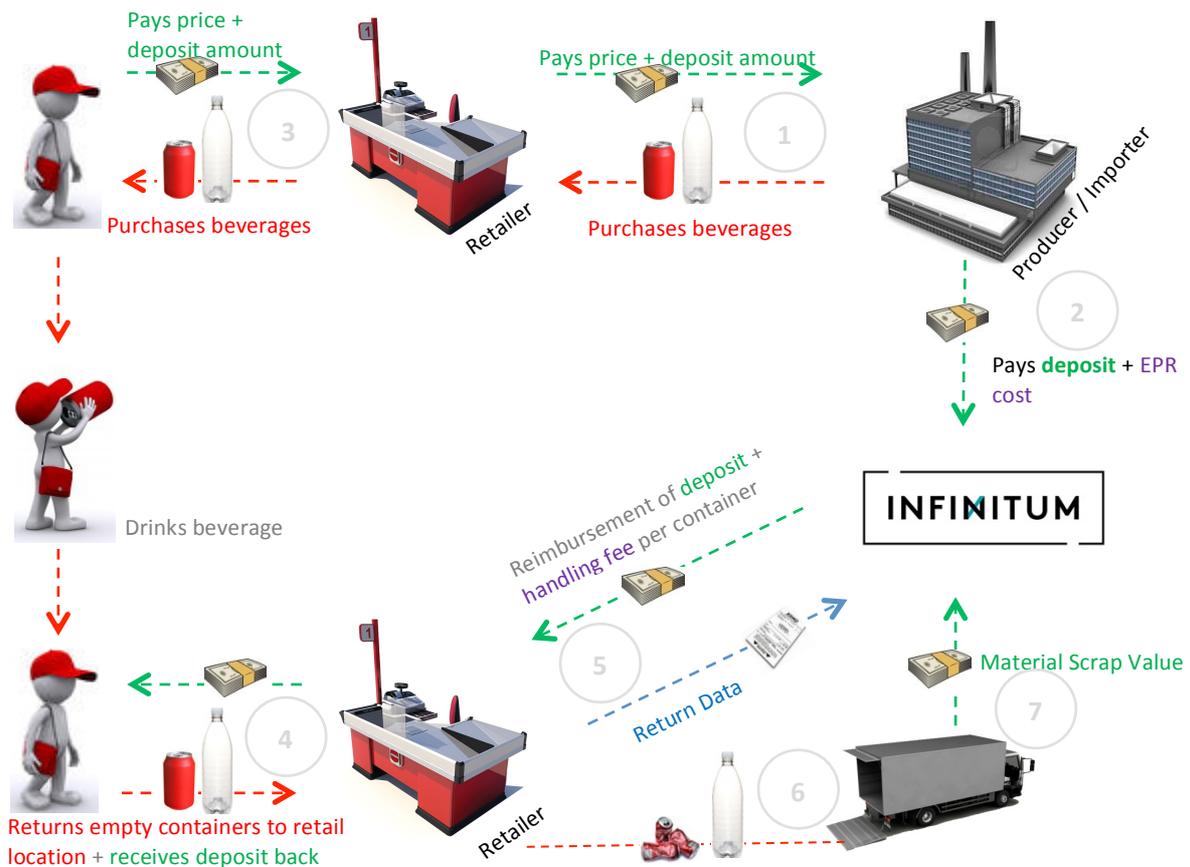
Material owner: Infinitem AS

SYSTEM RESULTS (2016)

Total Return Rate: 91.7%
Can 95.7%
PET 88.2%



MONEY MATERIAL FLOW





SWEDEN

Population: 9.5m

Website: www.pantamera.nu



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
 Target: 90% collection target for all metal cans and PET bottles set by Swedish EPA

PROGRAM SCOPE

Material: Plastic (predominantly PET), metal (aluminum/tinplate) (Note: 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 polyethylenetereftalat. The definition in the new law (Ordinance 2005:220) that replaced the existing laws have broader definitions.)

Beverage type: All ready-for-consumption beverages including beer, soft drinks, cider, bottled water

Excluded: Dairy products; vegetable; fruit; berry drinks

DEPOSITS AND FEES

Deposit: Initiated by Producer/Importer

Deposit value: Metal: 1 SEK (€0.11, USD\$0.12)
 Plastic < 1l: 1 SEK (€0.11, USD\$0.12)
 Plastic > 1l: 2 SEK (€0.22, USD\$0.24)

Unredeemed deposits: AB Svenska Returpack

Handling Fee:
 Manual collection: Metal: 0 SEK (€0.00, USD\$0.00)
 Plastic: 0.2 SEK (€0.023, USD\$0.02)

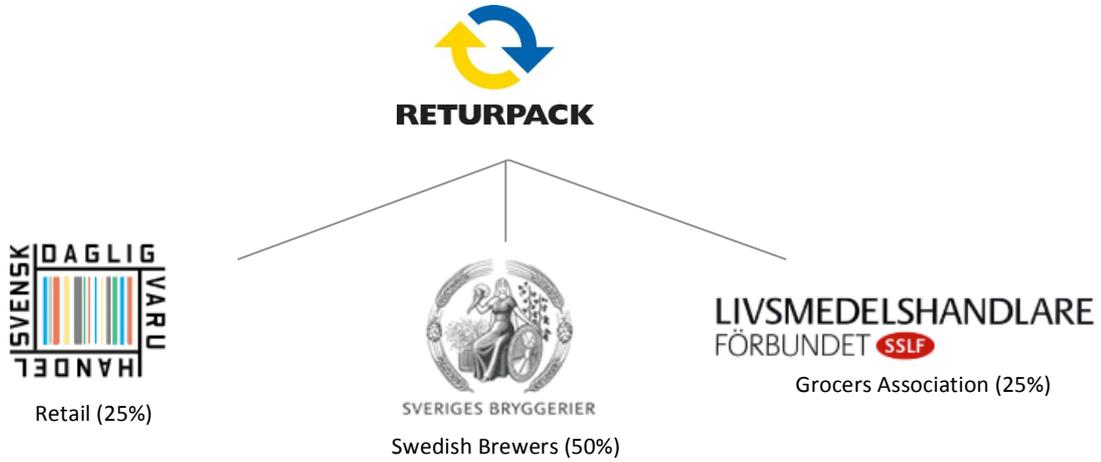
RVM without compaction: Metal, Plastic: 0.2 SEK (€0.023, USD\$0.02)

RVM with compaction: Metal: 0.15 SEK (€0.017, USD\$0.02)
 Plastic <1l: 0.38 SEK (€0.043, USD\$0.045)
 Plastic >1l: 0.42 SEK (€0.048, USD\$0.049)

Producer administration fee: Plastic: €0.0232 (USD\$0.03) – €0.0548 (USD\$0.06)
 Aluminum can: €0 (USD\$0)
 Steel can: €0.0259 (USD\$0.03) (sorting fee)

SYSTEM OPERATOR

Clearing System:	Centralized
System Operator & Administrator:	AB Svenska Returpack (Pantamera)
System Finance:	Material revenue / unredeemed deposits / administration fee

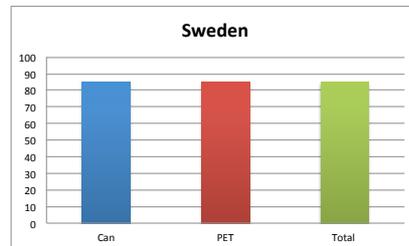


REDEMPTION SYSTEM

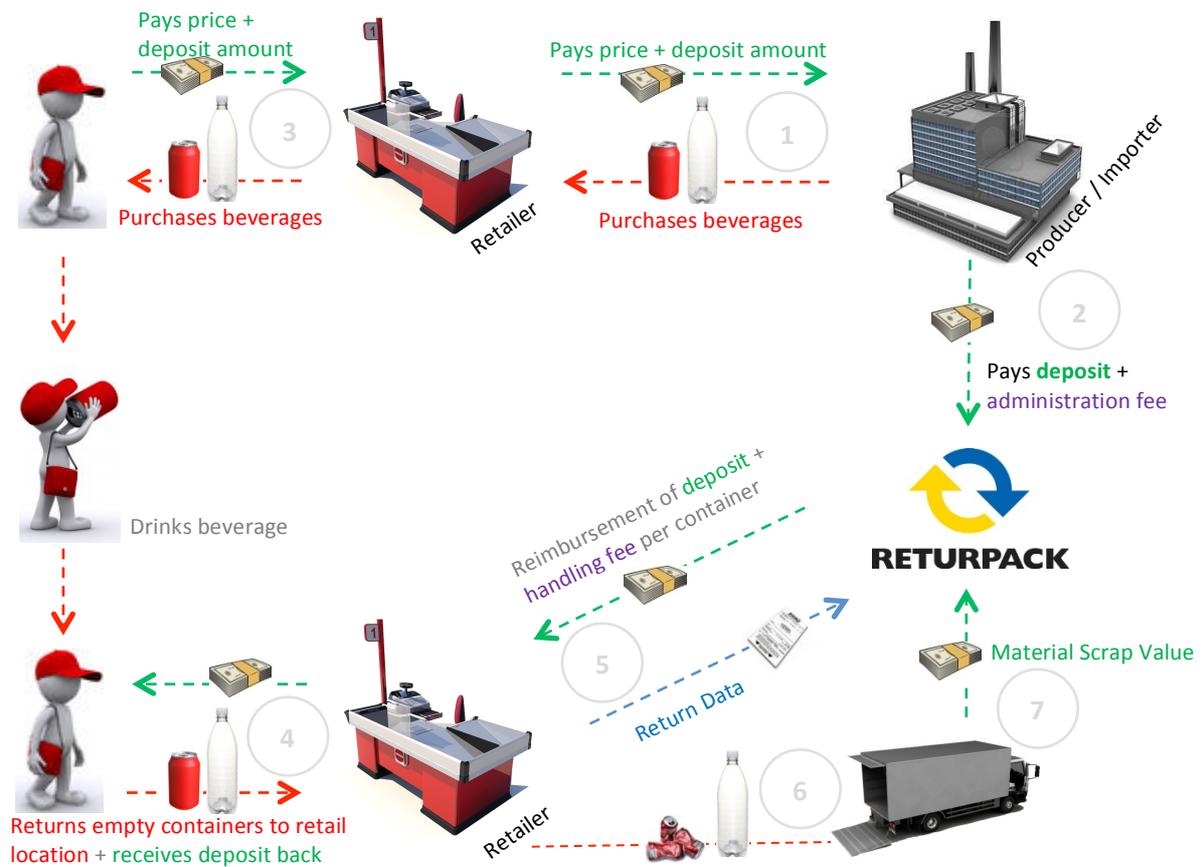
Return-to-Retail	Collection system is 95% automated / 5% manual
Material owner:	AB Svenska Returpack (Pantamera)

SYSTEM RESULTS (2016)

Total Return Rate:	84.9%
Can	84.9%
PET	84.9%

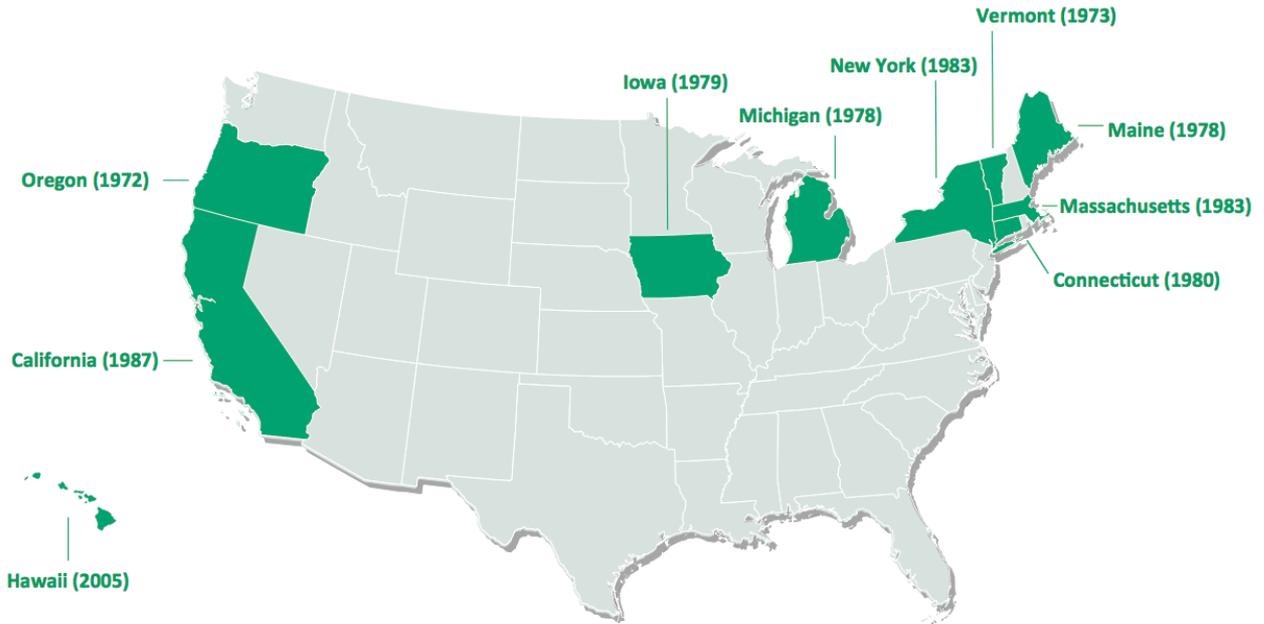


MONEY MATERIAL FLOW



USA

(88.6 million have access to DRS)



State	Population (million)	Mandate Enacted	Mandate Implemented
1. California	38.8	1986	1987
2. Connecticut	3.6	1978	1980, 2009 (Water)
3. Hawaii	1.3	2002	2005
4. Iowa	3.1	1978	1979
5. Maine	1.3	1976	1978
6. Massachusetts	6.6	1981	1983
7. Michigan	9.9	1976	1978
8. New York	19.5	1982	1983, 2009 (Water)
9. Oregon	3.9	1971	1972
10. Vermont	0.6	1972	1973



CALIFORNIA

Population: 38m

Website: www.calrecycle.ca.gov/bevcontainer/



MANDATE

California Beverage Container Recycling and Litter Reduction Act

Enacted:	1986
Implemented:	1987
Last Updated:	2012 (Enforcement & Payments)
Authority:	Department of Conservation (CalRecycle)
Target:	80% Recycling Rate

PROGRAM SCOPE

Material:	Plastic, metal (aluminum), bimetal, glass
Beverage type:	Beer; malt; wine and distilled spirits; all non-alcoholic beverages
Excluded:	Milk; 100% fruit juice ≥46 oz.; vegetable juice ≥16 oz; refillables

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Containers < 24oz: USD \$0.05 Containers ≥ 24oz: USD \$0.10
Unredeemed deposits:	Escheated to state, used for program administration
Handling fee:	Paid to the operators of supermarket redemption sites to help cover the costs of operating the redemption system
Processing Fee (PF):	Paid by beverage manufacturers to the Department of Conservation, per container sold
Processing Payments:	Made to all certified recyclers and processors (by the Department) when the cost of recycling exceeds the value of material, per ton redeemed

SYSTEM OPERATOR

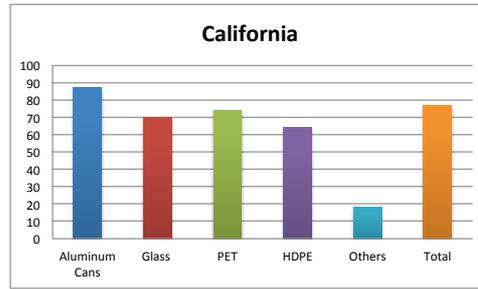
Clearing System:	Centralized
System Operator & Administrator:	CalRecycle (Government Operated)

REDEMPTION SYSTEM

Return-to-Retail (25%)	Return-to-retail obligation with opt-out if certified recycling center is located in a Convenience Zone (CZ); non-handling fee recycling centers; curbside/drop-off recycling programs. CRV may be calculated by weight. 2,578 Recycling Centers (2012), 1,376 of which are CZ recyclers.
Return to certified recycler (55%-65%)	
“Donate” to Curbside (15%-20%)	
Material owner:	Processor, Curbside

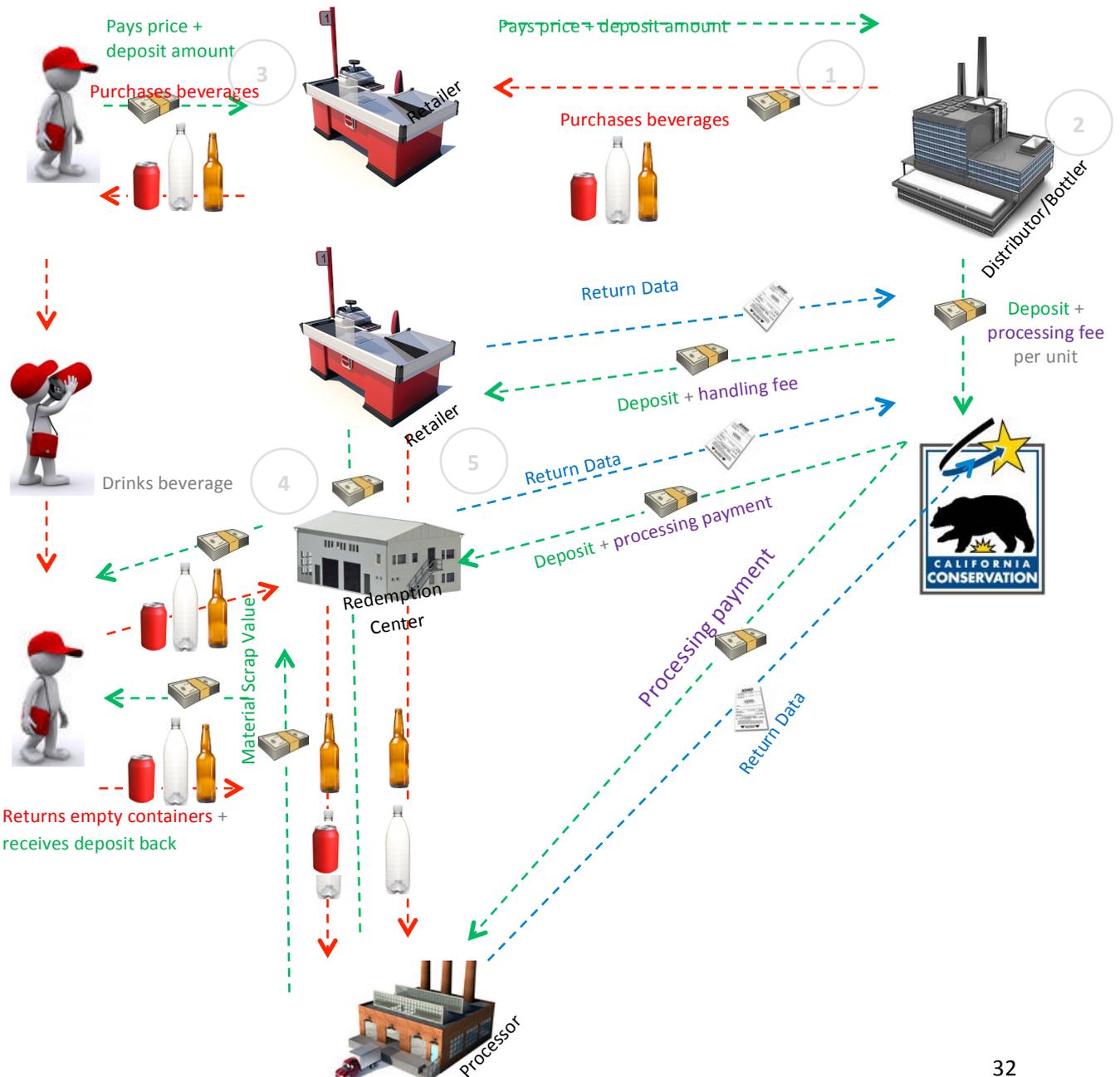
SYSTEM RESULTS (2017)

Total Return Rate:	77%*
Aluminum	87%
Glass	70%
PET	74%
HDPE	64%
Others	18%



*Curbside included in redemption rate

MONEY MATERIAL FLOW





CONNECTICUT

Population: 3.6m

Website: www.ct.gov/deep/cwp/view.asp?a=2714&q=324834



MANDATE

Beverage Container Deposit and Redemption Law

Enacted:	1978
Implemented:	1980
Last Updated:	2009 (Water added)
Authority:	Department of Energy and Environmental Protection

PROGRAM SCOPE

Material:	Plastic, metal (aluminum), glass (any individual, separate, sealed bottle, can, jar or carton containing a beverage <3l)
Beverage type:	Beer; malt; carbonated soft drinks (including mineral waters and soda waters); noncarbonated beverages (water, including flavored water, nutritionally enhanced water)
Excluded:	Other noncarbonated beverages; juices; HDPE containers

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Plastic, metal, glass: USD\$0.05
Unredeemed deposits:	Escheated to State
Handling Fee:	USD\$0.015 for beer, USD\$0.02 other beverages

SYSTEM OPERATOR

Clearing System:	Decentralized, TOMRA
System Operator & Administrator:	Beverage Industry

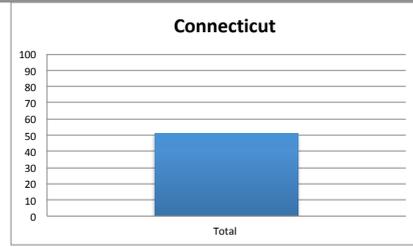
REDEMPTION SYSTEM

Return-to-Retail / Return to Redemption Center	Stores are only required to take back the brands that they sell.
Material owner:	Deposit Initiator

SYSTEM RESULTS (2017)

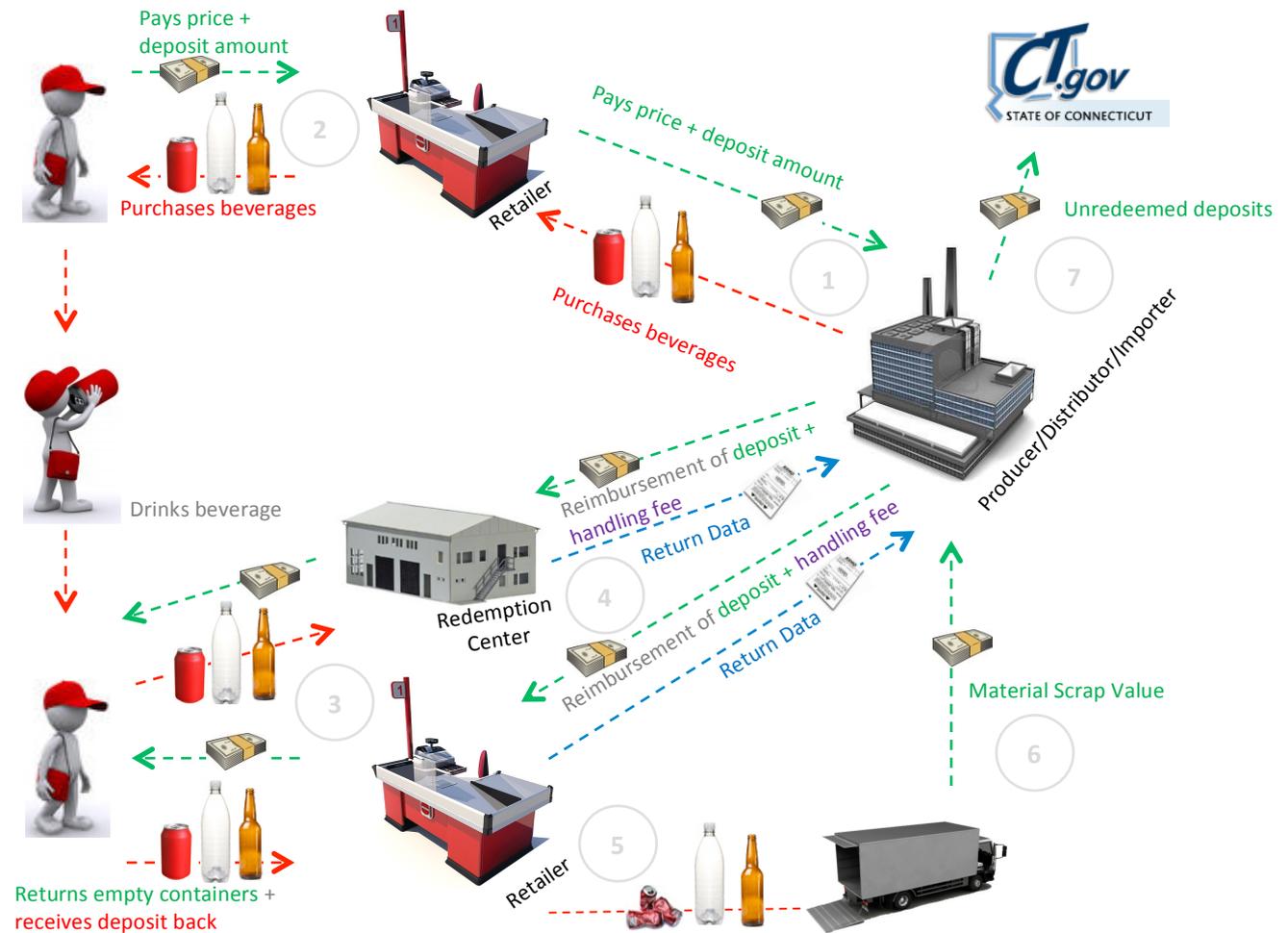
Return Rate:

50.7%



Before water bottles were added to the deposit system in 2009, redemption rates were higher (in the range of 65-70%).

