DEPOSIT RETURN SYSTEMS (DRSs)

Position v. 1.3

Growing sustainability awareness among producers, consumers, and legislators leads many countries to introduce segregated collection and recycling schemes for beverage containers to increase recycling and reduce litter. These include deposit return systems (DRSs), also known as deposit refund systems, where the consumer pays a deposit at the point of sale and then receives a refund when the container is returned.

Existing DRSs achieve a collection rate of more than 90%. In contrast, non-deposit schemes run by packaging recovery organisations (PROs) are nowhere near as effective, which means that many EU and most non-EU markets are falling well short of regulatory recycling targets.

The Carlsberg Group believes that DRSs are the best separate collection system for beverage containers, both economically and environmentally. Whilst DRSs may differ by country, Carlsberg recommends that they meet certain common criteria:

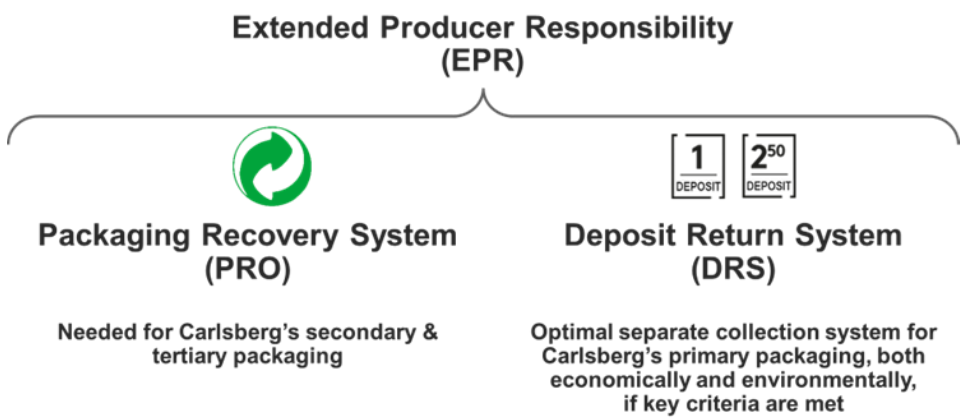
- A DRS for beverage packaging should be industry-driven and supported by authorities, retailers and consumers. All parties need to pull in the same direction by adopting basic DRS principles.
- A DRS should be not-for-profit, and unredeemed deposits should be retained in the system to offset a proportion of the cost.
- In the case of refillable glass bottles, the redemption points for the consumer should be harmonised with single-use packaging (cans, plastic and one-way glass bottles). This will make life easier for the consumer and lead to higher return rates for all beverage packaging. The logistics at the back of the store will often differ for the two packaging categories; refillable packaging will usually be managed by the producer and single-use beverage packaging by the DRS administrator.
- A DRS should be self-financing through the sale of collected materials for recycling, unredeemed deposits and, where necessary, fees for producers. The fees should be specific to the packaging type and reflect the actual cost of collection. They could also take account of the environmental impact of producing the packaging.
- All beverage packaging types included in the DRS should incur a deposit that can be redeemed in any store selling beverages in packaging of the same material, to ensure a high level of consumer convenience.
- As a minimum, a DRS should cover all types of beer, carbonated soft drinks and water. Ideally, non-carbonated drinks, with and without alcohol, should be included, and potentially also wine and spirits. It is critical that direct costs are allocated to each different packaging material with no cross-subsidisation between materials.
- A DRS should completely replace Packaging Recovery System (PRO) fees for primary beverage packaging included in the DRS.

2. EXTENDED PRODUCER RESPONSIBILITY

Extended producer responsibility (EPR) is an environmental strategy that makes producers responsible for the entire life cycle of their products.

- EPR schemes (DRS or PRO) make producers pay for the net cost of waste management (collection of consumer packaging), clean-up (litter) and awareness-raising measures.
- In the EU, the Waste Framework Directive establishes the general framework for waste management and enables member states to set up national EPR schemes. Currently, more than 30 European countries have various forms of EPR scheme implemented in their legislation.
- The EU Packaging and Packaging Waste Regulation requires member states to take action to prevent the generation of packaging waste and minimise the environmental impact of packaging. This includes the introduction of DRS schemes.
- There is a growing understanding among relevant institutions and regulators, such as the OECD, that DRSs are an effective tool for meeting EPR requirements for beverage packaging. The Carlsberg Group shares this view.