MONEY MATERIAL FLOW





HAWAII

Population: 1.3m

Website: <http://health.hawaii.gov/hi5/>



MANDATE

Deposit Beverage Container Law (Act 176)

Enacted:	2002
Implemented:	2005
Last Updated:	2013 (Energy Drinks & Dietary Supplements)
Authority:	Department of Health

PROGRAM SCOPE

Material:	Plastic (PET, HDPE); metal (aluminum); bi-metal; glass ≤ 2l
Beverage type:	Beer; malt beverages; mixed spirits (< 15% alcohol content); mixed wine (< 7% alcohol content); all non-alcoholic beverages (e.g. juice, tea, etc.)
Excluded:	Milk; dairy products

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	USD\$0.05
Unredeemed deposits:	Escheated to state, used for program administration
Handling Fee:	USD\$0.02 to \$0.04 (variable). Paid to redemption centers from the Deposit Beverage Container Fund.
Container Fee:	USD\$0.015 non-refundable fee paid by consumer on top of the deposit to fund redemption centers

SYSTEM OPERATOR

Clearing System:	Centralized
System Operator & Administrator:	Department of Health (Government Operated)

REDEMPTION SYSTEM

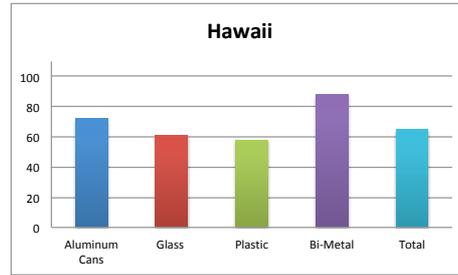
Return to Redemption Center

Persons who sell beverages in deposit containers to a consumer for off-premises consumption are required to operate redemption centers on-site, and must take back all empty beverage containers with a Hawaii refund value. Independent redemption centers are allowed by the law, but are subject to state certification.

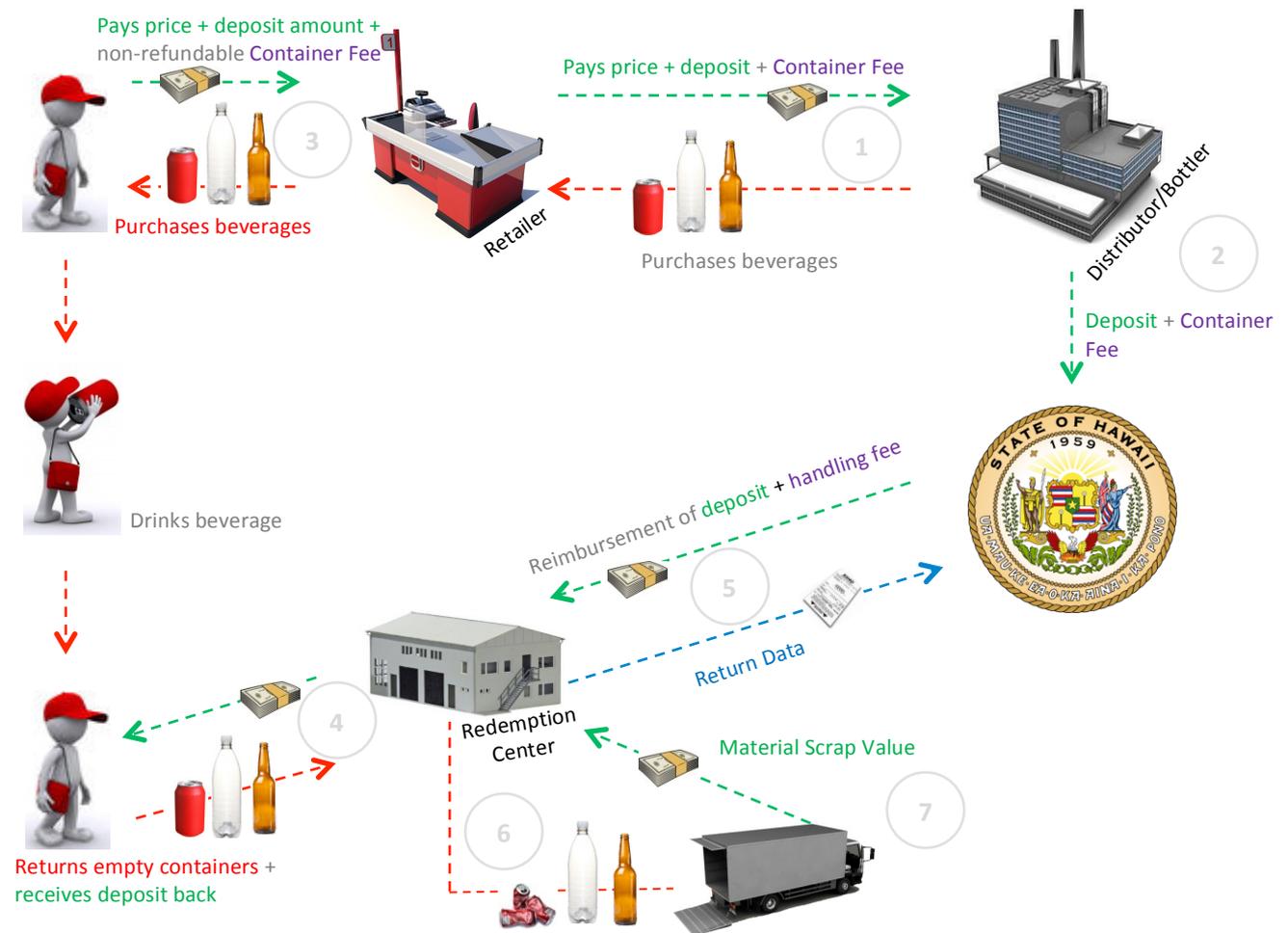
Material owner:	Redemption Center
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SYSTEM RESULTS (2017)

Total Return Rate:	65%*
Aluminum	72%
Glass	61%
PET	58%
Bi-Metal	88%



MONEY MATERIAL FLOW





IOWA

Population: 3.1m

Website: www.iowadnr.gov/Environmental-Protection/Land-Quality/Waste-Planning-Recycling/Bottle-Deposit-Law



MANDATE

Beverage Containers Control Law

Enacted:	1978
Implemented:	1979
Authority:	Iowa Department of Natural Resources (DNR)

PROGRAM SCOPE

Material:	Any sealed glass, plastic, or metal bottle, can, jar or carton containing a beverage
Beverage type:	Beer; carbonated soft drinks; mineral water; wine coolers; wine & liquor
Excluded:	Fruit and vegetable juices; fruit drinks; milk and milk products

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	USD\$0.05
Unredeemed deposits:	Distributor/Bottler
Handling Fee:	USD\$0.01 paid by deposit initiator to retailers and redemption centers

SYSTEM OPERATOR

Clearing System:	Decentralized, CRINC
System Operator & Administrator:	CRINC, Deposit Initiators

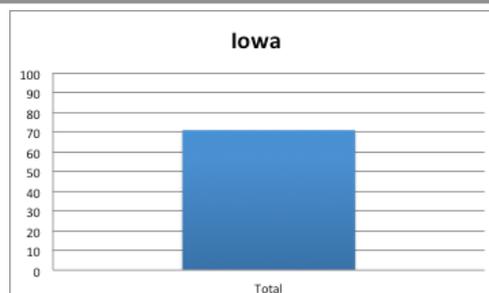
REDEMPTION SYSTEM

Return-to-Retail / Return to Redemption Center

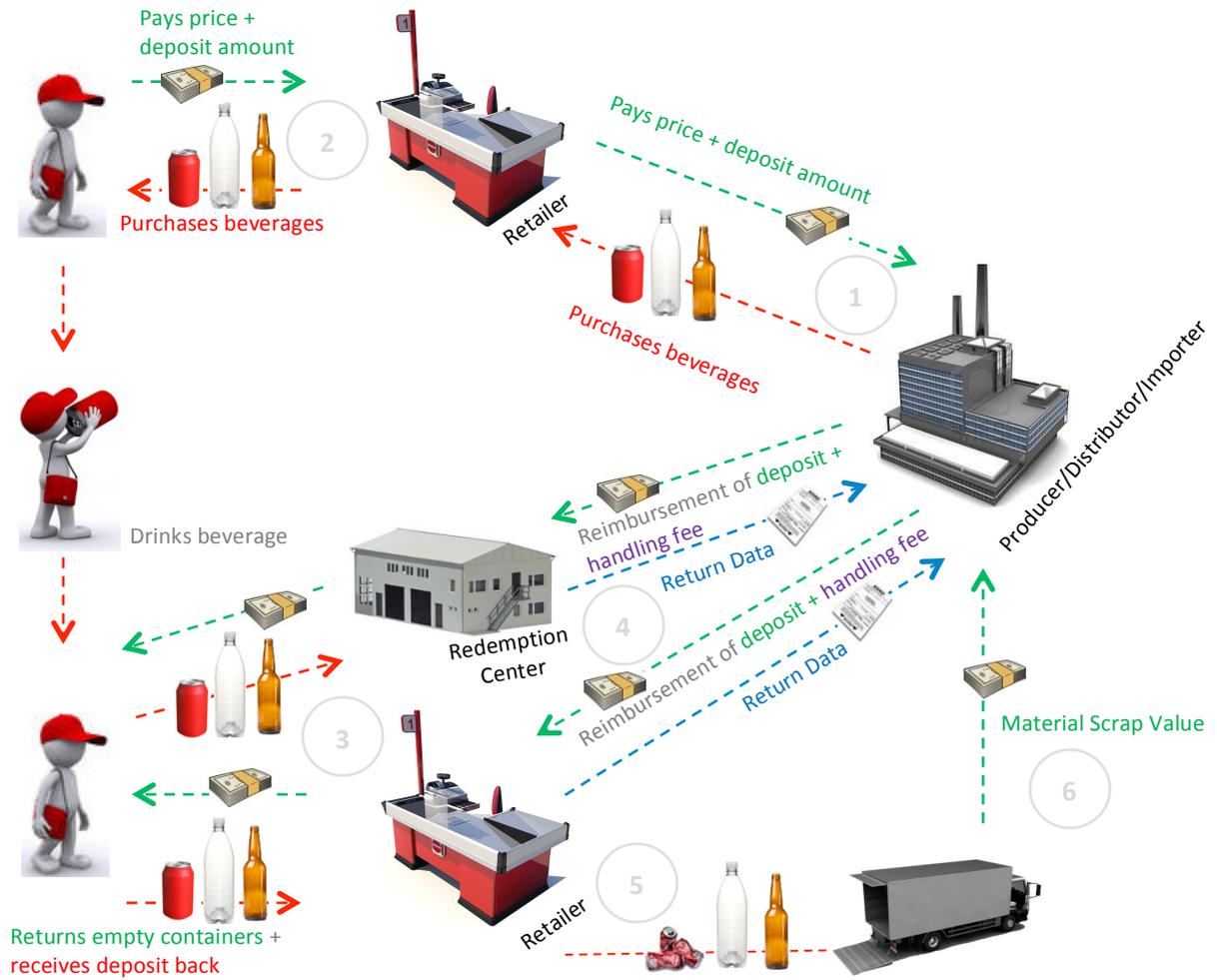
Material owner:	Deposit Initiator
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SYSTEM RESULTS (2016)

Total Return Rate: 71%



MONEY MATERIAL FLOW





MAINE

Population: 1.3m

Website: <http://maine.gov/dep/sustainability/bottlebill/index.html>



MANDATE

Maine Returnable Beverage Container Law

Enacted:	1976
Implemented:	1978
Last Updated:	2011
Authority:	Department of Agriculture, Conservation and Forestry, Weights and Measures

PROGRAM SCOPE

Material:	Plastic, metal (aluminum/tinplate), glass (all sealed containers made of glass, plastic or metal, containing ≤ 4l)
Beverage type:	All
Excluded:	Dairy products; unprocessed cider

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Plastic, metal, glass: USD\$0.05 Wine/liquor: USD\$0.15
Unredeemed deposits:	Escheated to state (when containers are not subject to a comingling agreement)
Handling Fee:	USD\$0.04 (\$0.005 less if deposit initiator participates in a qualified comingling agreement)

SYSTEM OPERATOR

Clearing System:	Decentralized, TOMRA
System Administrator:	Department of Agriculture, Conservation and Forestry
System Operator:	Beverage Industry

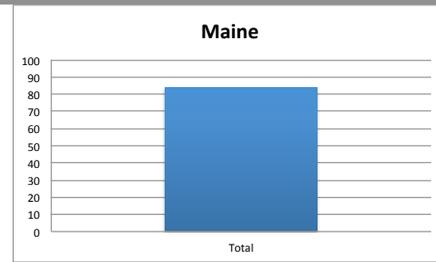
REDEMPTION SYSTEM

Return to Retail / Return to Redemption Center
Retailers can opt-out if they have an agreement with a nearby redemption centre.

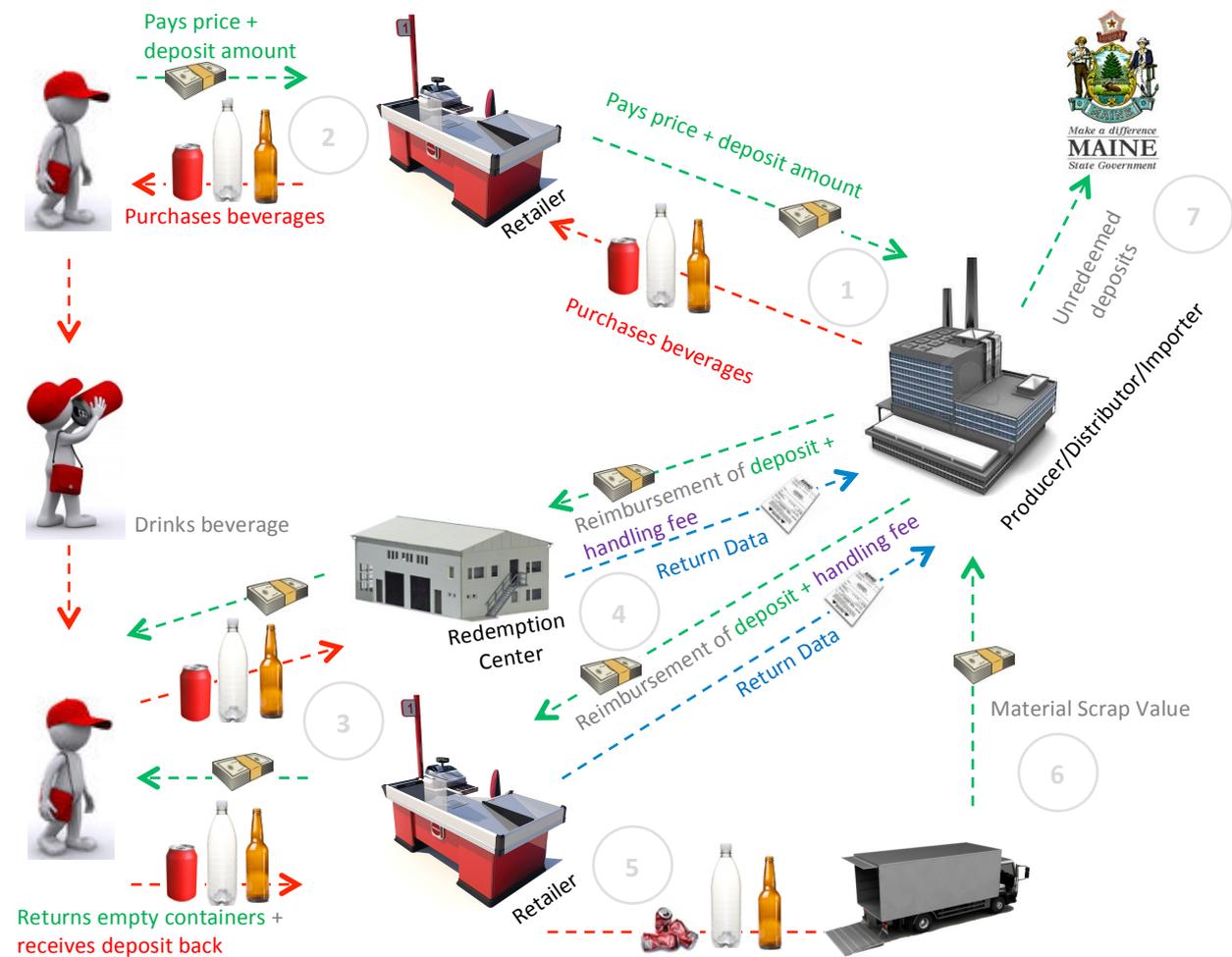
Material owner:	Producer/Distributor/Importer
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SYSTEM RESULTS (2017)

Total Return Rate: 84%



MONEY MATERIAL FLOW





MASSACHUSETTS

Population: 6.6m

Website: www.mass.gov/eea/agencies/massdep/recycle/reduce/bottle-and-can-recycling.html



MANDATE

Beverage Container Recovery Law

Enacted:	1981
Implemented:	1983
Last Updated:	2013 (Handling Fee)
Authority:	Massachusetts Department of Environmental Protection

PROGRAM SCOPE

Material:	Plastic, metal (aluminum), bimetal, glass (any sealable bottle, can, jar, or carton of glass, metal, plastic, or combination)
Beverage type:	Beer; malt; carbonated soft drinks; mineral water
Excluded:	Wine; dairy products; natural fruit juices; non-carbonated alcoholic beverages other than beer and malt

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Plastic, metal, bimetal, glass:	USD\$0.05
Unredeemed deposits:	Escheated to State (Department of Revenue)
Handling Fee:	USD\$0.0225 Retailers (receive free pick-up of containers by deposit initiators) USD\$0.0325 Redemption Centers (RCs must deliver redeemed containers to central processing facility)

SYSTEM OPERATOR

Clearing System:	Decentralized, TOMRA
System Operator & Administrator:	Beverage Industry, TOMRA

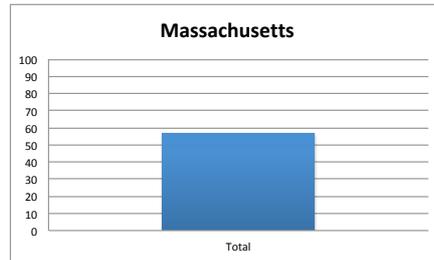
REDEMPTION SYSTEM

Return-to-Retail / Return to Redemption Center

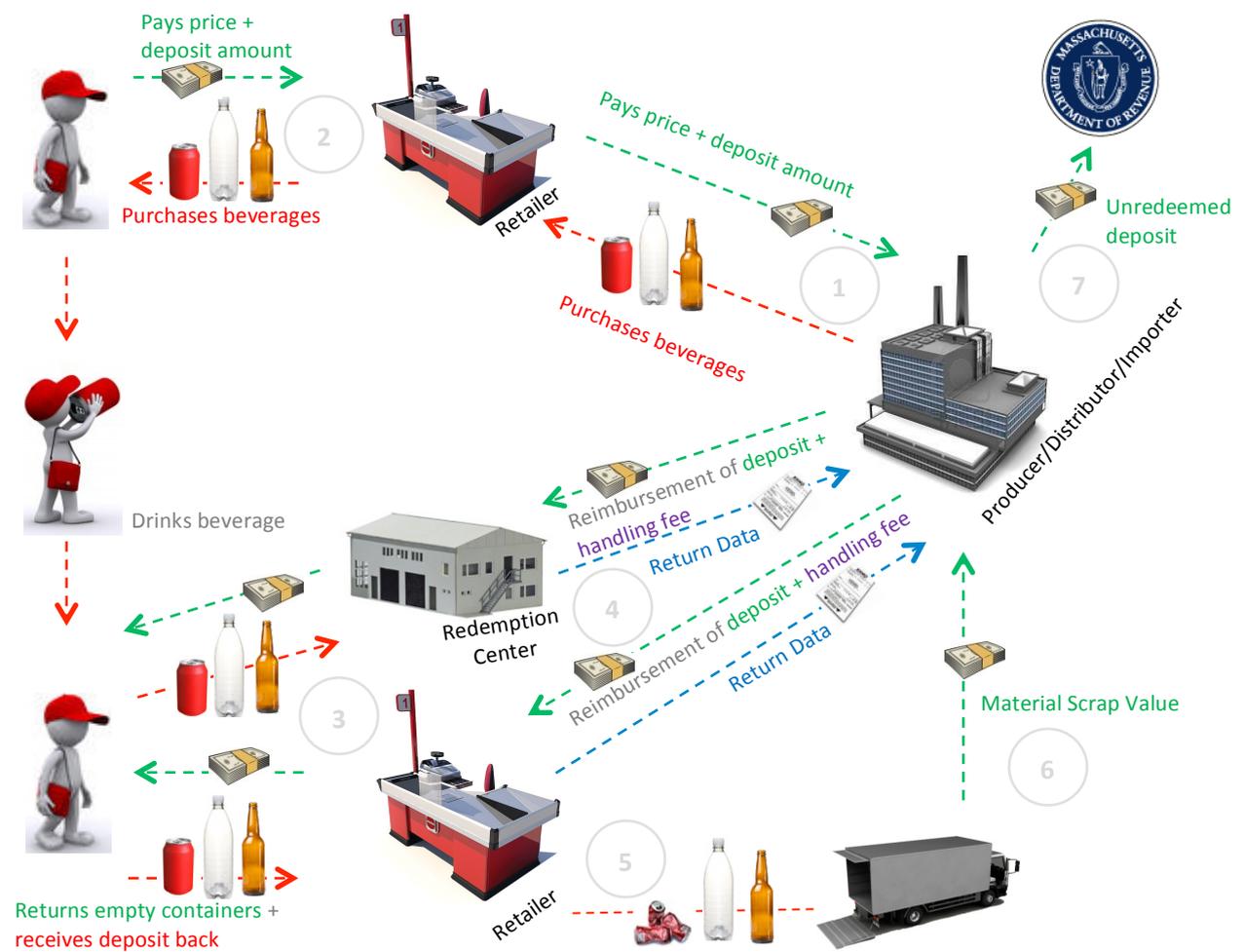
Material owner:	Deposit Initiator
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SYSTEM RESULTS (2017)

Total Return Rate: 57%



MONEY MATERIAL FLOW





MICHIGAN

Population: 9.9m

Website: www.legislature.mi.gov



MANDATE

Michigan Container Law (MCL)

Enacted:	1976
Implemented:	1978
Last Updated:	2008 (Security Rules) 2012 (Excluded Pouches)
Authority:	Michigan Department of Treasury

PROGRAM SCOPE

Material:	Plastic, metal (aluminum/tinplate), glass, paper (Any airtight metal, glass, paper, or plastic container, or a combination < 1 gallon)
Beverage type:	Beer/ale; soft drinks; carbonated and mineral water; wine coolers; canned cocktails; malt drink of whatever alcohol content
Excluded:	Milk; juice; water; tea; sport drinks; foil pouches

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Plastic, metal, glass: USD\$0.10
Unredeemed deposits:	75% escheated to State (to Clean-up and Redevelopment Trust Fund) / 25% available to retailers to cover handling costs
Handling Fee:	25% of unredeemed deposits

SYSTEM OPERATOR

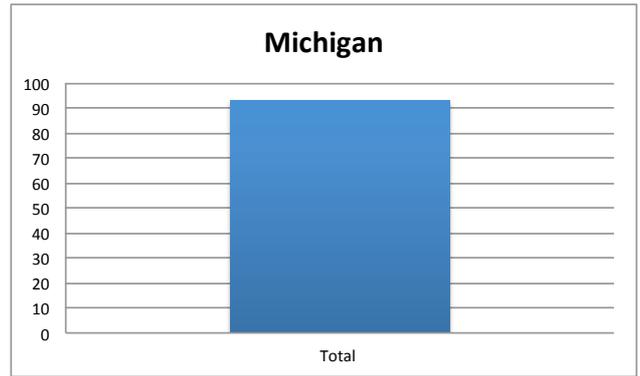
Clearing System:	Decentralized; Michigan Soft Drink Association (MSDA), Michigan Beer & Wine Wholesalers Association (MBWWA), TOMRA
System Operator & Administrator:	Beverage industry

REDEMPTION SYSTEM

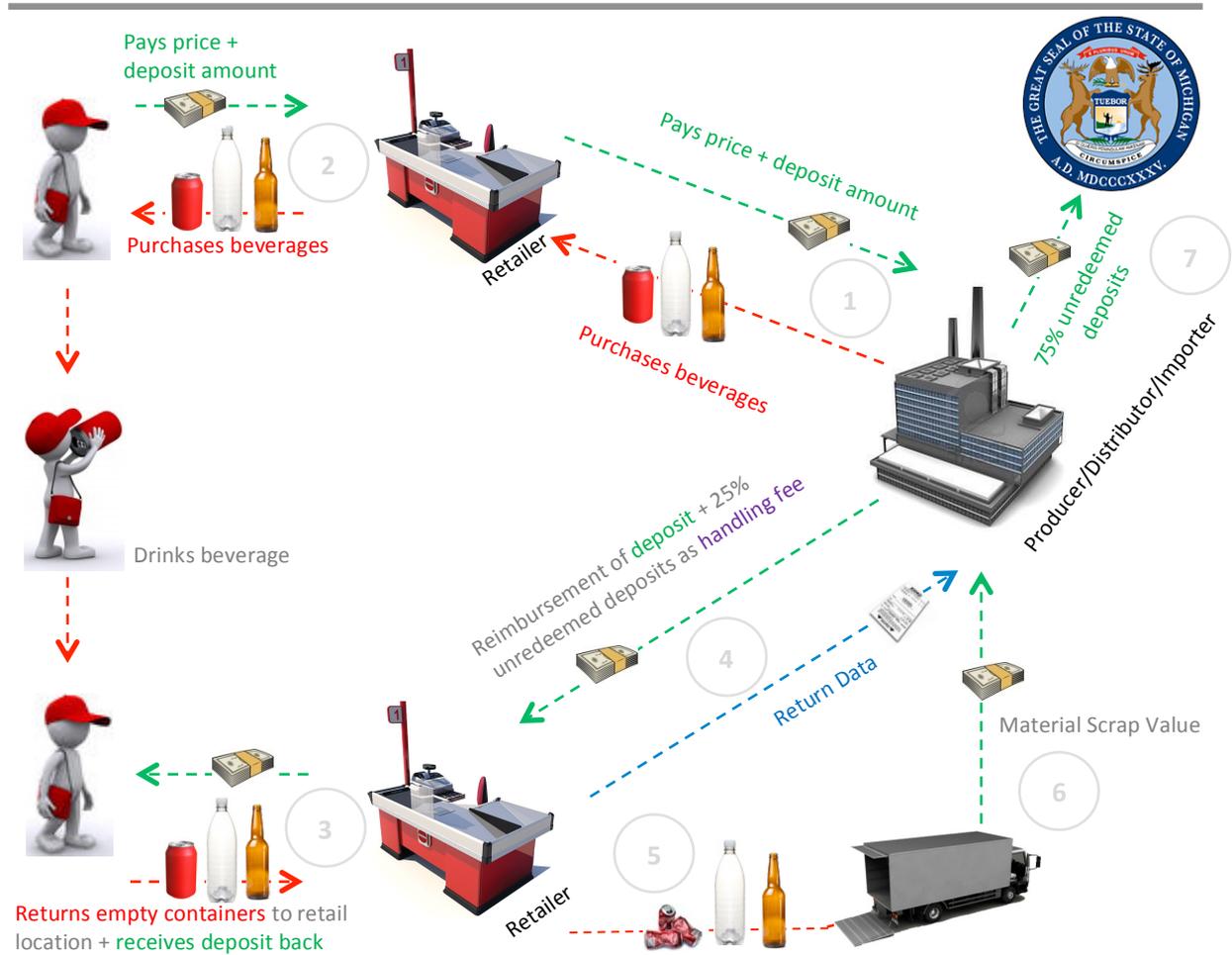
Return to Retail	
Material owner:	Deposit Initiator

SYSTEM RESULTS (2016)

Total Return Rate: 92%



MONEY MATERIAL FLOW





NEW YORK

Population: 19.5m

Website: www.dec.ny.gov/chemical/8500.html



MANDATE

New York State Returnable Container Act

Enacted:	1982
Implemented:	1983
Last Updated:	2009 (Added Water) 2012 (Rules)
Authority:	New York State Department of Environmental Conservation

PROGRAM SCOPE

Material:	Plastic, metal (aluminum), glass (any individual, separate, sealed glass, metal, aluminum, steel or plastic bottle, can or jar containing ≤ 3.78l)
Beverage type:	Carbonated soft drinks; soda water; energy drinks, juices (anything < 100% juice, containing added sugar or water); beer and other malt beverages; mineral water (carbonated and non-carbonated); wine products; water that does not contain sugar, including flavored or nutritionally enhanced water
Excluded:	Milk products; wine and liquors; tea; sports drinks; juice; drink boxes; water containing sugar

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Plastic, metal, glass: USD\$0.05
Unredeemed deposits:	80% to the New York State Department of Taxation and Finance (quarterly basis); 20% retained by Deposit Initiator
Handling Fee:	USD\$0.035

SYSTEM OPERATOR

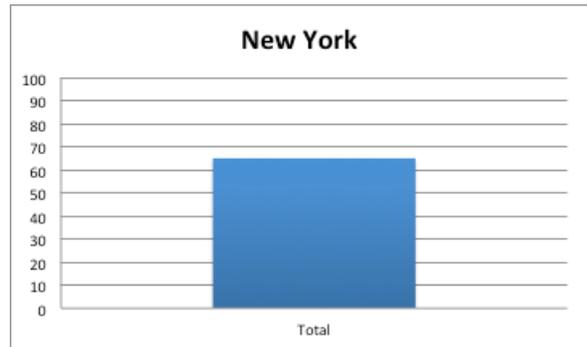
Clearing System:	Decentralized / TOMRA
System Operator & Administrator:	Beverage Industry; TNYR, Western New York Beverage Industry Collection & Sorting (WNYBICS)

REDEMPTION SYSTEM

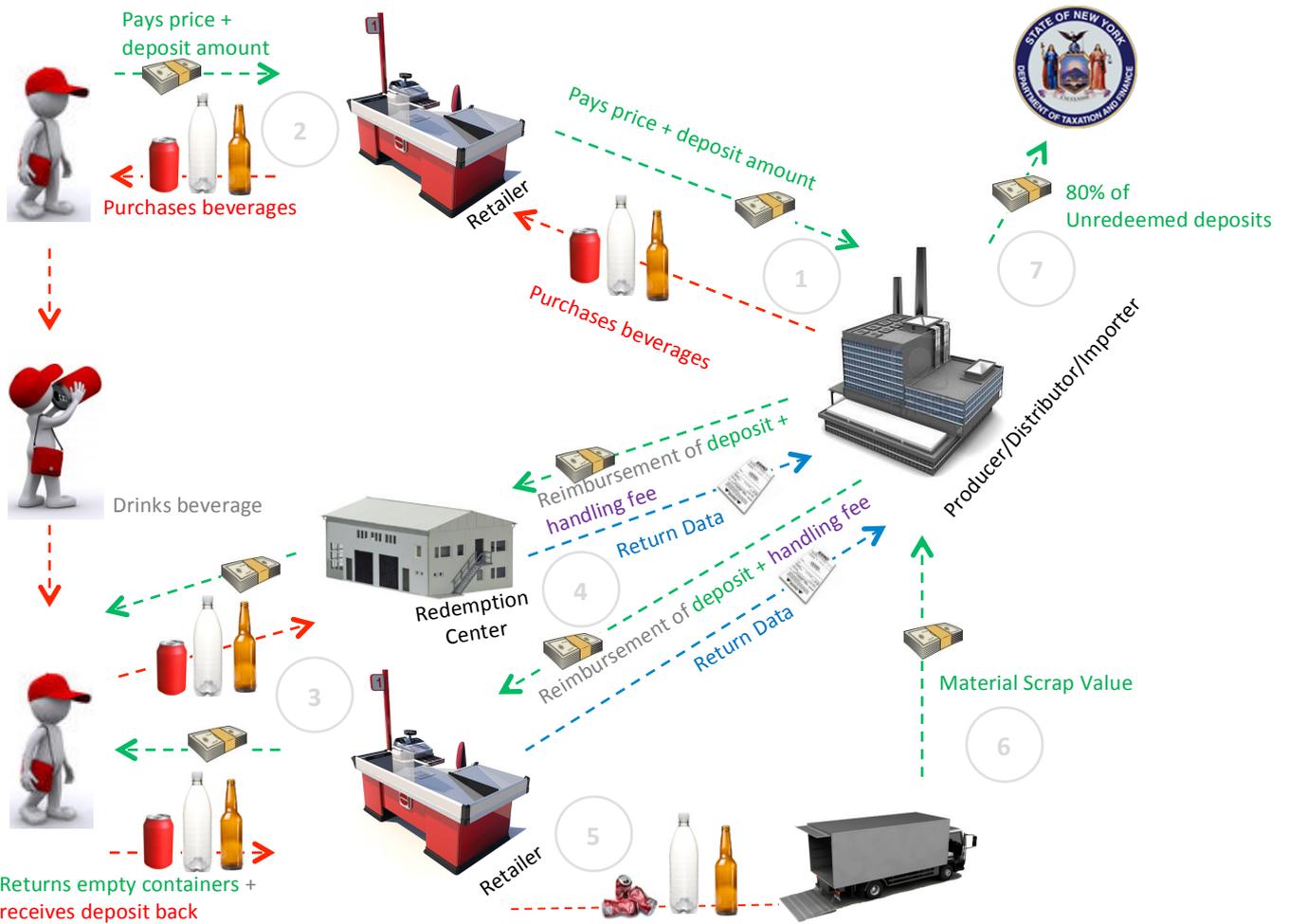
Return-to-Retail / Return to Redemption Center	Stores are only required to take back the brands that they sell
Material owner:	Deposit Initiator

SYSTEM RESULTS (2016)

Total Return Rate: 66%



MONEY MATERIAL FLOW





OREGON

Population: 3.9m

Website: www.oregon.gov/OLCC/pages/bottle_bill.aspx



MANDATE

The Beverage Container Act

Enacted:	1971
Implemented:	1972
Last Updated:	2011 (Redemption Centers) 2016 (Evaluate Deposit Level) 2018 (Expansion Effective)
Authority:	Oregon Liquor Control Commission (OLCC)

PROGRAM SCOPE

Material:	Plastic, metal (aluminum/tinplate), glass (any individual, separate, sealed glass, metal or plastic bottle, can, jar containing a beverage)
Beverage type:	<i>Beverages 4 oz. up to 1.5L:</i> coffee/tea; energy and sports drinks; fruit and vegetable juice (does not have to be 100%); juice smoothies; coconut water; non-alcohol wine; hard cider if 8.5% ABV or less; marijuana beverages; protein shakes (unless marketed as a meal replacement); Kombucha; cocktail mixers <i>Beverages ≤3L:</i> soda (carbonated/sparkling beverages); beer; water
Excluded:	Distilled liquor; wine; dairy or plant-based milks and milk substitutes; infant formula; meal-replacement drinks; alcoholic kombucha made with cane sugar; kefir; concentrates

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Plastic, metal, glass: USD\$0.10
Unredeemed deposits:	Producer/Distributor/Importer
Handling Fee:	None

SYSTEM OPERATOR

Clearing System:	Centralized, Oregon Beverage Recycling Cooperative (OBRC)
System Operator & Administrator:	Beverage Industry
System Finance:	Material revenue/unredeemed deposits

REDEMPTION SYSTEM

Return-to-Retail / R2RC	Note: Retail outlets ≥5,000 ft. ² are required to take back all brands and sizes of beverage containers for each kind they sell. Retailers <5,000 ft. ² may take back only brands and sizes that they sell.
Material owner:	Deposit Initiator



VERMONT

Population: 0.6m

Website: <http://dec.vermont.gov/waste-management/solid/product-stewardship/bottle-bill>



MANDATE

Beverage Container Law (1972), Solid Waste Act (1987)
 Enacted: 1972
 Implemented: 1973
 Last Updated: 1991
 Authority: Agency of Natural Resources

PROGRAM SCOPE

Material: Plastic, metal (aluminum/tinplate), glass (or any combination of these materials)
 Beverage type: Liquor & spirits; beer, wine coolers and other malt beverages; soft drinks and other carbonated beverages
 Excluded: Wine and hard cider; water; milk; juices; sports drinks; other non-carbonated beverages

DEPOSITS AND FEES

Deposit: Initiated by Producer/Distributor/Importer
 Deposit value: Plastic, metal, glass: USD\$0.05
 Liquor: USD\$0.15
 Unredeemed deposits: Producer/Distributor/Importer
 Handling Fee: USD\$0.04 for brand-sorted containers, USD\$0.035 for comingled

SYSTEM OPERATOR

Clearing System: Decentralized, TOMRA
 System Operator & Administrator: Beverage Industry, TOMRA
 System Finance: Material Revenue/Unredeemed deposits

REDEMPTION SYSTEM

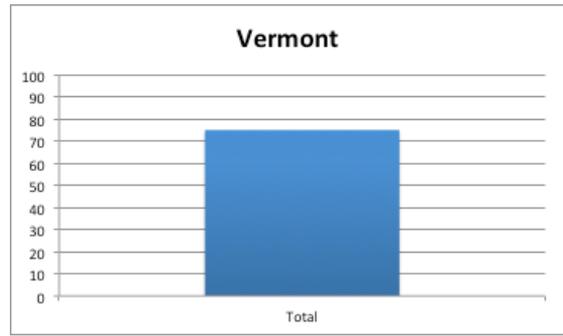
Return-to-Retail / Return to Redemption Center
 Retailers can gain State approval to opt-out of the program if they are located near a licensed redemption centre.

Material owner: Deposit Initiator

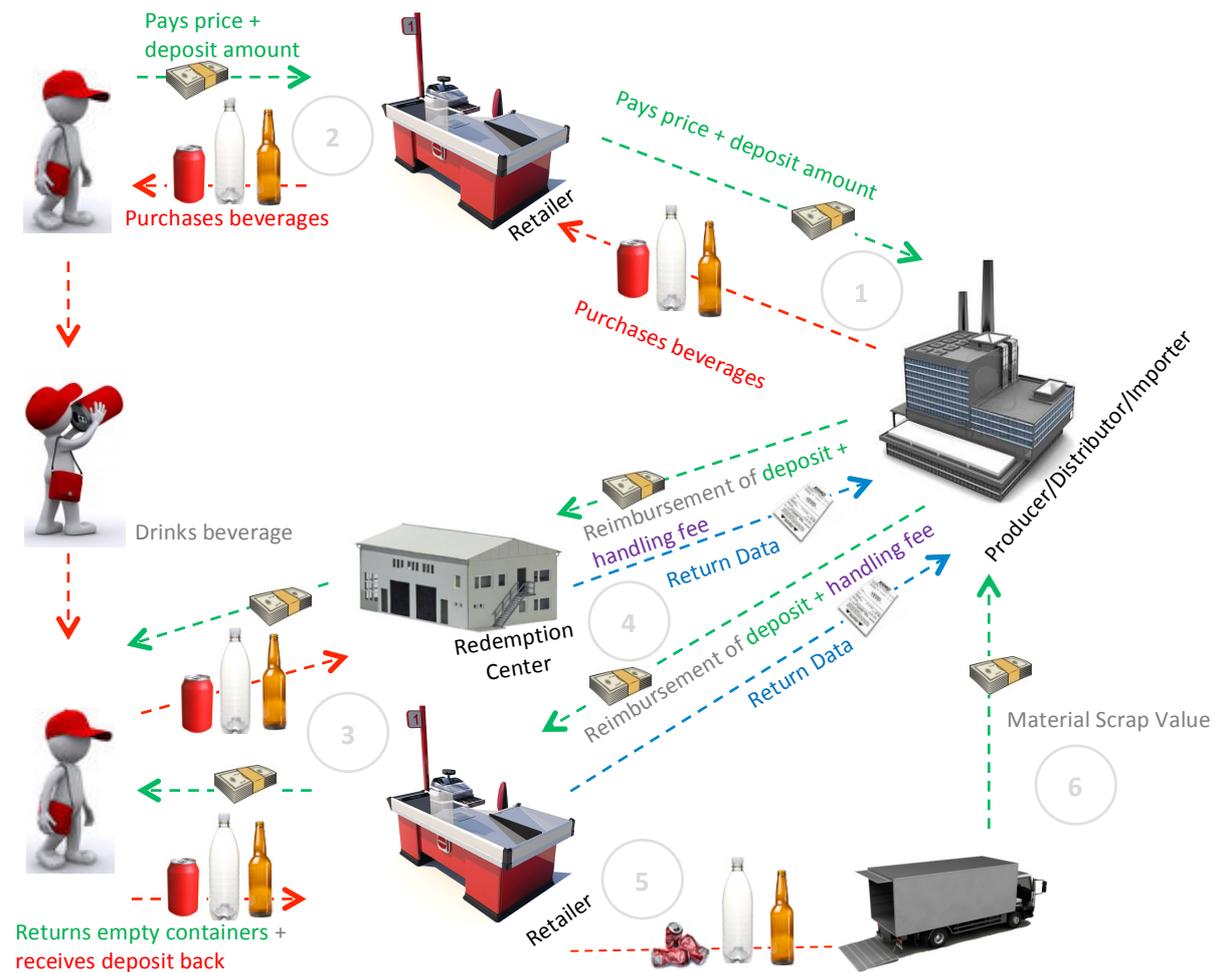
SYSTEM RESULTS (2016)

Total Return Rate: 75%*

*Estimate is from a 2012-2013 study commissioned by the State.



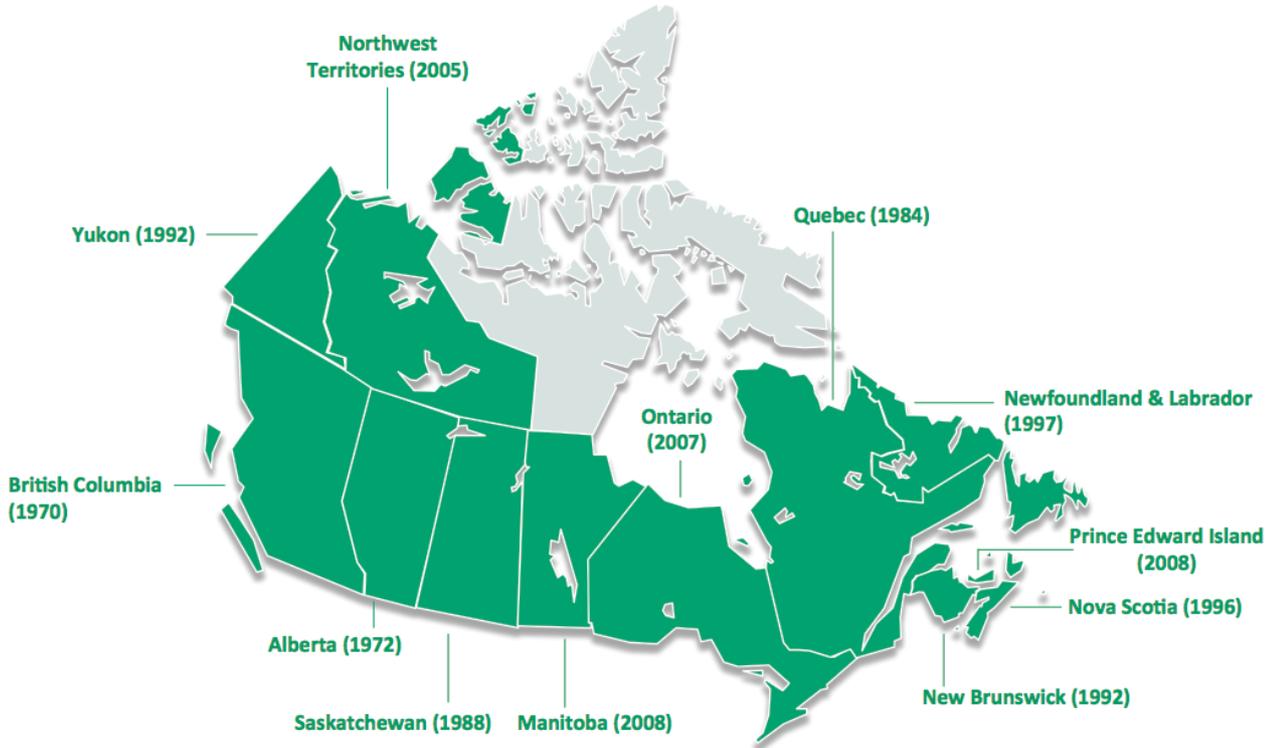
MONEY MATERIAL FLOW





CANADA

(33.3 million have access to DRS)



Province	Population (million)	Mandate Enacted	Mandate Implemented
1. Alberta	4.3	1972	1972
2. British Columbia	4.7	1970	1970
3. Manitoba	1.3	2008	2008
4. Newfoundland & Labrador	0.5	1996	1997
5. New Brunswick	0.75	1991	1992
6. Northwest Territories	0.04	2003	2005
7. Nova Scotia	0.9	1995	1996
8. Ontario	13.98	2006	2007
9. Prince Edward Island	0.1	1988	2008
10. Quebec	8.3	1972	1984
11. Saskatchewan	1.2	1978	1988
12. Yukon	0.03	1991	1992



ALBERTA

Population: 4.3m

Website: www.abcrc.com



MANDATE

Beverage Container Recycling Regulation

Enacted:	1972
Implemented:	1972
Last Updated:	2008
Authority:	Beverage Container Management Board (BCMB)
Target:	No official target; however the BCMB's 2015-2017 Business Plan includes an overall collection target of 83.7% for 2014. The BCMB has also set targets by container type (e.g. 90.6% for non-refillable glass and 87.2% for aluminum). Overall collection targets have also been set for 2015 (83.4%), 2016 (84.2%), and 2017 (85.0%).

PROGRAM SCOPE

Material:	Plastics (PET, HDPE, PVC, PS); metal (aluminum/tinplate); glass; gable top; Tetra Pak; bag-in-box; drink pouch; all sealed containers
Beverage type:	All (alcoholic and non-alcoholic), including milk (first jurisdiction in North America to include milk)
Excluded:	None

DEPOSITS AND FEES

Deposit (initiated by Producer/Distributor/Importer)

All containers ≤1l	CAD\$0.10
All containers > 1l	CAD\$0.25
Unredeemed deposits:	Retained by Producer/Distributor/Importer
Handling Fee:	CAD\$0.0317 to CAD\$0.2279 (Regulated by government and payable by a manufacturer or collection system agent to collection depots)
Container Recycling Fee:	CAD\$0.00 to CAD\$0.10 (non-refundable and based on a non-for-profit formula)

SYSTEM OPERATOR

Program Operator:	Alberta Beverage Container Recycling Corporation (ABCRC) (non-alcohol) Brewers Distributor Ltd. (BDL) (Beer)
Steward:	ABCRC (non-alcohol) Alberta Beer Container Corporation (ABCC) (Beer) Alberta Gaming and Liquor Commission (AGLC)

The ABCC acts as a collection service provider for beer manufacturers and is responsible for ensuring that beer containers are collected, transported, processed, and recycled as per the requirements of the regulation. ABCC subcontracts the management of beer that is in non-refillable containers (all one-way glass and aluminum beer containers) to the ABCRC.