Figure 1: In Carlsberg's case, two kinds of EPR system need to be combined:



3. STRUCTURE AND SCOPE OF A DRS

A DRS involves separate collection of clean beverage packaging. This results in recycled material streams of high food-grade quality, thereby increasing overall resource efficiency and minimising environmental impacts. A DRS thus addresses some of the biggest challenges of our times, such as climate change, limited resources and litter.

A DRS provides a financial incentive for consumers to return containers that might otherwise be littered or end up in landfill. Giving these empty containers a financial value – in some countries as much as €0.40 per container – signals that they have a value for society. The size of the deposit should encourage consumers to return the container, but not adversely affect shopping behaviour. The deposit should be an add-on to the product price so that consumers do not regard the deposit as a price increase. Containers need to be viewed and treated as a resource, rather than simply as rubbish.

Figure 2: The simplicity of a DRS for the consumer

For the consumer, the system needs to be as simple as possible (see Figure 2), with a single point of return for all types of beverage packaging at any point of sale (and potentially in other public places) irrespective of where the product was purchased. The packaging can be collected either via a reverse vending machine or manually.

Deposits have been shown to reduce beverage packaging litter by up to 80%. Furthermore, segregation of bottles and cans through a DRS allows them to be recycled without contamination from other types of waste as seen with a kerbside collection scheme.

A consumer-focused DRS has three key elements:

Education: Consumer understanding, trust and satisfaction with the system need to be built to ensure acceptance.

Ease of use:
- Clear labelling and DRS logo
- High consumer availability and sufficient accessible redemption points to make container return easy
- Quick, simple and problem-free refund of deposit either in cash or settled against purchases
- Redemption area must be clean

Appropriate deposit fee: The deposit must be high enough to incentivise return, but not so high as to adversely affect sales volumes or encourage fraud. The amount should be based on thorough consumer research.

Key to the operation of a DRS is a not-for-profit administrator that is governed by producers and supported by the authorities (through a well-defined regulatory framework), retailers and consumers. Packaging suppliers, waste management companies, recyclers and any other stakeholders with commercial interests should not be part of the operation of a DRS, as their interests will push up costs for the obligated industry (beverage producers and importers).

Producers should be tasked by government with achieving a given collection rate in order to be exempt from PRO fees. It should then be left to the producers to design the most efficient system possible to ensure that DRS fees for each material are as low as possible. The DRS should be financed through the sale of collected materials for recycling, unredeemed deposits and, where necessary, fees for producers.

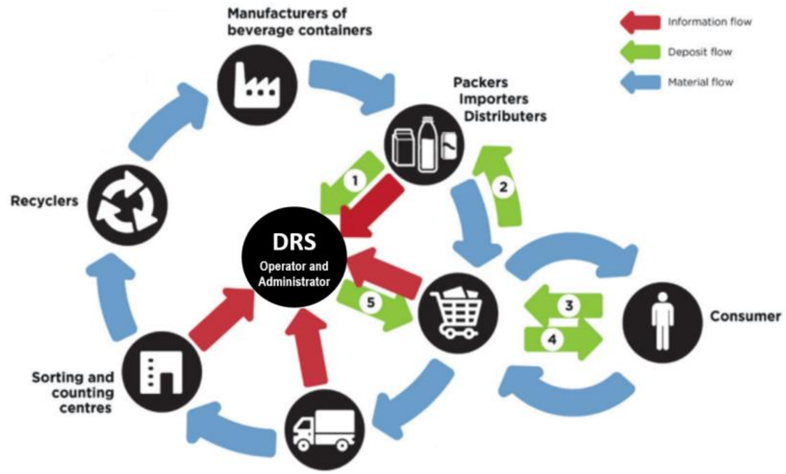
The board of the not-for-profit organisation administering the DRS could have a seat for a retail representative. Strong legislative support is important to ensure that only one transparent and efficient DRS operator services the total market with high consumer availability. Multiple DRSs create inefficiencies and confusion for consumers.