The AGLC represents the producers of alcohol. AGLC uses ABCRC to manage its wine and spirit containers and the ABCC to manage its beer containers. ABCC is responsible for ensuring that all beer containers are collected, transported, processed, and recycled as per the requirements of the regulation.

System Finance: Material revenue / Unredeemed deposits / Container Recycling Fee

REDEMPTION SYSTEM

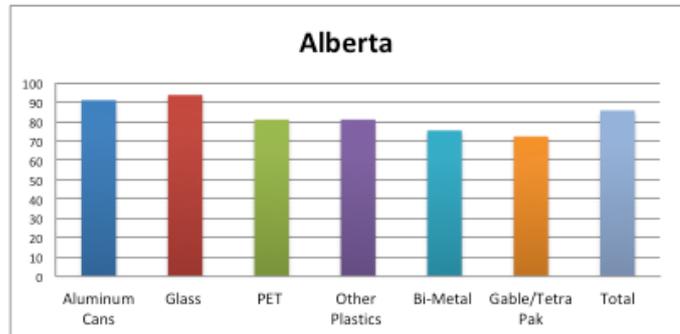
Return to Depot Manual collection. 217 province wide privately owned & operated registered “universal” bottle depots; 17 Class “D” (beer containers only) depots.

Beer containers through licensees/liquor/beer stores

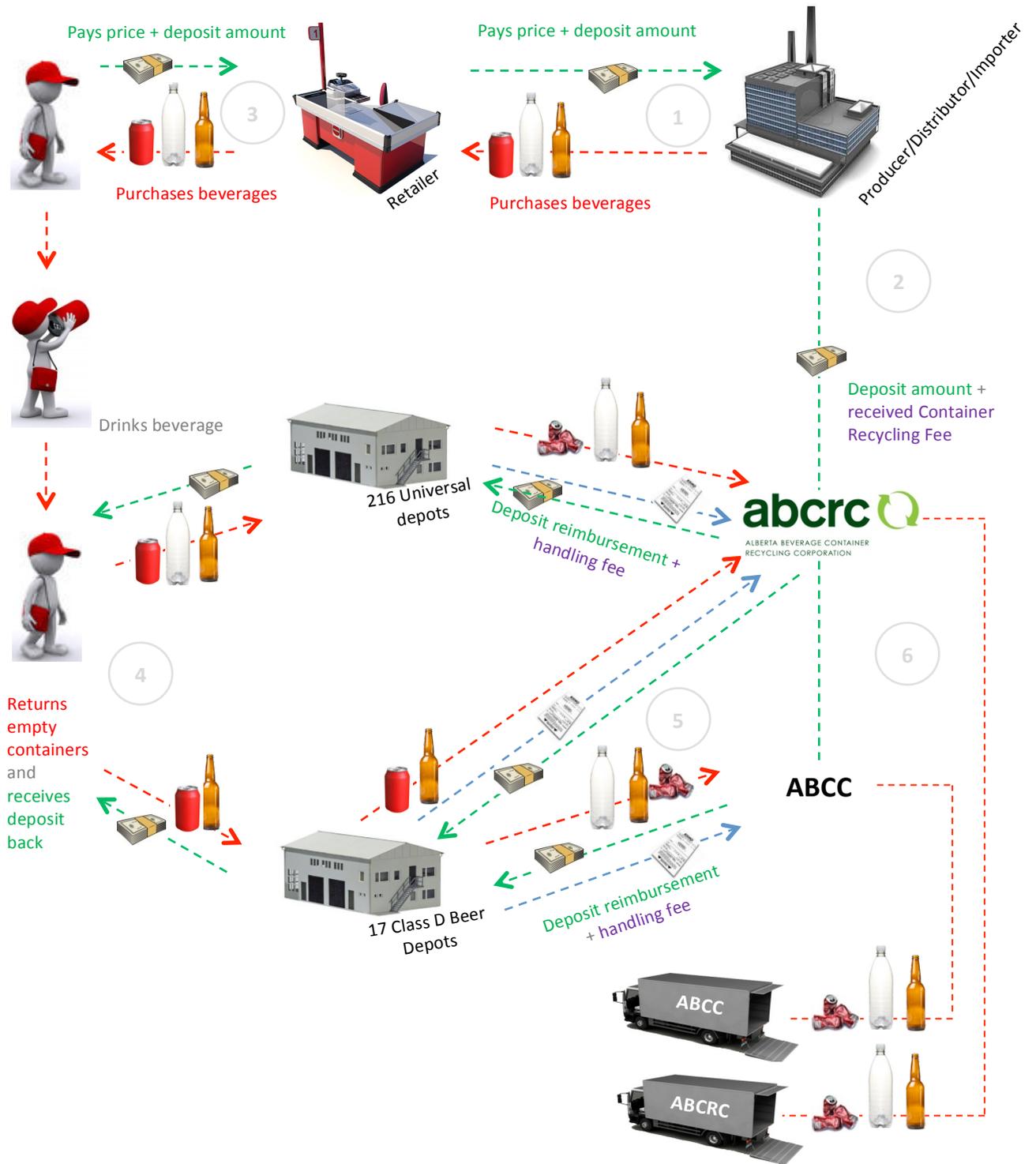
Material owner: ABCRC & BDL

SYSTEM RESULTS (2016)

Total Return Rate:	85.7%
Aluminum Can	91.0%
Glass	93.7%
PET	81.0%
Other Plastic	81.0%
Bimetal	75.4%
Gable/Tetra Pak	72.3%



MONEY MATERIAL FLOW





BRITISH COLUMBIA



Population: 4.7m

Website: www.return-it.ca/beverage/products/

MANDATE

Beverage Container Stewardship Program (Litter Act)

Enacted:	1970
Implemented:	1970
Last Updated:	2004
Authority:	Ministry of Environment
Target:	<i>Recycling Regulation</i> establishes a 75% minimum collection target & requires that redeemed containers are recycled or refilled

PROGRAM SCOPE

Material:	Plastics (PET, HDPE, PVC, PS); metal (aluminum/tinplate); bi-metal; glass; paper; gable top; Tetra Pak; drink pouch; bag in box; all containers accepted for beverages
Beverage type:	All ready-to-drink beverages (non-alcoholic beverages, wine, spirits, beer) that is or was sealed by its manufacturer
Excluded:	Milk; milk substitutes; rice milk; soya milk; flavoured milk; infant formulas; meal replacements; dietary supplements

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Non-alcohol ≤1l: CAD\$0.05 Non-alcohol >1l: CAD\$0.20 Wine & spirit ≤1l: CAD\$0.10 Wine & spirit >1l: CAD\$0.20 Beer bottles ≤1l: CAD\$0.10
Unredeemed deposits:	Producer/Distributor/Importer
Handling Fee:	CAD\$0.027 to CAD\$0.1127 paid by Encorp Pacific (Canada) and Brewers Distributors Ltd. (BDL) to authorized depots and contracted retailers. Bottle depots independently negotiate HFs directly with the beer industry. HFs fluctuate depending on the cost to collect and process each type of container.
Container Recycling Fee (CRF):	CAD\$0.00 to CAD\$0.40 (calculated on an annual basis and based on net cost of collection and recycling of specific containers)

SYSTEM OPERATOR

Program Operator:	Encorp Pacific & BDL
Steward:	Encorp Pacific & BDL

Encorp Pacific (Canada) represents brand owners of non-alcoholic beverages, wine, spirits, some ciders, and coolers, as well as some import beer manufacturers. BDL represents brand owners of domestic coolers, beers, and ciders, and it collects the containers of both these domestic distributors and of outside distributors who import.

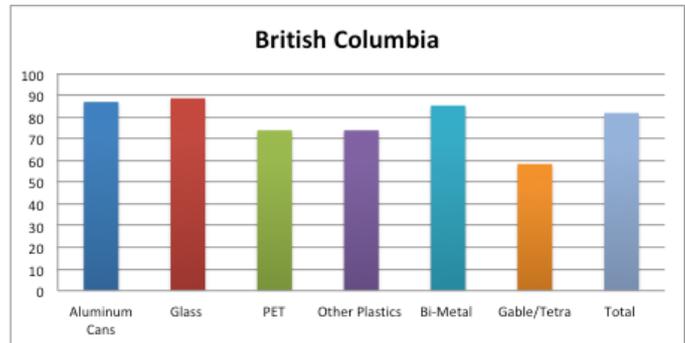
System Finance:	Material revenue, unredeemed deposits, Container Recycling Fee
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REDEMPTION SYSTEM

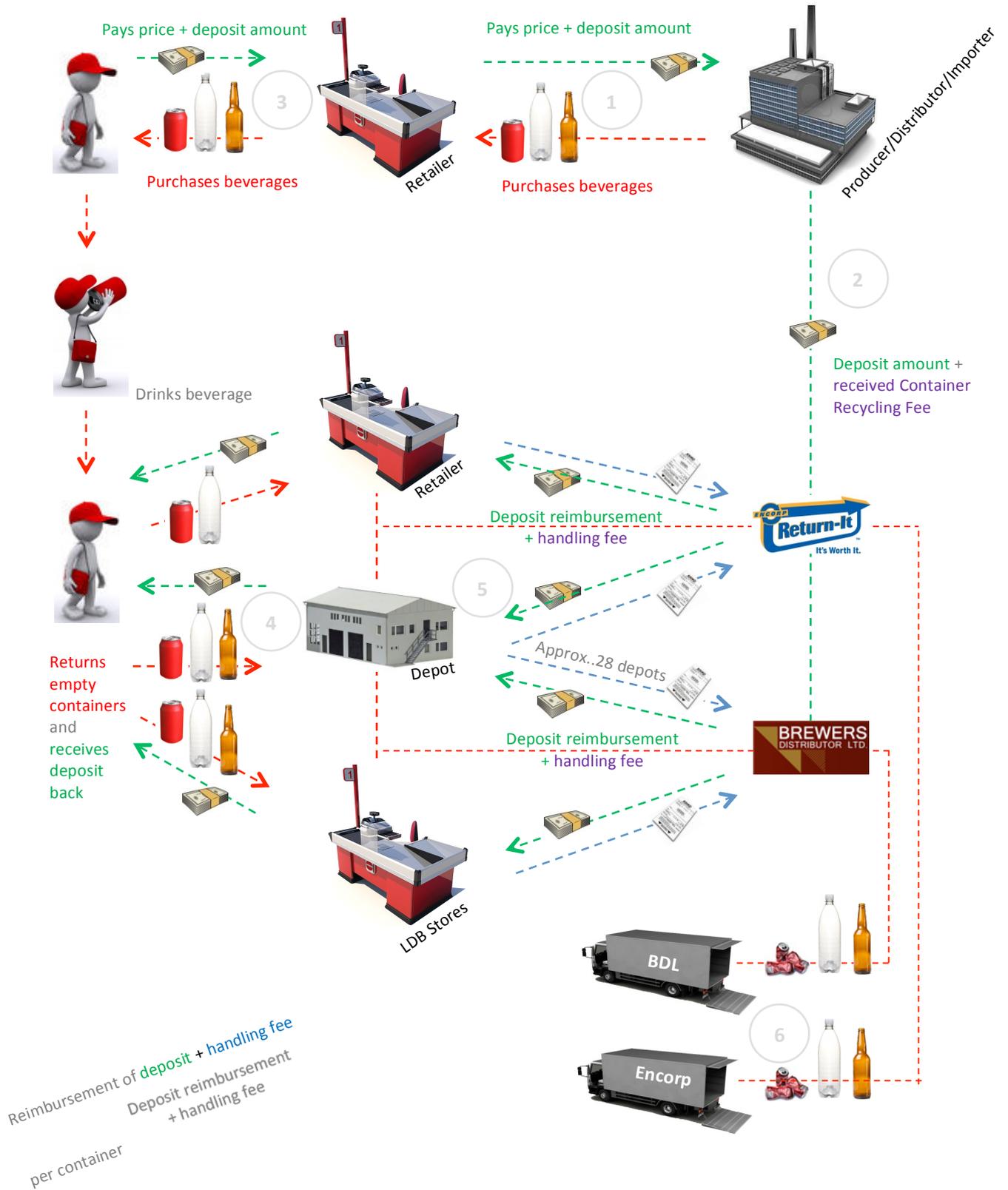
Return-to-Retail/Return to Depot	1,430 return locations. 78% of population live within a 2km radius of a BDL depot
Encorp Pacific: (Non-alcohol, wine, spirits, cider, and imported beer)	172 independent depots and hundreds of retail outlets Manages about 90% of recovered beverage containers province-wide (the balance is covered by retailers)
Brewers Distributor Ltd.: (domestic beer, coolers and cider)	Provides for retail returns at a total of 1,144 locations including 656 private liquor stores, 196 government-run liquor stores, 220 rural agency stores, and 72 independent depots. Manages about 29% of recovered containers province-wide
Material owner:	Encorp Pacific & BDL

SYSTEM RESULTS (2016)

Total Return Rate:	81.9%
Aluminum Cans	87.0%
Glass	88.7%
PET	73.9%
Other Plastic	73.9%
Bimetal	85.3%
Gable/Tetra Pak	58.4%



MONEY MATERIAL FLOW





MANITOBA

Population: 1.3m

Website: www.bdl.ca



MANDATE

Waste Reduction and Prevention Act (WRAP)

Packaging and Paper Stewardship Regulation

Enacted: 2008

Implemented: 2010

Authority: Ministry of Environment

Target: 75% (not specific to beer containers)

PROGRAM SCOPE

Material: Plastics, metal (aluminum/tinplate), bimetal, glass, all beer containers

Beverage type: Beer

Excluded: Non-alcoholic beverages; wine; spirits; milk

DEPOSITS AND FEES

Deposit: Initiated by Producer/Distributor/Importer

Deposit value: Beer cans and bottles ≤1l: CAD\$0.10
Beer cans and bottles >1l: CAD\$0.20

Unredeemed deposits: Retained by brewers

Handling Fee: Beer cans: CAD\$0.0204

SYSTEM OPERATOR

Program Operator: Brewers Distributor Ltd. (BDL)

Steward: BDL

System Finance: Material revenue, unredeemed deposits

REDEMPTION SYSTEM

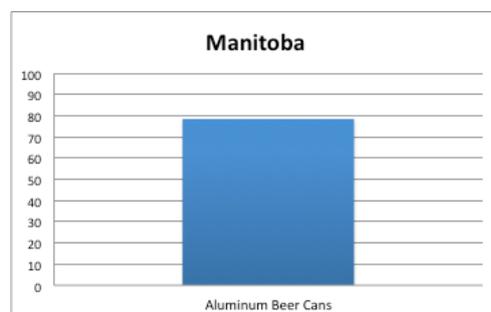
Return-to-Retail: Beer retailers only (beer vendors, Manitoba Liquor Commission (MLC), designated licensees)

Material owner: BDL

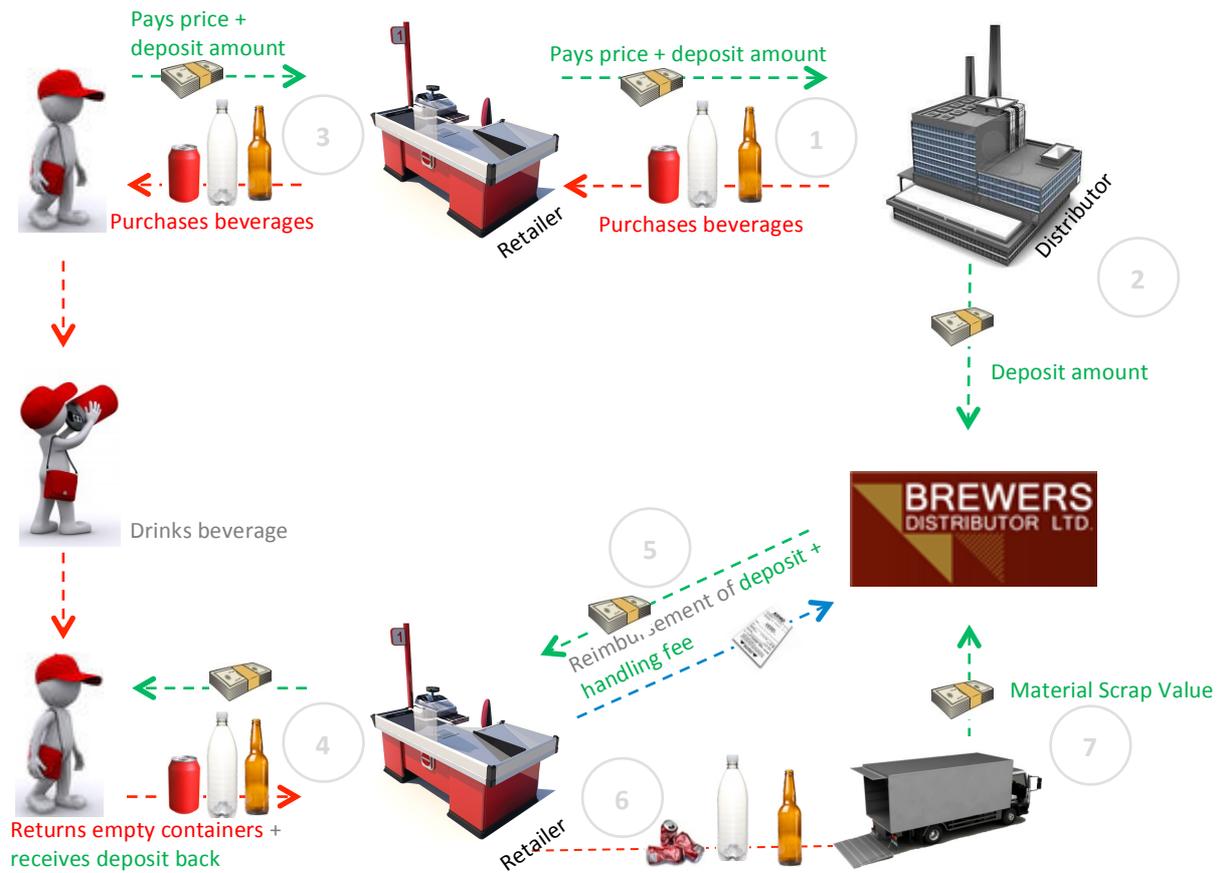
SYSTEM RESULTS (2014)

Total Return Rate: 78.5%

Aluminum Beer Can 78.5%



MONEY MATERIAL FLOW





NEWFOUNDLAND & LABRADOR



Population: 0.5m

Website: www.mmsb.nl.ca/recyclingprograms/beverage-containers/

MANDATE

Used Beverage Container Recycling Program

Enacted:	1996
Implemented:	1997
Last Updated:	2003
Authority:	Ministry of Environment
Target:	No official collection target

PROGRAM SCOPE

Material:	All containers ≤5l: Plastics, metal (aluminum/tinplate), bimetal, glass, gable top, Tetra Pak, drink pouches
Beverage type:	All ready-to-drink beverages (non-alcoholic beverages, wine, spirits, non-refillable beer). Only milk products with the word “beverage” on the label are covered under the program.
Excluded:	Milk and milk substitutes, infant formula, refillable bottles (including domestic beer bottles), concentrated liquids, medicinal/nutritional supplements, containers > 5l), refillables

DEPOSITS (Half Back) AND FEES

Half-Back Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Non-alcohol: CAD\$0.08/ \$0.05* Wine & spirit (any size): CAD\$0.20 / \$0.10* Beer cans & importer bottles ≤1l: CAD\$0.08 / \$0.05*
Unredeemed deposits:	Retained by Multi-Materials Stewardship Board (MMSB)
Handling Fee:	CAD\$0.0425

*Part of the revenue generated from the non-refunded portion of the deposit (\$0.03 for non-alcoholic containers, beer cans and imported bottles and \$0.10 for alcoholic containers) is used to pay for the cost of the recycling program, including administration, handling, transportation, and processing costs. Money from unredeemed beverage container deposits, as well as revenue generated from the sale of material, also goes towards paying for the program.

SYSTEM OPERATOR

Program Operator:	MMSB
Steward:	MMSB

The MMSB is a crown corporation established pursuant to the Environmental Protection Act and accompanying Waste Management Regulations. This board manages the Used Beverage Container Recycling Program and is mandated to support and promote the protection, enhancement, and wise use of the environment through waste management programs. By law, beverage distributors and retailers are obligated to register with and

remit deposits charged on the sale of all beverage containers to MMSB. Green Depots must also register with MMSB.