The deposit should be mandatory for all beverage producers. This means it is required by legislation and enforced by the authorities to avoid free riders, i.e. companies that place products on the market without registering or paying for the DRS. All relevant products/packaging should be registered and incur administration fees.

It is important that retailers selling the beverages (and so taking deposits) have a mandatory take-back obligation. They should be compensated, through a handling free, for the time and resources they spend collecting the packaging. In some markets, there are take-back exemptions for stores up to a certain size, with the limit ranging from 50 to 300 square metres.

Figure 3 shows the deposit, material and information flows in a DRS, and the central role of the not-for-profit operator and administrator of the system.

Figure 3: Deposit, material and information flows in a DRS



For a DRS to operate effectively, it is important that the administrator, governed by the producers, retains the revenue from selling the recyclables and any unredeemed deposits to offset the operating costs. As the beverage producers are paying for the operation of the system, they should have first refusal on collected food-grade materials based on fair-share principles. Owning the recyclables also guarantees alignment on packaging design guidelines among producers, which is essential for clean, consistent, environmentally friendly and economical recycling streams.

3. STRUCTURE AND SCOPE OF A DRS

For the consumer, there should be a single point of return for all beverage packaging covered by the DRS. The front end will be the same in all markets. The flow from the back end of the store will be the same within a given country but can differ greatly between countries due to varying logistics options for different packaging types. The most environmentally friendly and economical options need to be evaluated for each market.

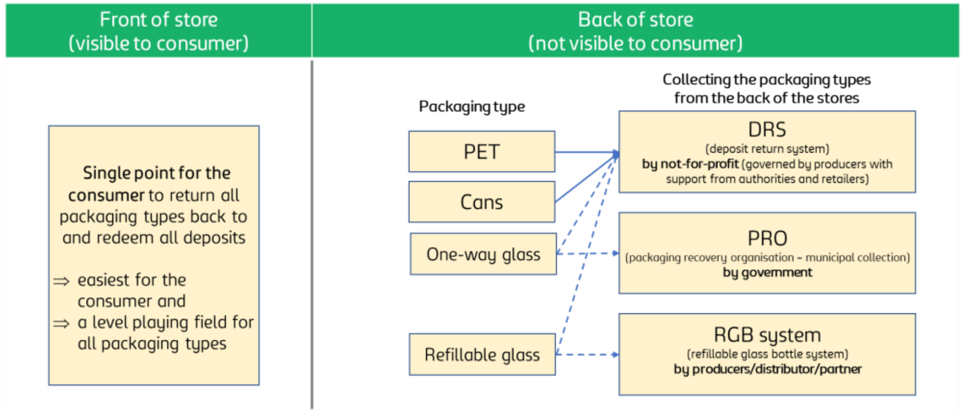
Figure 4 shows an example of how the different packaging types can be collected from the back of the store. The retailer is compensated through a fixed fee for handling each packaging type. The fee needs to be paid by the producers and should differ according to the material and the redemption method (reverse vending machine or manual).

Whether one-way glass bottles should be included in a DRS requires careful consideration. If these bottles do not carry a deposit, it might be confusing for consumers. In Figure 4, they are returned to the front of the store and then collected by the PRO (not the DRS) from the back of the store. In this case, producers using one-way bottles will pay a handling fee to the store as well as a logistics fee to the PRO.

If the return of one-way glass bottles takes place outside a DRS, it must be efficient and there must be sufficient financial and operational resources to meet collection targets. The resulting costs for collection need to be covered by producers.

Where there is already a scheme for the collection of refillable glass bottles (RGBs) from off-trade outlets before the introduction of the DRS, it is essential that these bottles can be returned at the same harmonised redemption point and in the same way as single-use beverage packaging. This makes the system easier for retailers and more convenient for consumers.

Figure 4: Example of DRS collection of packaging types from back of store



Carlsberg generally supports a single DRS with full national market coverage for PET bottles, metal cans, one-way glass bottles and refillable glass bottles. The system should create a level playing field with no competitive advantages to be obtained by any producer, irrespective of beverage category or producer size. National coverage means high consumer availability and the highest collection rates. Beverages covered by the DRS should be beer, cider, other low-alcohol beverages, carbonated and non-carbonated soft drinks, and water.