System Finance: Material revenue, unredeemed deposits, half-back (goes into Waste Management Trust Fund)

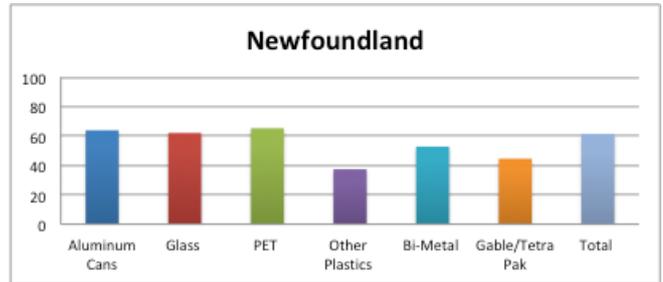
REDEMPTION SYSTEM

Return to Depot: 40 main depots, 16 sub-depots, and 20 mobile collection services

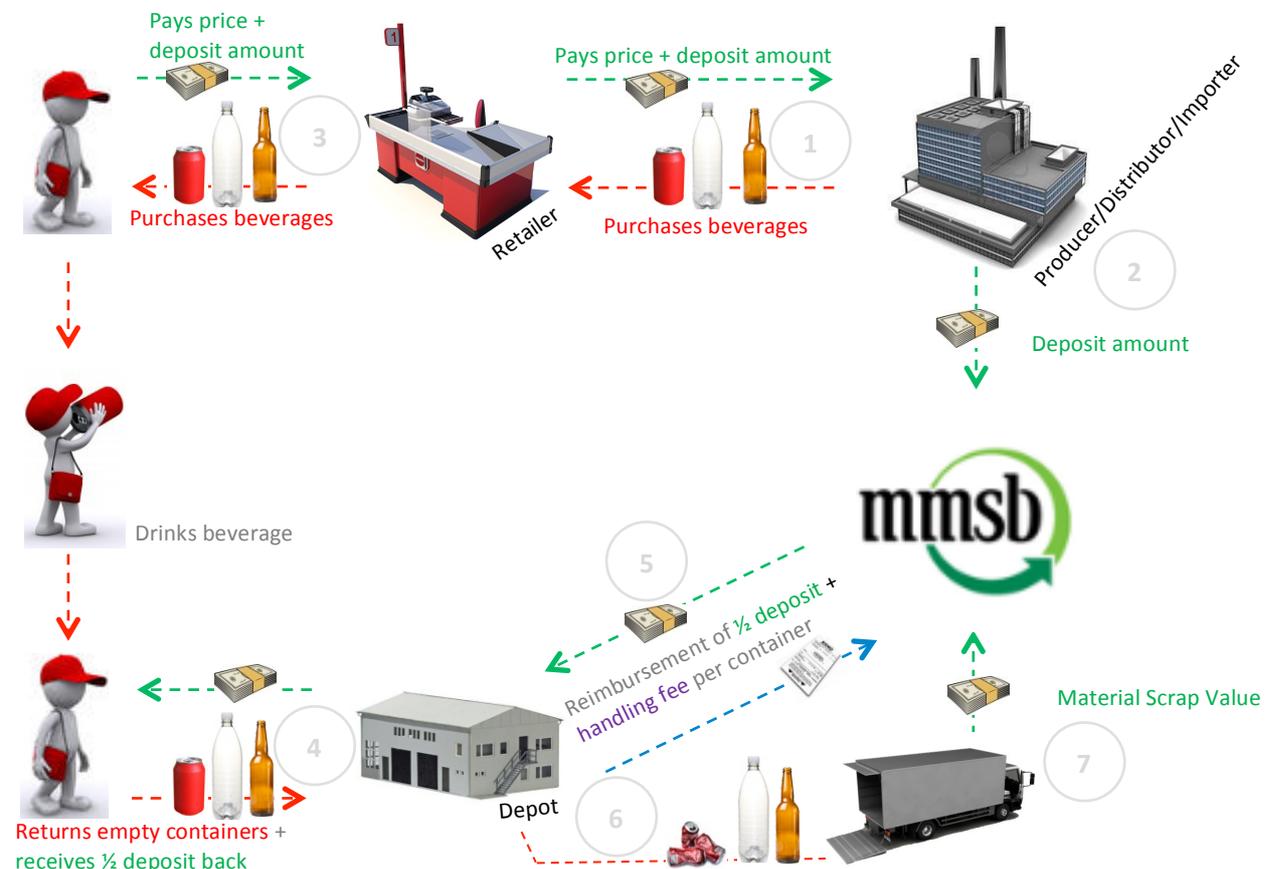
Material owner: MMSB

SYSTEM RESULTS (2016)

Total Return Rate:	61.6%
Aluminum Cans	64.7%
Glass	66.0%
PET	65.2%
Other Plastic	17.6%
Bimetal	52.9%
Gable/Tetra Pak	46.4%



MONEY MATERIAL FLOW





NEW BRUNSWICK

Population: 0.75m

Website: www2.gnb.ca/content/gnb/en/services/services_renderer.3975.Beverage_Container_Program.html



MANDATE

Beverage Container Act

Enacted:	1991
Implemented:	1992
Authority:	Department of Environment
Target:	Unofficial collection rate of 80%

PROGRAM SCOPE

Material:	Plastics, metal (aluminum/tinplate), bimetal, glass, gable top Tetra Pak, all beverage containers ≤ 5l
Beverage type:	All ready-to-drink beverages (non-alcoholic beverages, wine, spirits, non-refillable beer)
Excluded:	Milk; milk products; unpasteurized cider

DEPOSITS (Half Back) AND FEES

Deposit:	Initiated at Producer/Distributor/Importer
Deposit value:	Non-alcohol: CAD\$0.10 / CAD\$0.05* Beer cans & bottles, wine & spirits ≤ 500ml: CAD\$0.10 / CAD\$0.05* Beer cans & bottles, wine & spirits > 500ml: CAD\$0.20 / CAD\$0.10*
Unredeemed deposits:	Encorp Atlantic and New Brunswick Liquor (Alcool NB Liquor)
Handling Fee:	CAD\$0.0406

*Under New Brunswick’s half-back system, consumers receive only half of their deposit back when they return non-refillable containers. Fifty-percent of this “half-back” revenue (2.5- or 5-cents depending on container size), plus the revenue generated from unredeemed deposits and from the sale of material, is used to pay for program costs. The remaining 50% of the “half-back” revenue goes into the province’s Environmental Trust Fund where it is used for environmental conservation, education, protection, and other provincial environmental initiatives aimed at reducing waste.

SYSTEM OPERATOR

Program Operator:	Encorp Atlantic (Non-alcoholic), Rayan Industries (Alcohol)
Steward:	Encorp Atlantic (Non-alcoholic), Alcool NB Liquor (Alcohol)

Encorp Atlantic manages the collection of non-alcoholic beverage containers on behalf of brand owners. It collects the containers from depots, ships materials for processing, and markets these materials. Encorp is also responsible for collecting deposits from the distributors, and reimbursing the redemption centers for the refunds paid out.

Alcool NB Liquor is responsible for collecting alcoholic beverage containers (wine, beer, spirits, and coolers), and it contracts the transportation and processing of these containers to Neighbourhood Recycling (Rayan Investments Ltd.).

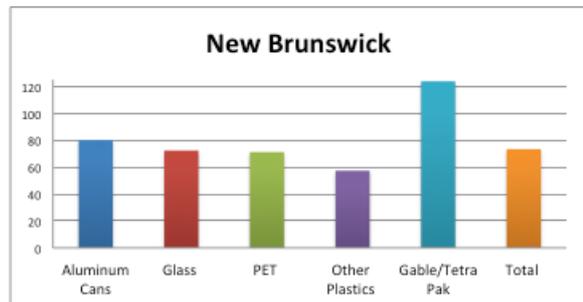
System Finance: Material revenue, unredeemed deposits, 50% of half-back

REDEMPTION SYSTEM

Return-to-Depot 72 licenced depots (individually owned and operated)
 Material owner: Encorp Atlantic and Alcool NB Liquor

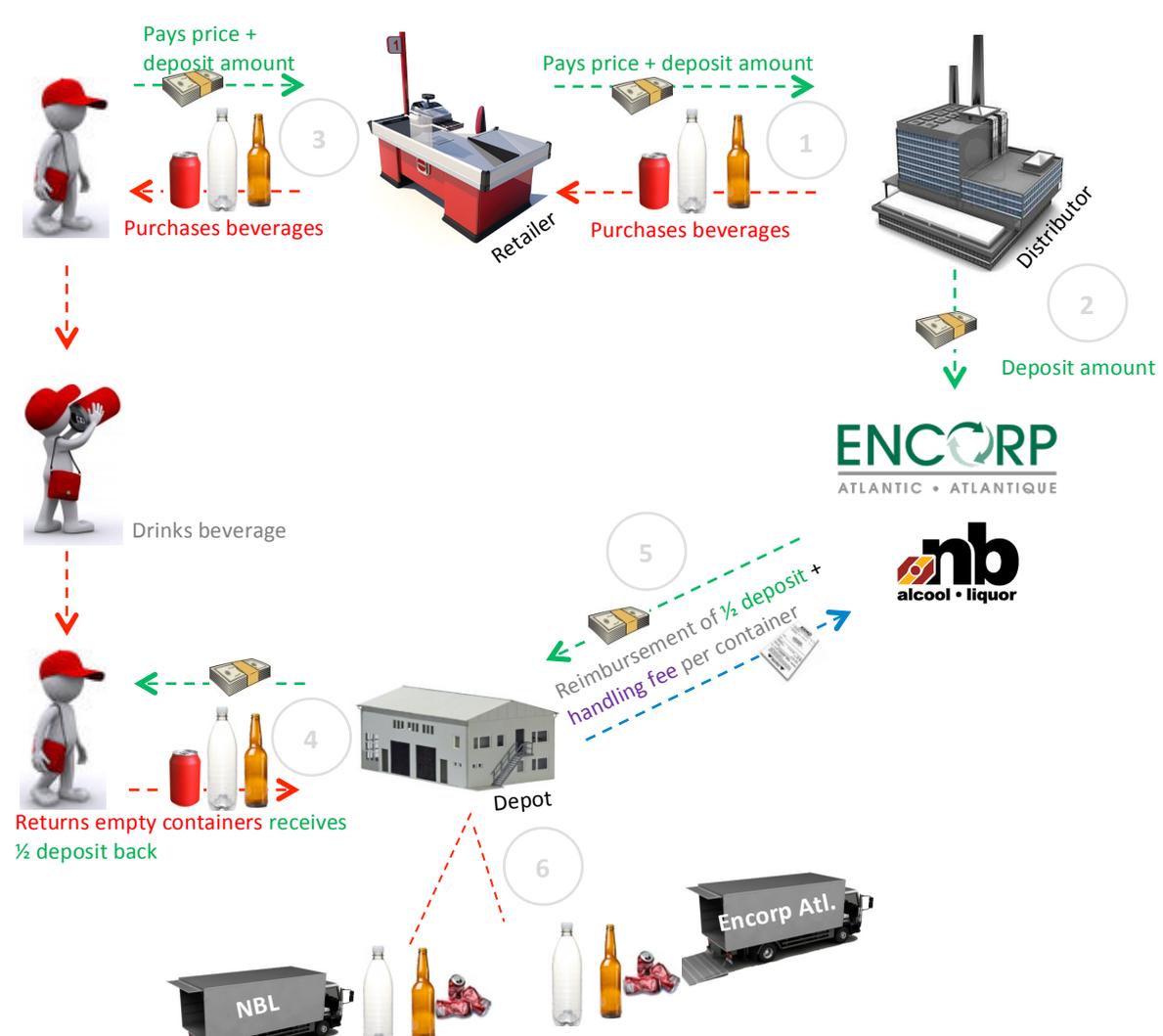
SYSTEM RESULTS (2014-15)

Total Return Rate:	73.4%
Aluminum Can	80.1%
Glass	72.4%
PET	71.2%
Other Plastic	57.4%
Gable/Tetra Pak	123.8%*



*Note: This is clearly not possible, and reflects the fact that some cartons are being reported as sold under other categories by distributors, leading to a situation where the denominator for gable/Tetra Pak containers sold is lower than it should be, while the denominator for other categories may be falsely reported as too high.

MONEY MATERIAL FLOW





NORTHWEST TERRITORIES



Population: 0.04m

Website: www.enr.gov.nt.ca/node/3723

MANDATE

Waste Reduction and Recovery Act

Enacted:	2003
Implemented:	2005
Last Updated:	2010
Authority:	Department of Environment and Natural Resources (ENR)

PROGRAM SCOPE

Material:	Plastics, metal (aluminum/tinplate), bimetal, glass, Tetra Pak, any sealed container & combination of materials
Beverage type:	All ready-to-serve drinks including milk (non-alcoholic beverages, wine, spirits, non-refillable beer, milk and liquid milk products)
Excluded:	Containers for infant formula, containers for milk and liquid milk products <30ml, powder milk, containers sold empty, open containers filled with a drink when sold

DEPOSITS AND FEES

	Refundable Deposit (CAD\$)	CRF (CAD\$)	Total surcharge per container (CAD\$)
Glass ≤ 1l	\$0.10	\$0.13	\$0.23
Aluminum ≤ 1l	\$0.10	\$0.08	\$0.18
Plastic ≤ 1l	\$0.10	\$0.08	\$0.18
Tetra Pak/Drink Pouch/Gable Top ≤ 1l	\$0.10	\$0.05	\$0.15
Bi-Metal ≤ 1l	\$0.10	\$0.05	\$0.15
Glass >1l	\$0.25	\$0.13	\$0.38
Plastic >1l	\$0.25	\$0.10	\$0.35
Tetra Pak/Drink Pouch/Gable Top >1l	\$0.25	\$0.10	\$0.35
Bi-Metal >1l	\$0.25	\$0.10	\$0.35
Bag-in-a-Box >1l	\$0.25	\$0.10	\$0.35

Unredeemed deposits: Retained by ENR

Depot Handling Fee (DHF): CAD\$0.022 - CAD\$0.045

Processing Handling Fee (PHF): CAD\$0.02 - CAD\$0.045

At the point of purchase, the customer is charged a refundable deposit and a non-refundable CHF. CHF's vary by type of container and container size, and are based on the estimated costs to collect, process, and transport beverage containers and to administer the program. These fees, along with unredeemed deposits and material revenues, are used to pay for the program.

SYSTEM OPERATOR

Program Operator:	ENR (Government Operated)
Steward:	ENR

The program is overseen by the ENR. The ENR administers the program by enforcing the act and the regulations, coordinating and supporting local depots and regional processing centres, coordinating public information, improving the program, and undertaking audits or checks on distributors, importers, stores, depots, and processing centres.

System Finance: Material revenue, unredeemed deposits, Container Handling Fee (includes DHF and PHF)

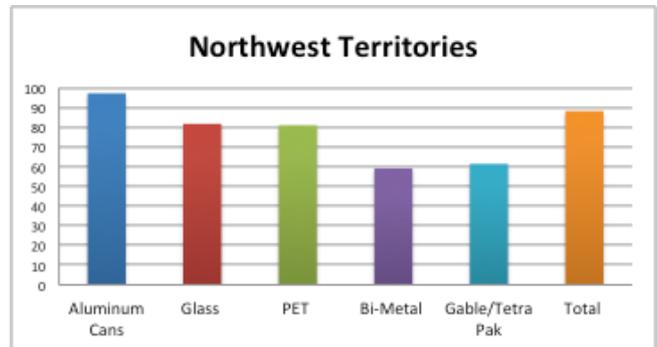
REDEMPTION SYSTEM

Return to Depot: 23 locally operated depots & 6 temporary satellite depots

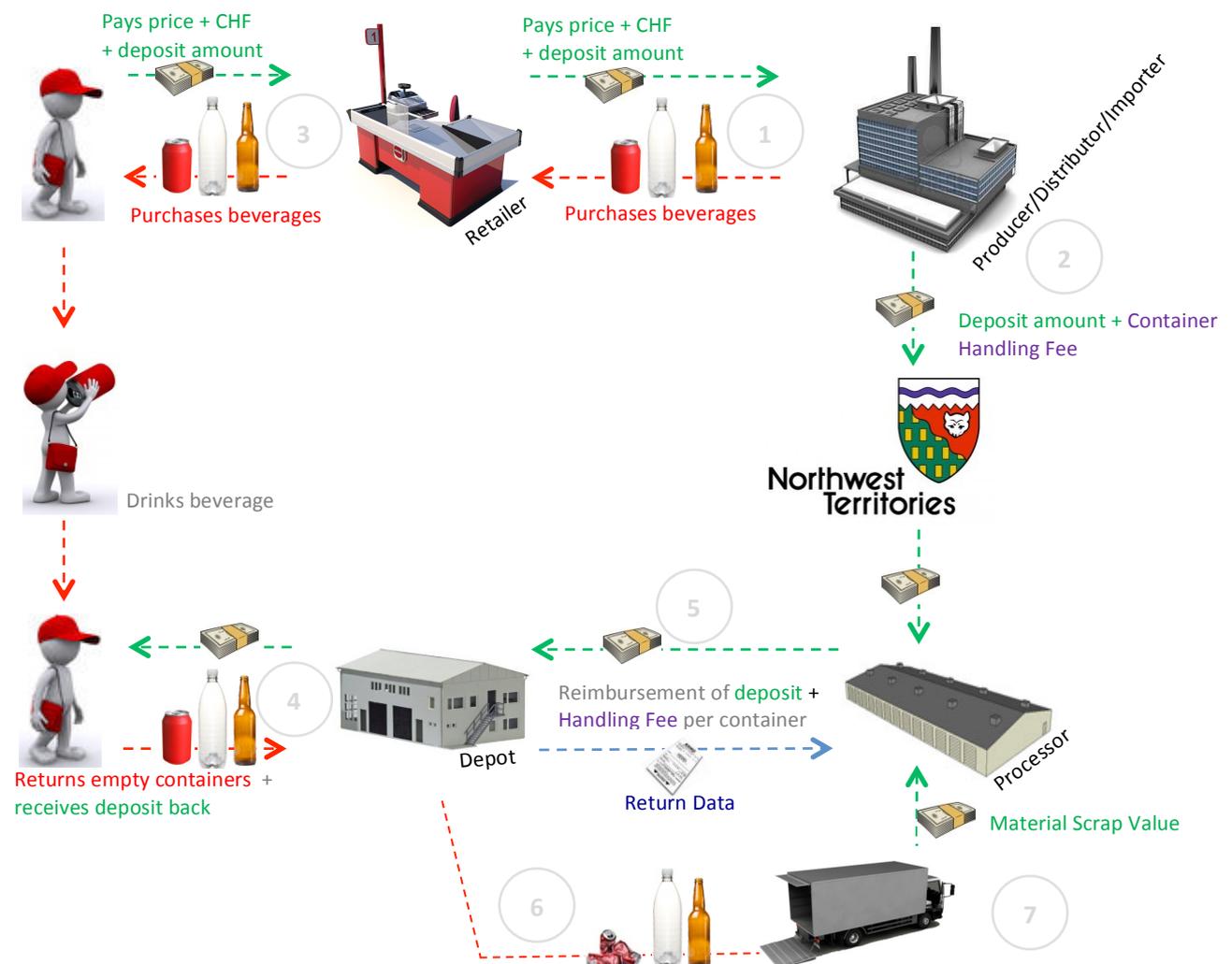
Material owner: Processors

SYSTEM RESULTS (2016-17)

Total Return Rate:	88.2%
Aluminum Can	97.2%
Glass	81.7%
PET	81.0%
Bimetal	59.1%
Gable/Tetra Pak	61.4%



MONEY MATERIAL FLOW





NOVA SCOTIA



Population: 0.9m

Website: <http://divertns.ca/recycling/what-goes-where/beverage-container-recycling>

MANDATE

Solid Waste – Resource Management Regulations	
Enacted:	1994
Implemented:	1996
Last Updated:	2007
Authority:	Ministry of Environment

PROGRAM SCOPE

Material:	Plastics, metal (aluminum/tinplate), bimetal, glass, gable top, Tetra Pak, all beverage containers <5l
Beverage type:	All ready-to-serve drinks (non-alcoholic beverages, wine, spirits, non-refillable beer)
Excluded:	Milk (collection of milk containers is carried out under a voluntary agreement between Nova Scotia Environment, the Nova Scotia Solid Waste Management Regions, and the Atlantic Dairy Council); milk products; soya milk; rice beverages; certain meal replacements; formulated liquid diets; foods for low energy diets; thickened juices; baby formulas; concentrates; non-alcoholic beverages ≥ 5l

DEPOSITS (Half Back) AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Non-alcohol < 5l: CAD\$0.10 / CAD\$0.05 Wine & spirit ≤ 500ml: CAD\$0.10 / CAD\$0.05 Wine & spirit >500ml: CAD\$0.20 / CAD\$0.10 Beer cans & bottles <500ml: CAD\$0.10 / CAD\$0.05 Beer cans & bottles ≥ 500ml: CAD\$0.20 / CAD\$0.10
Unredeemed deposits:	Retained by Divert NS (formerly RRFB Nova Scotia)
Handling Fee:	CAD\$0.0427

SYSTEM OPERATOR

Program Operator:	Divert NS (formerly RRFB Nova Scotia)
Steward:	Divert NS (formerly RRFB Nova Scotia)

Divert NS was incorporated in 1996 to administer major components of the Nova Scotia Solid Waste-Resource Management Strategy (1995). Divert NS is tasked with five mandates, one of which is to develop and operate a DRS for beverage containers. Distributors of designated beverage containers are required to register with Divert NS in order to sell or distribute these products legally within the province. They must also report sales data and remit applicable deposits directly to Divert NS on a monthly basis.

System Finance:

Material revenue, half-back, unredeemed deposits

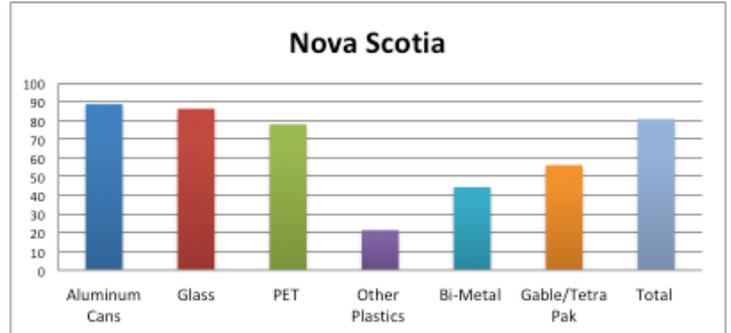
REDEMPTION SYSTEM

Return to Depot: 78 Enviro Depot locations

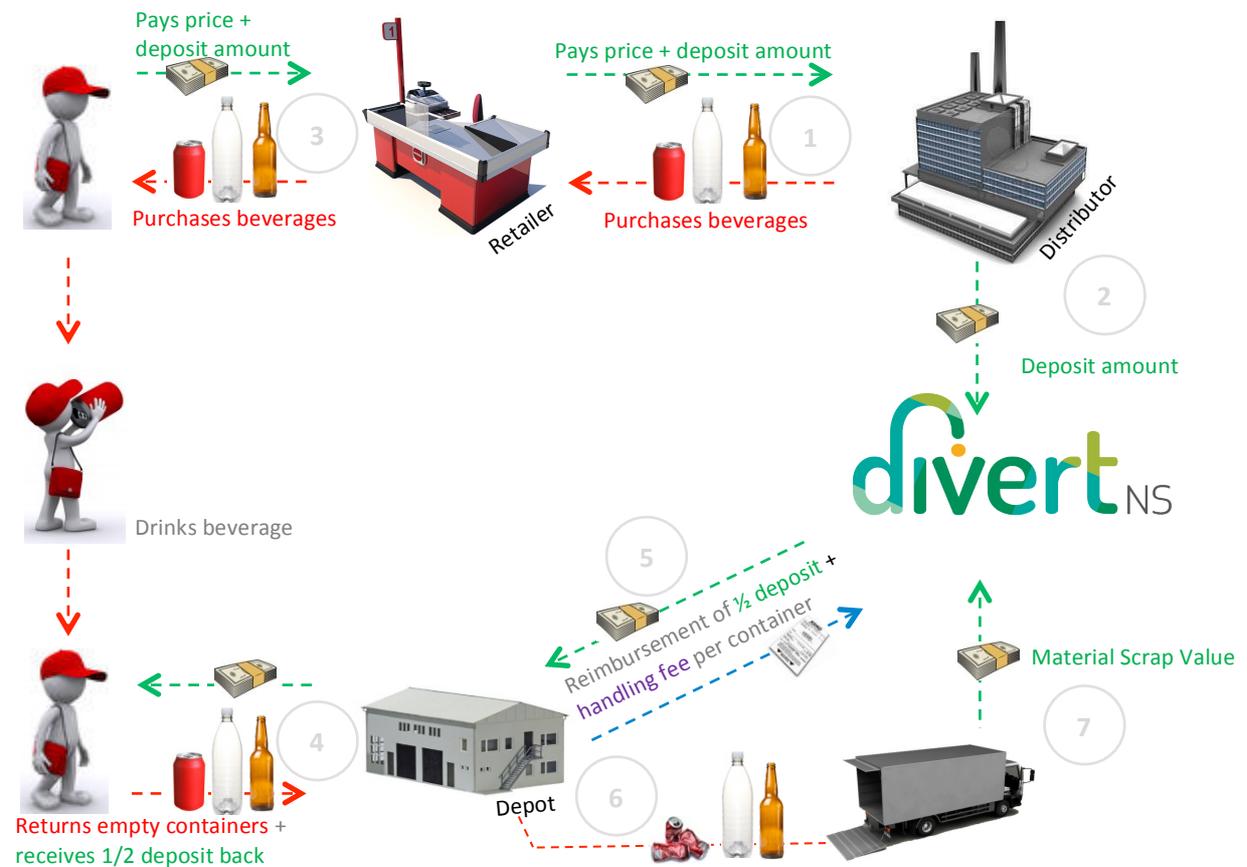
Material owner: Divert NS

SYSTEM RESULTS (2016-17)

Total Return Rate:	80.8%
Aluminum Can	88.7%
Glass	86.3%
PET	78.0%
Other Plastic	21.4%
Bimetal	44.4%
Gable/Tetra Pak	56.2%



MONEY MATERIAL FLOW





ONTARIO

Population: 13.9m

Website: www.bagitback.ca



MANDATE

Ontario Deposit Return Program

Enacted:	2006
Implemented:	2007
Authority:	Liquor Control Board Ontario (LCBO)

PROGRAM SCOPE

Material:	Plastics, metal (aluminum/tinplate), bimetal, glass, gable top, Tetra Pak, bag-in-box, all beverage containers
Beverage type:	Wine, spirits, imported beer
Excluded:	Non-alcoholic beverages, containers with a volume of ≤100ml containers purchased at duty-free stores

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Wine & spirit ≤ 630ml: CAD\$0.10 Wine & spirit > 630ml: CAD\$0.20 Beer cans & bottles ≤1l: CAD\$0.10 Beer cans & bottles > 1l: CAD\$0.20
Unredeemed deposits:	Retained by beer distributor/bottlers and the Liquor Control Board of Ontario (LCBO)
Handling Fee:	Proprietary

The LCBO is obligated to reimburse The Beer Store (TBS) for all deposit refunds that TBS pays out to consumers who return wine, spirit, and imported beer containers that are not sold at TBS; it is also required to pay TBS a per unit service fee for these containers. A contract with TBS, in effect since February 2012, sets the fee at 10.5-cents for 2016.

Brewers pay a handling fee to TBS based on the type of container. These rates are proprietary.

SYSTEM OPERATOR

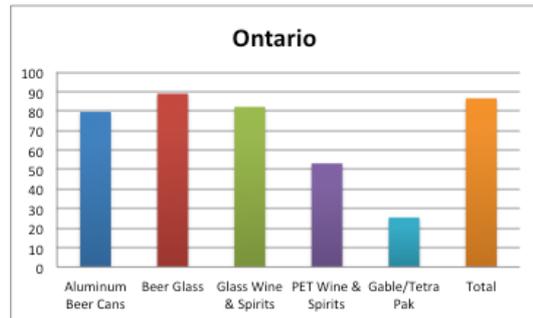
Program Operator:	TBS
Steward:	LCBO (wine, spirits); TBS (beer)
System Finance:	Material Revenue, unredeemed deposits, government revenue

REDEMPTION SYSTEM

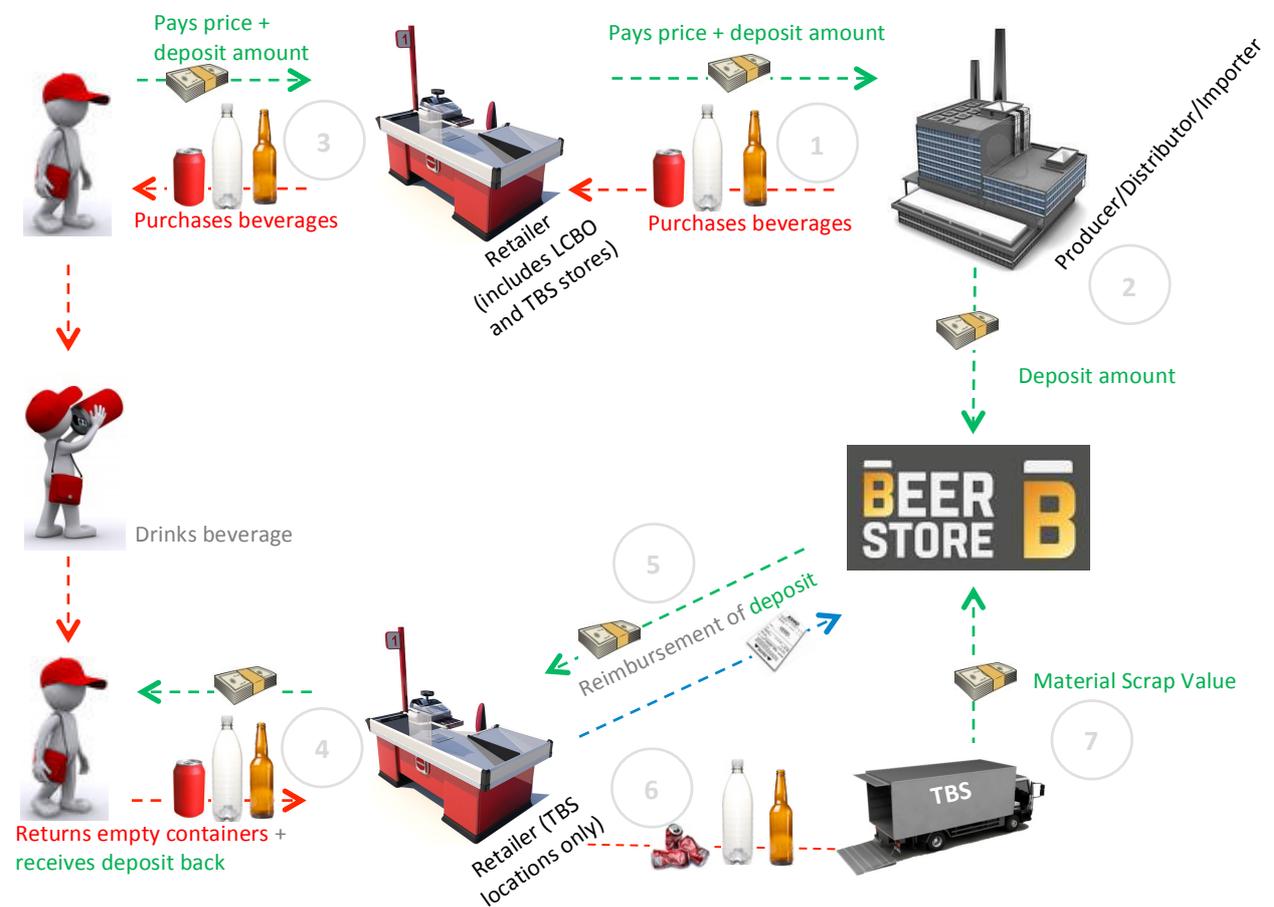
Return-to-Retail:	956 redemption locations, including 446 TBS locations, 187 breweries (beer containers only), 210 retail partner stores and LCBO northern agency stores, 3 LCBO stores, and 110 empty bottle dealers
Material owner:	TBS

SYSTEM RESULTS (2016)

Total Return Rate:	86.6%
Aluminum Beer Cans	79.6%
Beer Glass	89.0%
Glass Wine & Spirits	82.2%
PET Wine & Spirits	53.2%
Gable/Tetra Pak	25.4%



MONEY MATERIAL FLOW





PRINCE EDWARD ISLAND



Population: 0.1m

Website: www.beveragecontainers.pe.ca

MANDATE

Beverage Container Act

Enacted: 2008

Implemented: 2008

Authority: PEI Department of Environment, Energy, and Forestry

Law prohibiting the sale of non-refillable bottles was repealed in late 2007

PROGRAM SCOPE

Material: Plastics, metal (aluminum/tinplate), bimetal, glass, gable top, Tetra Pak, bag-in-box, drink pouches, all sealed containers ≤ 5l

Beverage type: All ready-to-drink beverages (non-alcoholic beverages, wine, spirits, non-refillable beer)

Excluded: Dairy products; milk substitutes; nutritional supplements

DEPOSITS (Half Back) AND FEES

Deposit: Initiated at Producer/Distributor/Importer

Deposit value: Non-alcohol: CAD\$0.10 / CAD\$0.05
 Wine & spirit ≤ 500ml: CAD\$0.10 / CAD\$0.05
 Wine & spirit 501ml to 5l: CAD\$0.20 / CAD\$0.10
 Beer cans & bottles ≤ 500ml: CAD\$0.10 / CAD\$0.05
 Beer cans & bottles ≥ 501ml: CAD\$0.20 / CAD\$0.10

Unredeemed deposits: Retained by Provincial Government (Provincial Treasury)

Handling Fee: CAD\$0.0405

Prince Edward Island operates a half-back deposit system on all non-refillable beverage containers. Under this system, deposits are paid on all beverage containers. While deposits on refillable containers are 100% refundable, those on non-refillable containers are only half (50%) refundable.

SYSTEM OPERATOR

Program Operator: Department of Environment, Energy and Forestry (Government Operated)

Steward: Department of Environment, Energy and Forestry

System Finance: Half-back, unredeemed deposits

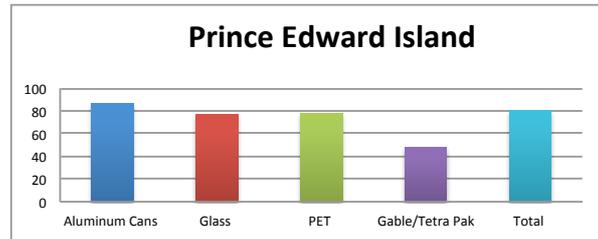
REDEMPTION SYSTEM

Return to Depot: 10 licensed depots

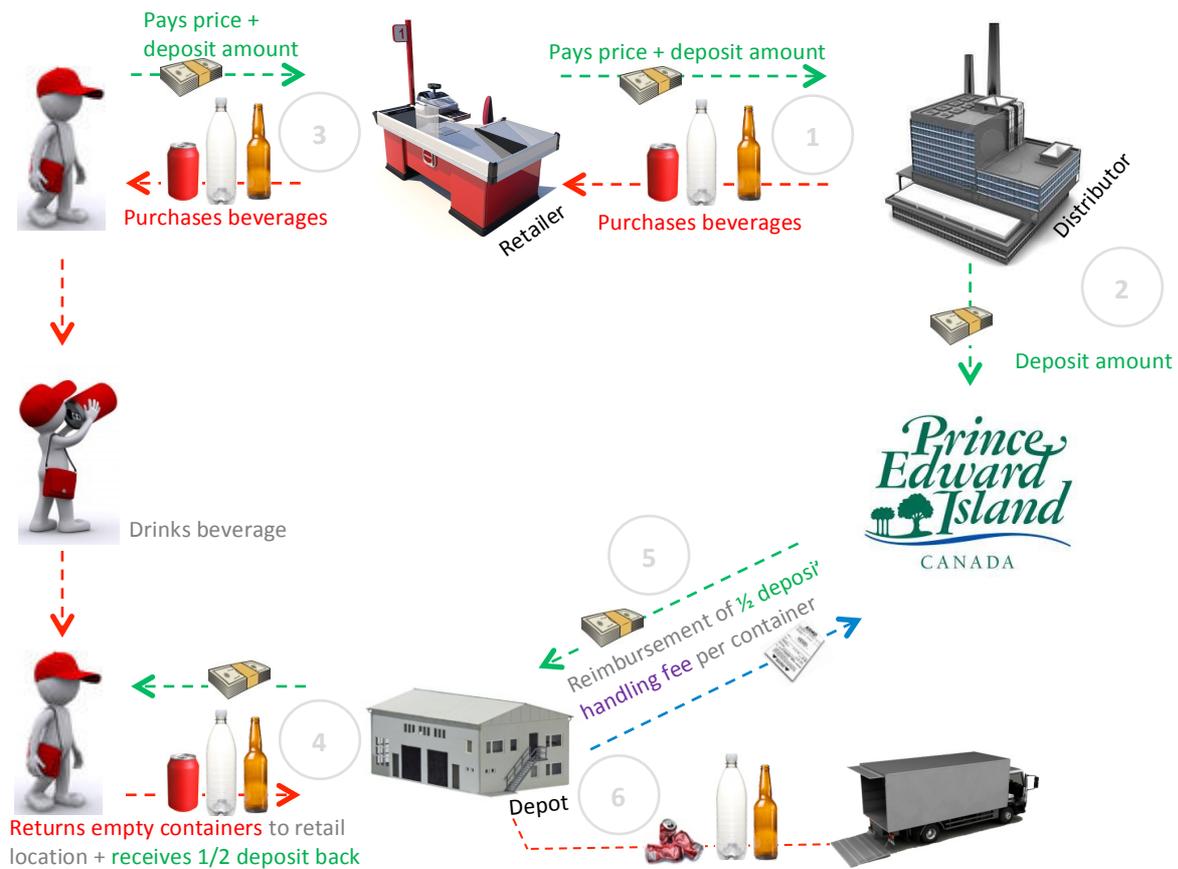
Material owner: Processors

SYSTEM RESULTS (2016-17)

Total Return Rate:	80.4%
Aluminum Can	86.9%
Glass	76.6%
PET	77.7%
Gable/Tetra Pak	47.7%



MONEY MATERIAL FLOW





QUEBEC

Population: 8.3m

Website: www.recyc-quebec.gouv.qc.ca/entreprises-organismes/mieux-gerer/consigne



MANDATE

Agreement Relating to the Consignment, Recovery & Recycling of Non-Refillable (Soft Drink/Beer) Containers	
Enacted:	1984
Implemented:	1984
Last Updated:	2014
Authority:	Recyc-Québec
Target:	75% collection target for soft drinks / 75% collection target for beer

PROGRAM SCOPE

Material:	Plastics, metal (aluminum/tinplate), bimetal, glass (all containers for accepted beverages)
Beverage type:	All non-refillable beer and carbonated soft drinks (all beverages that contain water with essence of flavour)
Excluded:	Energy drinks; water; juice; wine; spirits; milk

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Soft drink containers & beer cans ≤ 450ml: CAD\$0.05 Non-refillable beer > 450ml: CAD\$0.20
Unredeemed deposits:	Retained by Recyc-Québec & distributors/bottlers (finances handling fee)
Handling Fee:	CAD\$0.02

SYSTEM OPERATOR

Program Operator:	Beverage Industry Beer Industry
Steward:	Boissons Gazeuses Environnement (BGE) (Non-alcoholic) Québec Brewers Association (QBA) (Beer)

In 1990, the Québec government established the Société Québécoise de récupération et de recyclage, giving the Société (Recyc-Québec) regulatory authority for the program. Recyc-Québec is responsible for the promotion and development of reduction, reuse, recovery, and recycling of containers and packaging in Québec. Its main responsibility is program oversight.

In 1999, BGE—a non-profit organization established by the Québec soft drink industry—took over Recyc-Québec’s responsibility for collecting non-refillable soft drink containers. Brewers are responsible for running the system for beer bottles and cans.

System Finance: Material revenue, unredeemed deposits, Handling Fee

REDEMPTION SYSTEM

Return-to-Retail:

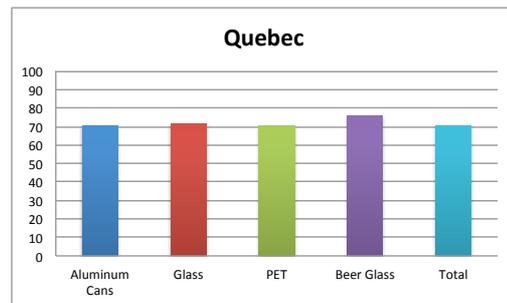
Approx. 10,000 retail locations. By law, anyone that sells these containers must take them back. Collection system is 70% automated/30% manual.

Material owner:

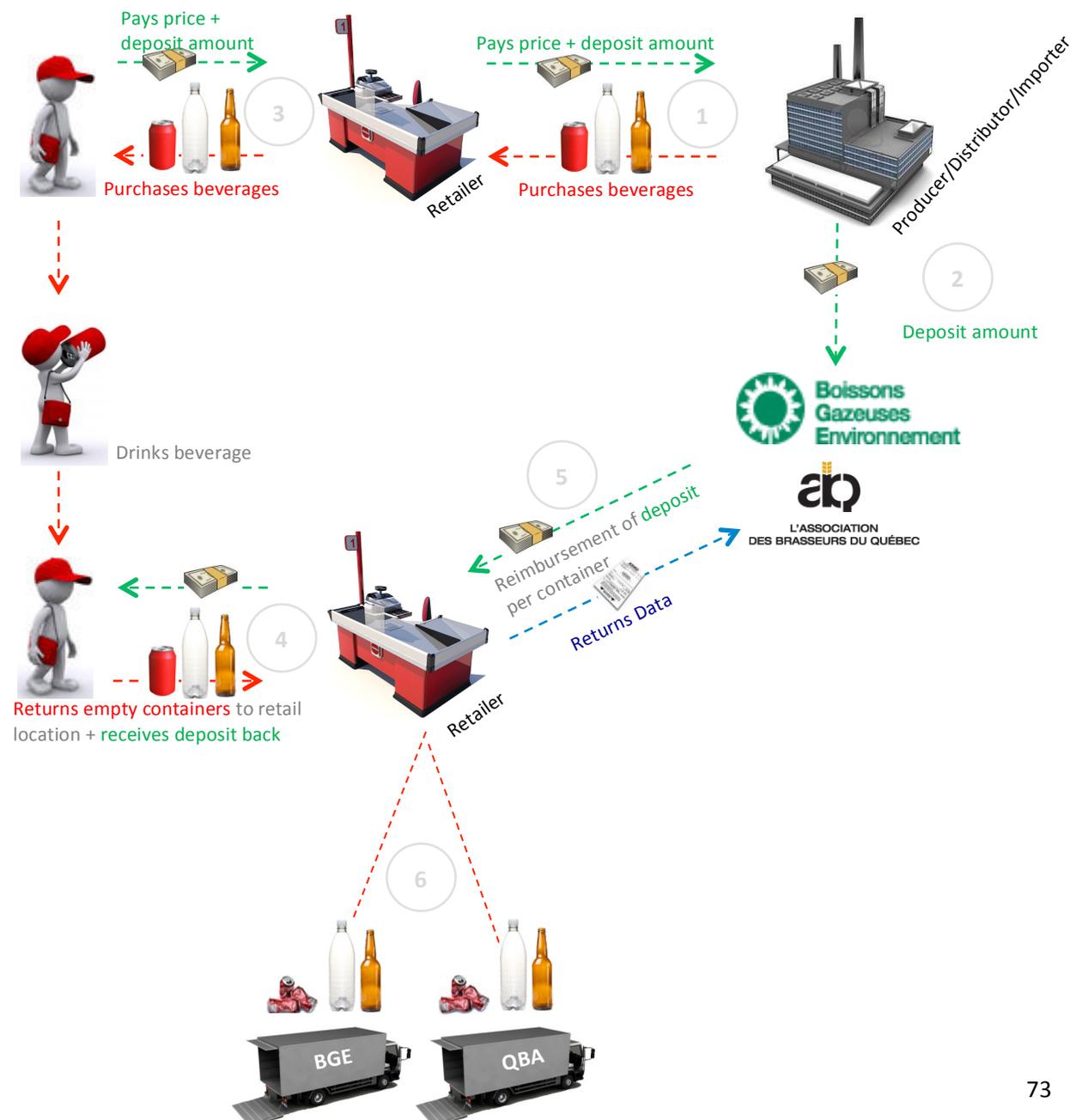
Producer/Distributor/Importer

SYSTEM RESULTS (2016)

Total Return Rate:	70.6%
Aluminum Cans	70.6%
Glass	71.4%
PET	70.4%
Beer Glass	76.0%



MONEY MATERIAL FLOW





SASKATCHEWAN



Population: 1.2m

Website: www.sarc.ca/pages/deposit-beverage-containers

MANDATE

Beverage Container Collection and Recycling Program

Enacted:	1978
Implemented:	1988
Last Updated:	1999
Authority:	Ministry of Environment

PROGRAM SCOPE

Material:	Plastics, metal (aluminum/tinplate), bimetal, glass, gable top, Tetra Pak, all beverage containers
Beverage type:	All ready-to-serve drinks (non-alcoholic beverages, wine, spirits, beer in non-refillable containers)
Excluded:	Frozen juice concentrates, baby juices, foil pouches, meal replacements, dietary supplements

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Metal < 1l: CAD\$0.10 Metal ≥ 1l: CAD\$0.25 Glass ≤ 300ml: CAD\$0.10 Glass 301ml to 999ml: CAD\$0.20 Glass ≥ 1l: CAD\$0.40 Plastic < 1l: CAD\$0.10 Plastic ≥ 1l: CAD\$0.25 Juice boxes / gable top cartons: CAD\$0.05
Unredeemed deposits:	Retained by Provincial Government
Handling Fee:	No handling fees (SARCAN receives provincial grants)
Environmental Handling Charge (EHC):	Aseptic CAD\$0.03, polycoat CAD\$0.03, metal CAD\$0.05, plastic CAD\$0.06, non-refillable glass CAD\$0.07

SYSTEM OPERATOR

Program Operator: SARCAN Recycling

The Saskatchewan Association of Rehabilitation Centres (SARC) has a recycling division known as SARCAN Recycling, which administers the program. SARCAN operates under contract to the Saskatchewan Ministry of Environment.

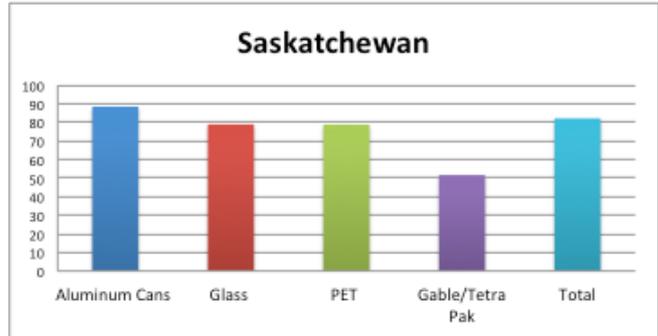
System Finance: Material revenue, unredeemed deposits, provincial grants, Environmental Handling Charge

REDEMPTION SYSTEM

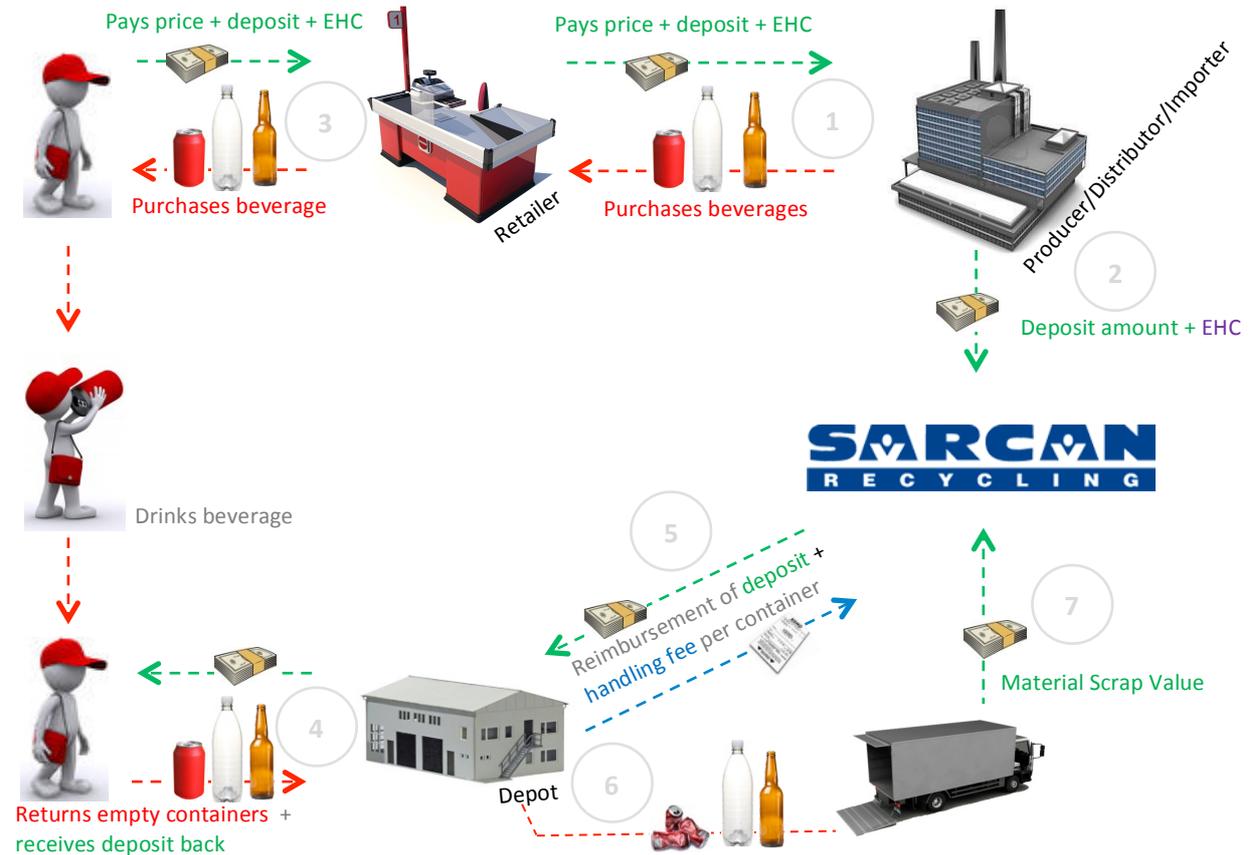
Return to Depot:	72 SARCAN licensed depots
Material owner:	SARCAN

SYSTEM RESULTS (2016)

Total Return Rate:	82.1%
Aluminum Can	88.4%
Glass	78.9%
PET	78.8%
Gable/Tetra Pak	51.6%



MONEY MATERIAL FLOW





YUKON

Population: 0.03m

Website: www.community.gov.yk.ca/cd/recycling.html



MANDATE

Beverage Container Regulation

Enacted:	1991
Implemented:	1992
Last Updated:	2009
Authority:	Environment Yukon

PROGRAM SCOPE

Material:	Plastics, metal (aluminum/tinplate), bimetal, glass, gable top, Tetra Pak, all beverage containers
Beverage type:	All ready-to-drink beverages (non-alcoholic beverages, wine, spirits, non-refillable beer, milk and milk substitutes)
Excluded:	Canned coconut milk; canned condensed or evaporated milk; canned whipping cream; powdered drink crystals; juice concentrates; liquid meal replacement; infant formula

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	Containers ≥ 750ml: CAD\$0.35 / CAD\$0.25 Containers < 750ml: CAD\$0.10 / CAD\$0.05 Milk and milk substitutes (all sizes): CAD\$0.10 / CAD\$0.05
Unredeemed deposits:	Retained by government
Handling Fee:	CAD\$0.025 – CAD\$0.075
Recycling Fund Fee (RFF):	CAD\$0.05 – CAD\$0.10
Processing Fee (PF):	Paid to processing facilities for each container received (N/A)

When purchasing beverages, the consumer pays a deposit, which includes a refundable portion and a non-refundable RFF. Consumers receive a refund when they return the empty containers to a registered recycling depot. The non-refundable RFF is collected by the retailer and goes into a recycling fund that is administered by the government. Unredeemed deposits also go into this fund.