Operating a DRS entails costs. The main cost is the handling fee paid to retailers. Other costs include bags, logistics, sorting, baling, counting, administration and marketing.

A DRS has three revenue streams to cover its operating costs:

1. Selling collected materials for recycling
2. Unredeemed deposits (excluding VAT)
3. Industry fee paid by producers for each packaging unit by material, based on no cross-subsidisation of materials.

The industry fee should be specific to each type of packaging and reflect only the direct cost of collecting and recycling the packaging. If packaging has properties that reduce its value/recyclability (e.g. if a PET bottle has a PVC sleeve), this will result in a higher fee (and reduced revenue) for that packaging type.

The general principle is that each packaging type should cover its own direct costs, including the handling fee paid to retailers. For example, it is less work for retailers to crush PET bottles through a reverse vending machine than it is to store one-way glass bottles, so the handling fee for the latter will be higher. Equal treatment of suppliers and packaging types is a fundamental principle of any DRS, which means that fees must be transparently calculated and not negotiated.

When establishing a DRS, the largest cost driver is the handling fee for retailers, and calculating a fair fee is one of the most contentious issues. It should be calculated rather than negotiated (in some markets it is determined by legislation). It should be based on the direct cost per unit for the redemption point. The fee model should be agreed with the retail trade, including what is covered, how data are obtained, frequency of fee adjustments and approval procedures.

In a cost-effective DRS, the industry fee paid by the producer may even be zero, depending on the value of the material collected. Some countries with a DRS for aluminium cans, including Norway, Sweden, Latvia and Denmark, already have zero or even negative fees for the producer because the value of post-consumer aluminium is so high.

DRS funding falls into two categories:

- Retailers pay for the reverse vending machines but recoup this over their lifetime, including interest for the years of depreciation, through the handling fee they receive.
- The operation of the DRS is funded through guarantees from the beverage industry or an external financial institution. The financial risk is almost zero, as every packaging container sold generates an extra fee that goes towards repaying the initial funding. It is preferable to establish the DRS with a minimum of share capital to reduce the amount of non-performing cash tied up in it.

In general, the DRS administrator should be established as a not-for-profit incorporated company (depending on local legislation). The obligated industry, beverage producers and importers, should have controlling shareholding (exceeding 67%), preferably through their trade associations to avoid any special category or company interests.

5. IMPLEMENTING A DRS

Once a market decides to move from DRS discussions/advocacy to implementation, organising and aligning the right stakeholders is a critical first step. This includes:

- Building and formalising a strong industry coalition that agrees on fundamental DRS principles. The coalition should represent the obligated industry via its trade associations.
- Establishing a steering committee with representatives from top-level national management of the beverage producers.
- Putting in place a project group with project management experience and a clear mandate to design and prepare the DRS for that country.

NB: This process is more time-consuming than might be expected. The level of planning required is complex, and the details must be carefully assessed at every stage.

The importance of establishing a broad and aligned industry coalition should not be underestimated. The industry must present a strong united front with consistent messaging and representation when engaging with stakeholders such as retailers and relevant authorities.

A realistic and robust DRS implementation plan should then be developed and endorsed by the industry coalition. As each DRS needs to be tailored to the local market, local data and input are crucial.

The plan should include the following key elements:

- Agreement on legal set-up, including governance
- Arrangements for initial funding and ongoing financing
- DRS system design
- Operation and equipment plan
- Labelling requirements
- Collection plant location(s) and logistics infrastructure
- Communication/marketing and IT system and applications

A business plan should also be developed with full costings. This is critical for the funding and financing process.

In most markets, a DRS operating licence will be required. Obtaining this licence demonstrates that the founding organisation is capable and has a functional and operational business plan in place. It also demonstrates an understanding of the requirements set by the relevant authorities and an ability to meet them.

Internal preparations by producers are critical for a successful transition and should start approximately 18 months before the DRS goes live. It is strongly recommended that a dedicated cross-functional DRS transition organisation is established by each individual producer and chaired by its managing director. This organisation should have representatives from another market which went through DRS implementation, because internal insights can be of great benefit and should be sought/shared across markets. A properly designed and executed transition plan will optimise the operational and financial consequences and may provide a competitive advantage in the market once the DRS is rolled out.

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