SYSTEM OPERATOR

Program Operator:	Department of Community Services (Yukon Government)
System Finance:	Recycling Fund Fee / Unredeemed deposits / Grants

REDEMPTION SYSTEM

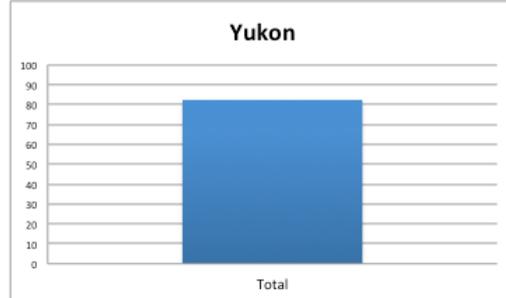
Return to Depot: 22 registered depots

Material owner: Processors

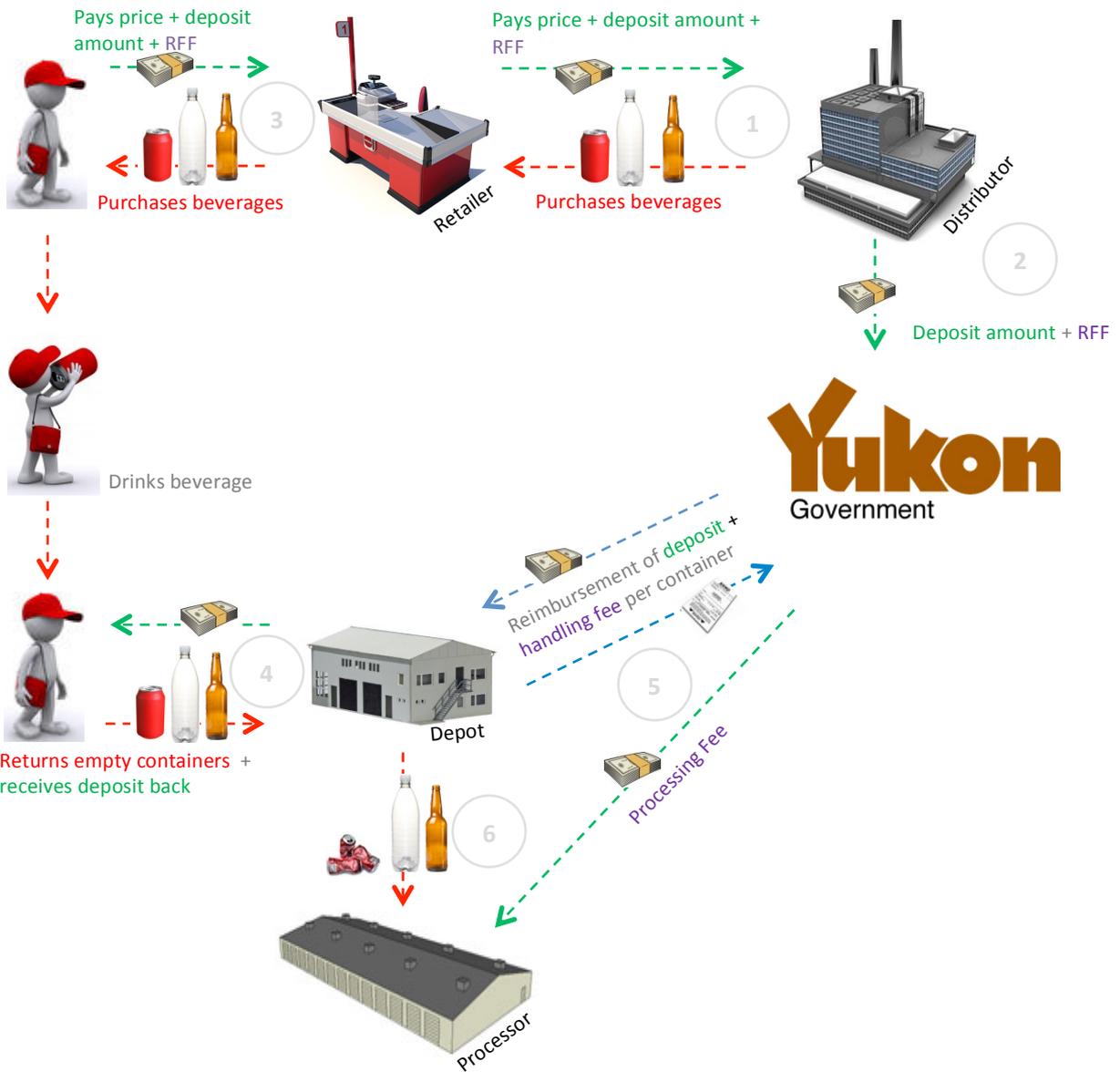
SYSTEM RESULTS (2014-15)

Total Return Rate: 82.3%

No breakdown of recycling rates by material is available due to lack of data.



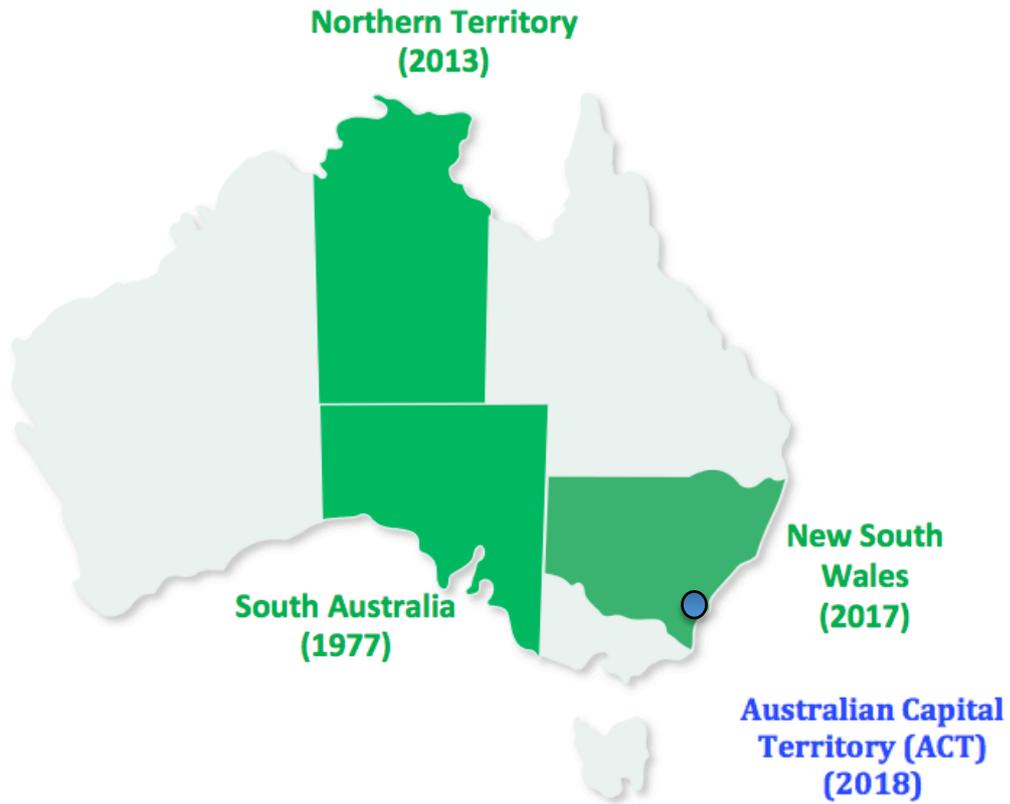
MONEY MATERIAL FLOW





AUSTRALIA

(10.1m have access to DRS)



State	Population	Mandate Enacted	Mandate Implemented
1. Australian Capital Territory (ACT)	0.4m	2017	2018
2. New South Wales	7.8m	2016	2017
3. Northern Territory	0.2m	2011	2012
4. South Australia	1.7m	1975	1977



AUSTRALIAN CAPITAL TERRITORY (ACT)



Population: 401,737

Website: www.actcds.com.au

MANDATE

Waste Management and Resource Recovery Amendment Act 2017

Additional legislative material: <https://www.tccs.act.gov.au/recycling-and-waste/drop-off/recycling/container-deposit-scheme/documents>

Enacted:	2017
Implemented:	June 30, 2018
Authority:	Transport Canberra and City Services

PROGRAM SCOPE

Material:	<i>Containers 150ml-3L:</i> aluminum, glass, HDPE, liquid paperboard, PET, steel
Beverage type:	All
Excluded:	Wine; spirits; cordial and plain milk (or milk substitute) containers; flavored milk containers of $\geq 1L$; pure fruit or vegetable juice containers of $\geq 1L$; glass containers for wine and spirits; casks for wine or water $\geq 1L$; sachets for wine of $\geq 250ml$; containers for cordials and concentrated fruit/vegetable juices; registered health tonics

DEPOSITS AND FEES

Deposit:	AUD\$0.10 (€0.07, USD\$0.08)
Unredeemed deposits:	Remains with the beverage industry
Handling Fee:	For every container returned through the collection infrastructure, the Network Operator receives a fee to cover the costs for the collection points, the logistics, counting centers and administration, as well as adding a certain margin. The value of this fee has not been made public. Producer costs per container for the first three months of operation, including the 10cent deposit (\$A0.10), based on overall recovery of between 70-72%, are \$A0.0994, \$A0.10192 and \$A0.10455

SYSTEM OPERATOR

Clearing System:	Hybrid – System Coordinator invoices the individual fillers, beverage producers, and importers
System Operator & Administrator:	Exchange for Change is the System Coordinator, responsible for financial management and ensuring that the scheme meets its

statewide access and recovery targets. The Network Operator is Re Turn-It, which will set up and run the collection points, including utilising their existing MRF as a consolidation and collection point.

System Finance:

Industry fee and material value

REDEMPTION SYSTEM

Return to Depot/social enterprise/MRF: Collection network is predominantly manual depot based with a government preference for 'face-to-face' drop off facilities, replicating the Sth Australian scheme; as well as charity sector shop front drop offs and other social enterprise involvement. An additional three automated sites across the territory are also expected over time. Kerbside redemption will also be possible in which case the consumer forfeits the deposit and this is acquired by the MRF.

Material owner:

Network Operator

SYSTEM RESULTS (2018)

No data available at this time

MONEY MATERIAL FLOW

Not available at this time



NEW SOUTH WALES (NSW)



Population: 7.8m

Website:

www.epa.nsw.gov.au/your-environment/recycling-and-reuse/return-and-earn; www.returnandearn.org.au

MANDATE

Waste Avoidance and Resource Recovery Amendment (Container Deposit Scheme) Act

Waste Avoidance and Resource Recovery (Container Deposit Scheme) Regulation

Enacted: 2016

Implemented: December 1, 2017

Authority: Environment Protection Authority

PROGRAM SCOPE

Material: *Containers 150ml-3L: aluminum, glass, HDPE, liquid paperboard, PET, steel*

Beverage type: All

Excluded: Wine; spirits; cordial and plain milk (or milk substitute) containers; flavored milk containers of $\geq 1L$; pure fruit or vegetable juice containers of $\geq 1L$; glass containers for wine and spirits; casks for wine or water $\geq 1L$; sachets for wine of $\geq 250ml$; containers for cordials and concentrated fruit/vegetable juices; registered health tonics

DEPOSITS AND FEES

Deposit: AUD\$0.10 (€0.07, USD\$0.08)

Unredeemed deposits: Remains with the beverage industry

Handling Fee: For every container returned through the collection infrastructure, the Network Operator receives a fee to cover the costs for the collection points, the logistics, counting centers and administration, as well as adding a certain margin

SYSTEM OPERATOR

Clearing System: Hybrid – System Coordinator invoices the individual fillers, beverage producers, and importers

System Operator & Administrator: Exchange for Change is the System Coordinator, responsible for financial management and ensuring that the scheme meets its statewide access and recovery targets. The Network Operator is TOMRA Cleanaway, which will set up and run the collection points.

System Finance: Industry fee and material value

REDEMPTION SYSTEM

Return to Depot/R2R/MRF:

There are 3 types of collection points: reverse vending machines (RVMs); over-the-counter collection points, and automated depots. There will be more than 500 Return and Earn collection points across NSW, including more than 800 RVMs. More than half the collection points will be automated.

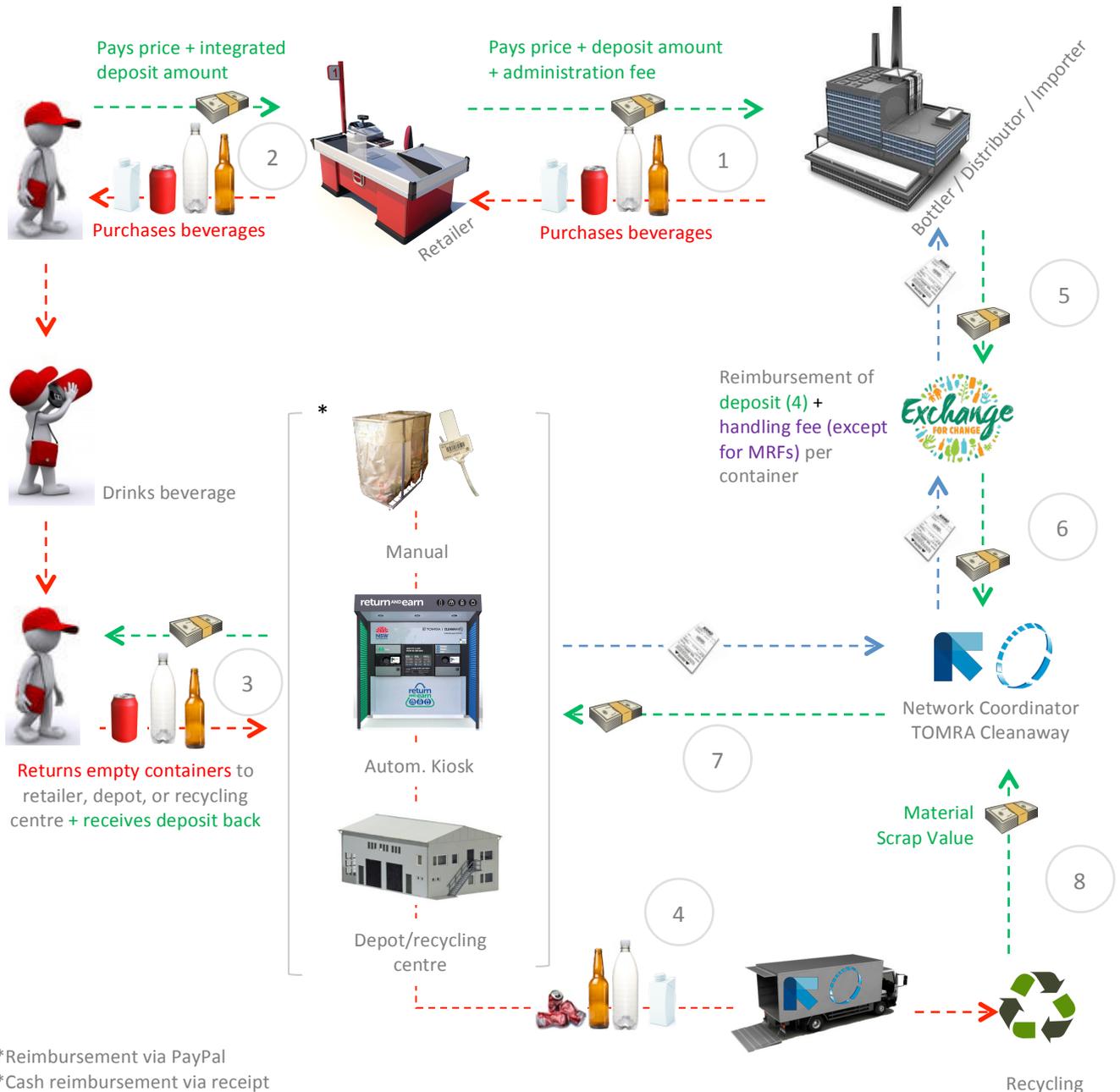
Material owner:

Network Operator

SYSTEM RESULTS (2017)

No data available at this time

MONEY MATERIAL FLOW



*Reimbursement via PayPal
*Cash reimbursement via receipt



NORTHERN TERRITORY



Population: 0.2m

Website: www.ntepa.nt.gov.au/container-deposits

MANDATE

Environment Protection (Beverage Containers and Plastic Bags) Act	
Enacted:	2011
Implemented:	2012
Updated:	2014
Authority:	Environment Protection Authority

PROGRAM SCOPE

Material:	All
Beverage type:	<p><i>Containers <1l:</i> flavoured milk; pure fruit/vegetable juice; water in aseptic packs/casks; some wine-based beverages</p> <p><i>Containers ≤3l:</i> carbonated soft drinks; non-carbonated soft drinks (including but not limited to: fruit/juice based drinks containing < 90% juice, sports drinks, vitamin drinks, energy drinks, ready-to-drink cordials), water that is not in an aseptic pack/cask; beer/ales/stouts/cider; spirit-based beverages; some wine-based beverages</p>
Excluded:	Unflavored milk; soy milk; cordial bottles (undiluted); concentrated fruit and/or vegetable juice intended to be diluted before consumption; still or sparkling wine (in glass)

DEPOSITS AND FEES

Deposit:	AUD\$0.10 (€0.07, USD\$0.08)
Unredeemed deposits:	Remains with producer/filler
Handling Fee:	Negotiated. Depots may be compensated for “reasonable costs” related to handling the containers by the CDS coordinator to whom they deliver the container.

SYSTEM OPERATOR

Clearing System:	Decentralized
System Operator & Administrator:	Beverage industry and private operators
System Finance:	Administration Fee/Unredeemed deposits/Material scrap

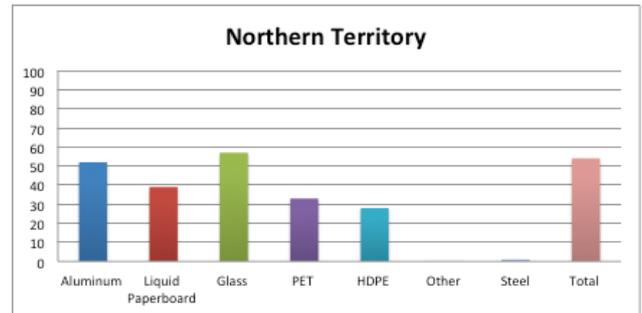
REDEMPTION SYSTEM

Return to Depot:	11 authorized collection depots, one of which ended operations in November 2014
Material owner:	CDS Coordinators

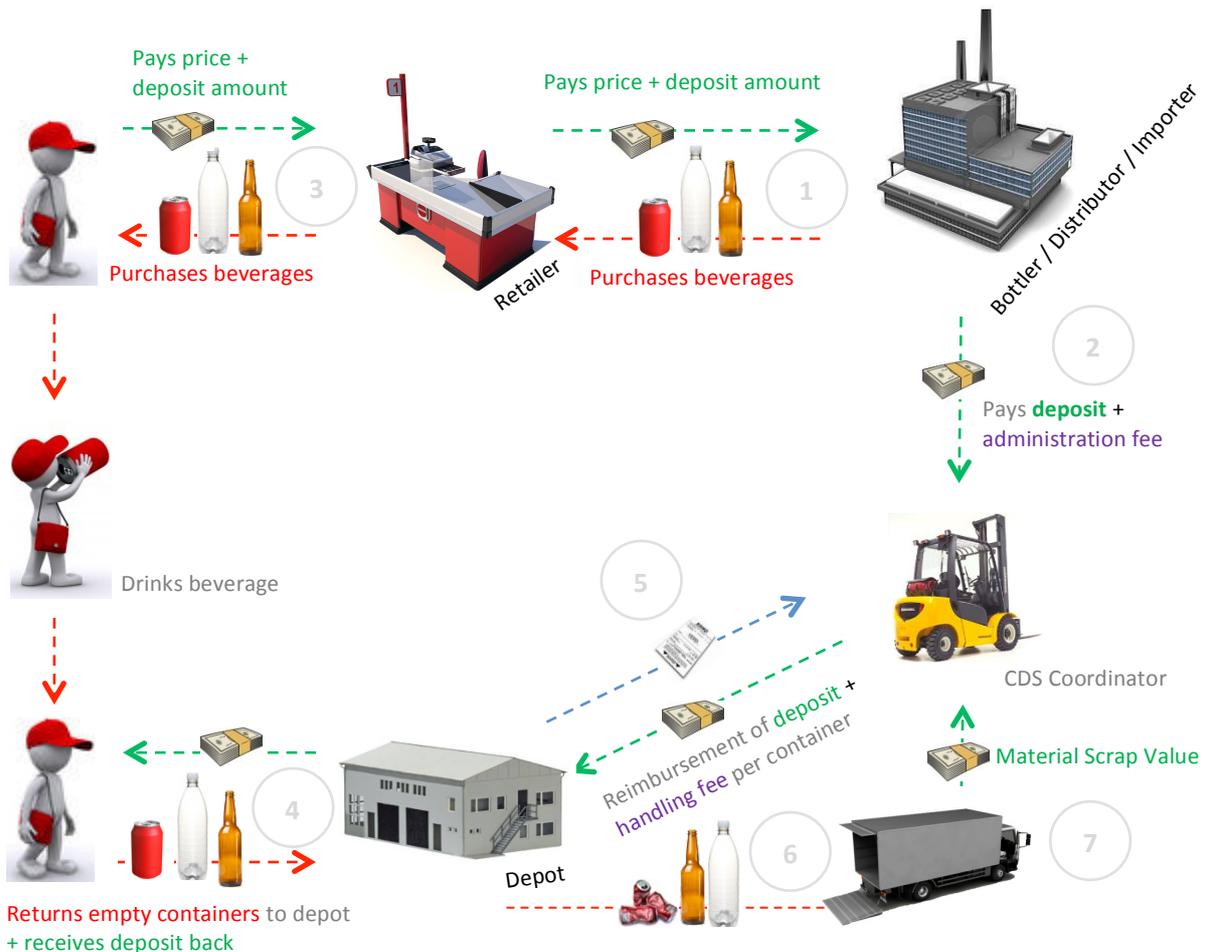
CDS coordinators coordinate the activities of those involved in the deposit return scheme and have arrangements with depots across the Territory. They coordinate the return of empty containers from collection depots, reimburse depots for refunds paid to consumers, and pay depots a handling fee, sell the containers to material recyclers and processors for recycling, reuse or recovery of energy. CDS coordinators, in turn, claim the deposit and handling fee from the beverage filler. As of 2017, four CDS coordinators are approved to operate under the CDS: Envirobank NT Pty Ltd.; Marine Shores Pty Ltd.; NT Coordinators Pty Ltd.; and Can-Recycling (SA) Pty Ltd. trading as Statewide Recycling.

SYSTEM RESULTS (2016-17)

Total Return Rate:	48%
Aluminum	52%
Liquid Paperboard	39%
Glass	57%
PET	33%
HDPE	28%
Steel	1%
Other	0%



MONEY MATERIAL FLOW





SOUTH AUSTRALIA



Population: 1.7m

Website: www.epa.sa.gov.au/environmental_info/container_deposit

MANDATE

Beverage Container Act

Enacted:	1975
Implemented:	1977
Authority:	Environmental Protection Agency

PROGRAM SCOPE

Material:	Glass, aluminum, HDPE, PET, liquid paperboard
Beverage type:	<p><i>Container types < 1l:</i> Water in aseptic packs/casks; pure fruit/vegetable juice (containing at least 90% fruit juice and/or vegetable juice); flavoured milk; wine in aseptic packs/casks; flavoured alcoholic beverages with a wine base in aseptic packs/casks</p> <p><i>Container types ≤ 3l:</i> Carbonated soft drinks; non-carbonated soft drinks, water (plain, still or carbonated); Beers/ales/stout, wine based beverages (wine cooler and similar beverages), spirit-based beverages, alcoholic beverages (derived from the fermentation of fruit)</p>
Excluded:	Wine in glass bottles; plain, unflavoured milk; concentrated fruit and/or vegetable juice intended to be diluted before consumption; cordial (undiluted)

DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer
Deposit value:	AUD\$0.10 (€0.07, USD\$0.08)
Unredeemed deposits:	Remains with producer/filler
Handling Fee:	Negotiated between producer/super collector

SYSTEM OPERATOR

Clearing System:	Decentralized
System Operator and Administrator:	Beverage Industry
System Finance:	Administration Fee/Unredeemed deposits/Material scrap

REDEMPTION SYSTEM

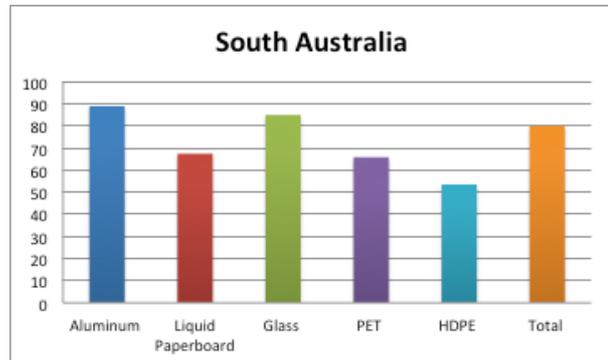
Return to Depot:	132 licensed depots
Material owner:	Super Collectors

The various container types and brands are sorted and prepared at the collection depots across the state for processing by the 'super collectors'. The super collectors act as agents for the beverage industry. They

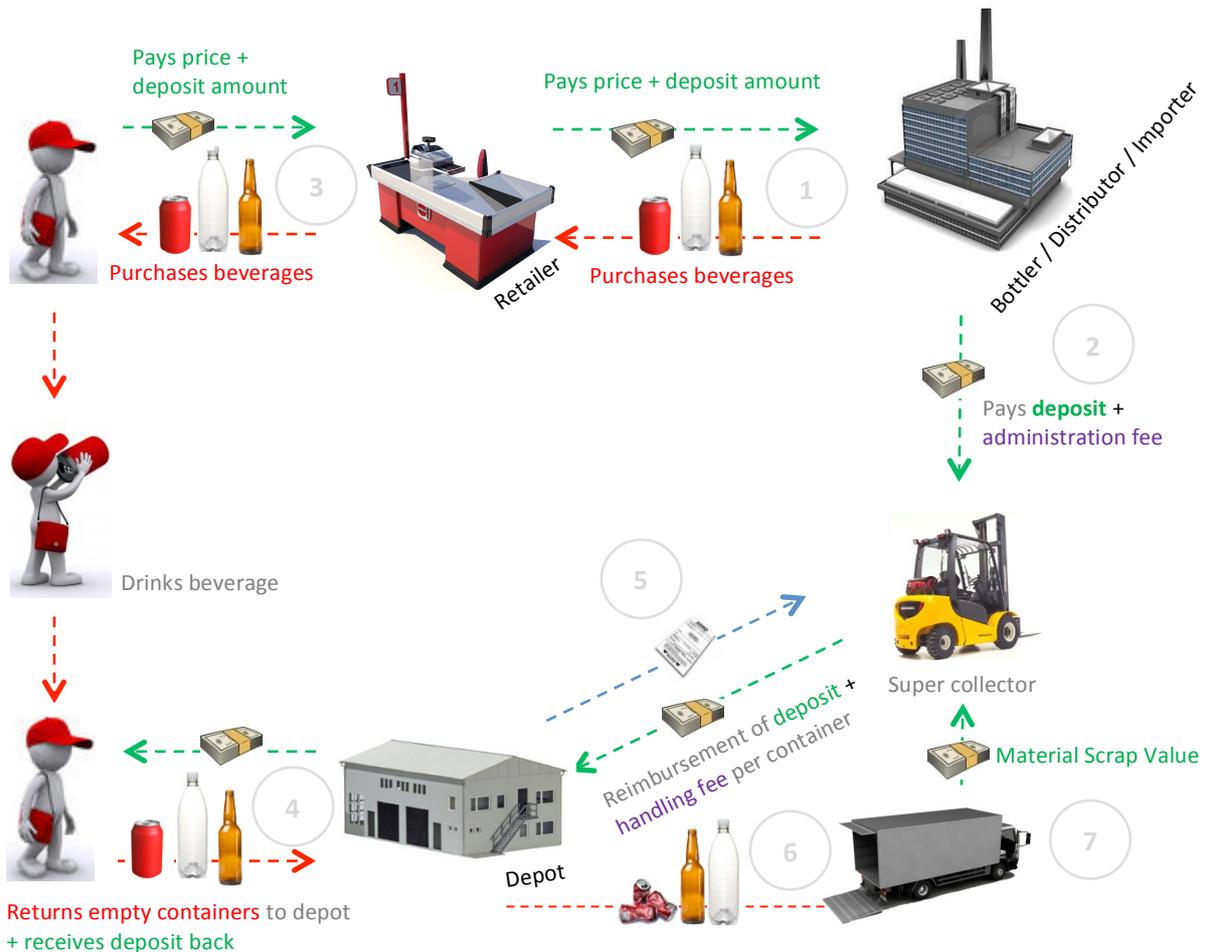
coordinate the return of empty containers from collection depots, reimburse depots for refunds paid to consumers, and pay depots a handling fee, sell the containers to material recyclers and processors for recycling, reuse or recovery of energy. The super collector in turn claims the deposit and handling fee from the beverage filler.

SYSTEM RESULTS (2016-17)

Total Return Rate:	79.9%
Aluminum	88.8%
Liquid Paperboard	67.4%
Glass	84.9%
PET	65.8%
HDPE	53.5%



MONEY MATERIAL FLOW





ISRAEL



Population: 7.9m

Website: www.ela.org.il

MANDATE

Israel Deposit Law on Beverage Containers

Enacted:	1999
Implemented:	2001
Last Updated:	2010 - The new law set a collection target of 77% for deposit containers, and prohibits manufacturers from applying for exemption from meeting the targets.
Authority:	Ministry of Environment
Target:	77% collection

PROGRAM SCOPE

Material:	Containers over 100ml and under 1.5l: PET, aluminum, metal, glass
Beverage type:	All beverages
Excluded:	Dairy products

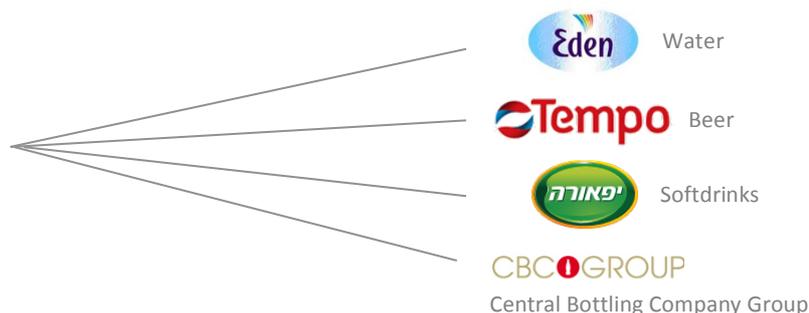
DEPOSITS AND FEES

Deposit:	Initiated by Producer/Distributor/Importer)
Deposit value:	0.3 ILS (€0.07, USD\$0.08)
Unredeemed deposits:	ELA Recycling Corporation
Handling Fee:	0.07 ILS (to retail only)

SYSTEM OPERATOR

Clearing System:	Centralized
System Operator & Administrator:	ELA Recycling Corporation

ELA Recycling Corporation is a private non-profit organization owned by Israel's beverage manufacturers. Its goal is to promote, coordinate and fund selective collection, sorting and recycling of bottles and beverage containers as per law in Israel.



REDEMPTION SYSTEM

Return to Retail/Municipal
Recycling Stations:

Supermarkets and shops are obligated to take back up to 50 containers per person, per day.

Material owner:

ELA Recycling Corporation

SYSTEM RESULTS (2015)

Total Return Rate:	77%
PET	77%
Glass	77%

MONEY MATERIAL FLOW





KOSRAE (FEDERATED STATES OF MICRONESIA)

Population: 0.104m

Website: N/A

MANDATE

Recycling Program Regulations

Enacted:	1991
Last Updated:	2006
Authority:	Kosrae State Government

PROGRAM SCOPE

Material:	Aluminum, plastic, glass
Beverage type:	N/A
Excluded:	N/A

DEPOSITS AND FEES

Deposit Initiator:	N/A
Deposit value:	\$0.06 (\$0.05 returned to consumer)
Unredeemed deposits:	Deposited into a Recycling Fund that is a Fund of the Treasury with the Kosrae State Government
Handling Fee:	\$0.01

SYSTEM OPERATOR

Clearing System:	N/A
System Operator & Administrator:	A private operator has been contracted to operate the scheme on behalf of the Kosrae Island Resource Management Authority (KIRMA)

REDEMPTION SYSTEM

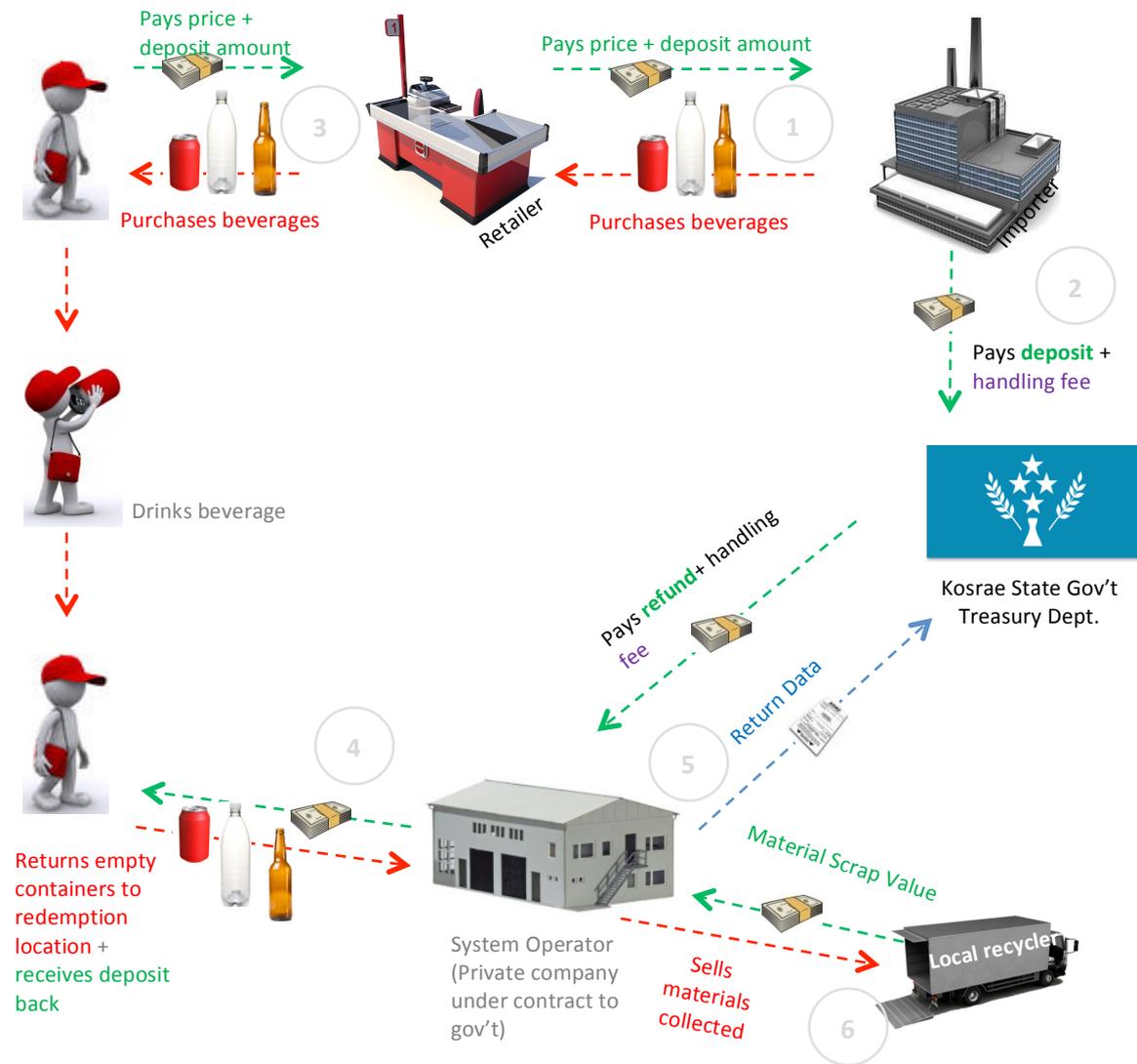
Return to Redemption Center

Material owner:	N/A
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SYSTEM RESULTS (2014)

<u>Total Return Rate:</u>	N/A
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MONEY MATERIAL FLOW





KIRIBATI

Population: 0.11m

Website: N/A

MANDATE

The Special Fund (Waste Materials Recovery) Act

Enacted: 2004

Implemented: 2005

Authority: Ministry of Environment

PROGRAM SCOPE

Material: Aluminum cans, plastic PET bottles

Beverage type: Beer, soft drink, and water

Excluded: Milk

DEPOSITS AND FEES

Deposit Initiator: N/A

Deposit value: AUD\$0.05 (€0.03, USD\$0.04) (AUD\$0.04 returned to the consumer)

Unredeemed deposits: 10% of levy moneys are retained to fund the scheme and provide recycling infrastructure

Handling Fee: AUD\$0.01 (€0.01, USD\$0.01) (retained by the Koaki Mange operator for operating costs)

SYSTEM OPERATOR

Clearing System: N/A

System Operator & Administrator: Private company under contract to government

System Finance: Unredeemed deposits , handling fees

REDEMPTION SYSTEM

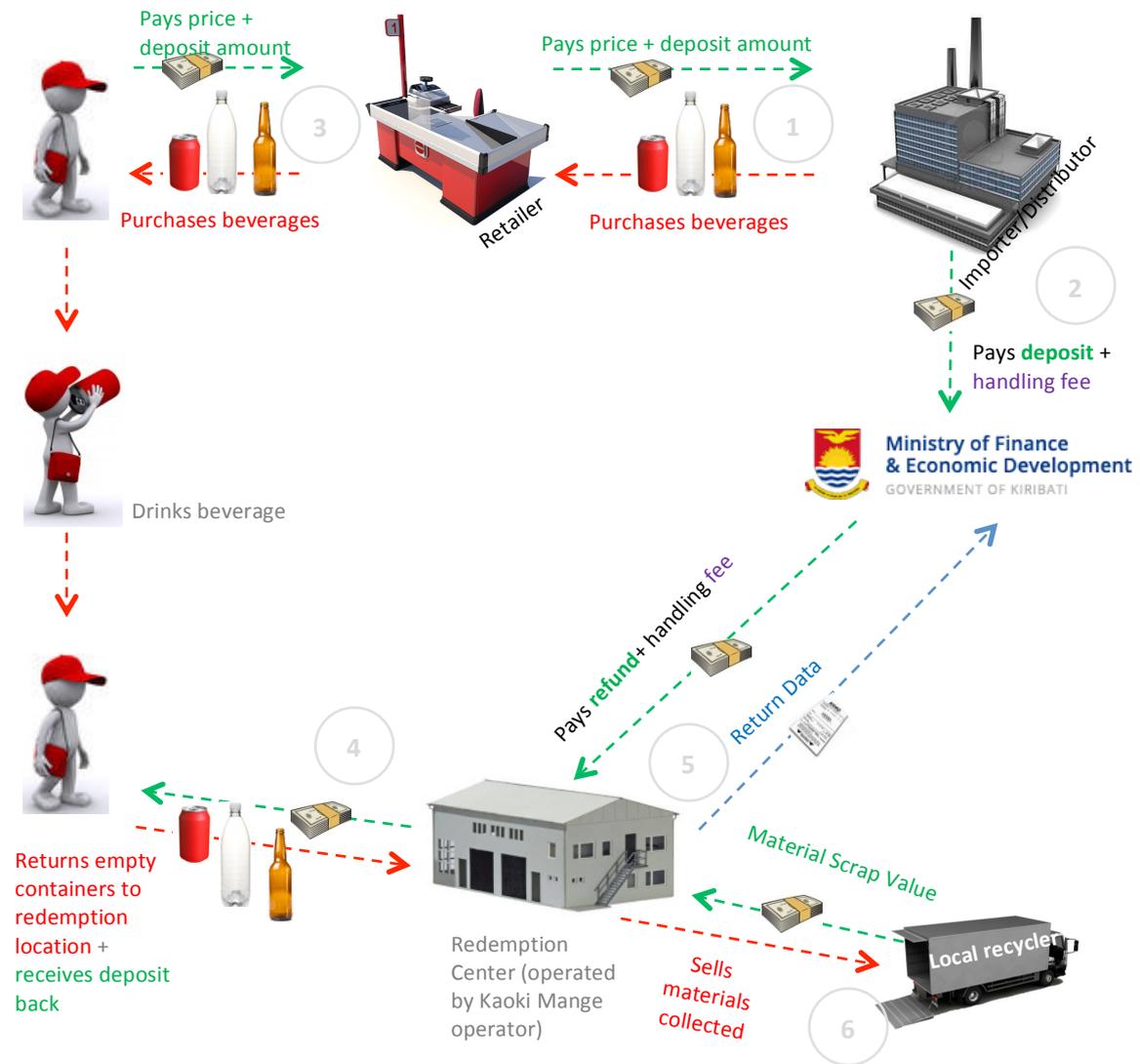
Return to Depot: Kaoki Mange operating centres

Material owner: N/A

SYSTEM RESULTS (2014)

Total Return Rate: N/A

MONEY MATERIAL FLOW





PALAU

Population: 0.021m

Website: www.kororstategov.com/swmo/beverage.html

MANDATE

The Republic of Palau Public Law No. 7-24

Enacted:	2006
Implemented:	2011
Authority:	Ministry of Public Infrastructure, Industries and Commerce & Ministry of Finance

PROGRAM SCOPE

Material:	Glass, PET, HDPE, metal
Beverage type:	<i>Container size ≤ 32 oz.:</i> Beer, ale, or other drink produced by fermenting malt; mixed spirits; mixed wine; tea and coffee drinks, regardless of dairy-derived product content; soda; non-carbonated water; all nonalcoholic drinks
Excluded:	Liquids which are: a syrup, in a concentrated form, or typically added as a minor flavoring ingredient, such as extracts; liquid which is ingested for medicinal purposes only; liquid that is designed and consumed only as a nutritional supplement and not as a beverage; products frozen at the time of sale to the consumer; products designed to be consumed in a frozen state; instant drink powders; milk and other dairy-derived products

DEPOSITS AND FEES

Deposit Initiator:	N/A
Deposit value:	\$0.10 (\$0.05 returned to consumer)
Unredeemed deposits:	N/A
Handling Fee:	\$0.025 goes to redemption center and \$0.025 to the national government for administrative costs

SYSTEM OPERATOR

Clearing System:	N/A
System Operator & Administrator:	Koror State Government

REDEMPTION SYSTEM

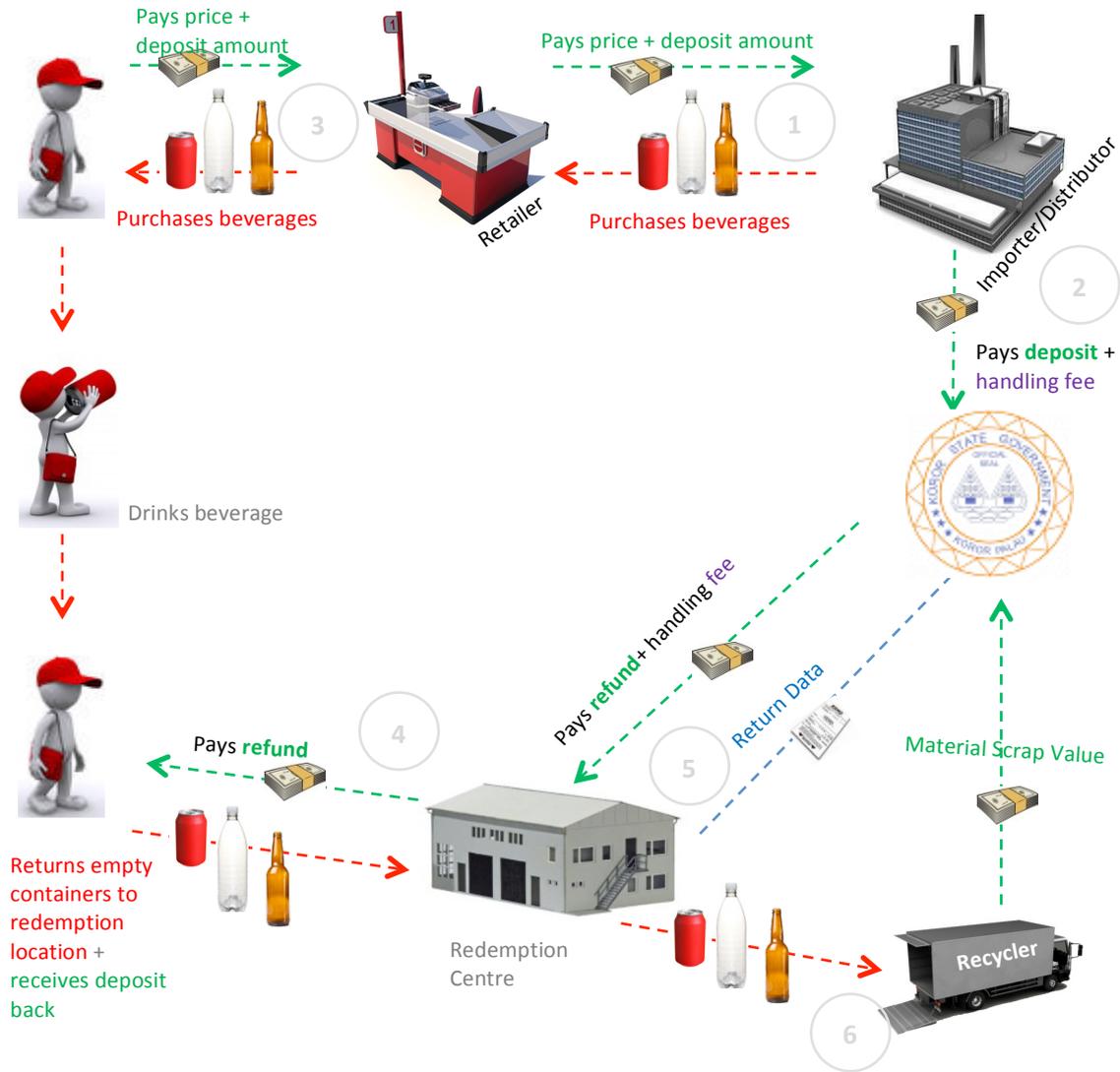
Return to Redemption Center

Material owner:	N/A
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SYSTEM RESULTS (2014)

Total Return Rate: N/A

MONEY MATERIAL FLOW





DEPOSIT SYSTEMS
FOR ONE-WAY
BEVERAGE CONTAINERS:
GLOBAL OVERVIEW



www.cmconsultinginc.com



www.reloopplatform.eu