



DEPOSIT RETURN SCHEMES FOR DRINKS CONTAINERS



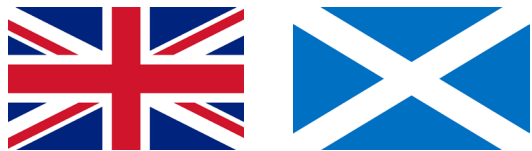
Written by

Andrew McCaffery
Heather Thomson
Kathy Illingworth

Introduction	03
Glossary	04
Definitions	05
Drinks Containers Placed on the Market	06
Drinks Container Collection Rates	07
Valpak DRS Working Group	08
DRS Models & Infrastructure Requirements	09
Next Steps	10

INTRODUCTION

England and Scotland have declared intent to introduce some form(s) of Deposit Return Scheme (DRS) on drinks packaging. The purpose being to improve the quantity and quality of recycle, reduce pollution to land and sea, change consumer behaviour and create economic and societal benefits. With this in mind, Valpak has been working with its members to assess the UK drinks market and potential DRS options, which are summarised in this report to support the current Scottish Consultation and that expected shortly for England. At the time of publication 2016 market data was available, a revised report with updated data for 2017 is anticipated to be issued by November 2018.



As a leading UK Packaging Compliance Scheme, Valpak collates a huge amount of packaging and product related data on behalf of its members. As part of this work, we have created Valpak's Environmental Product Information Centre (EPIC), a database of over 20 million products sold onto the UK market, and managed in our bespoke software. Our largest comprehensive

dataset relates to the UK grocery retail market, where we hold packaging and product data relating to 55% of UK product sales

EPIC's data is based on product information collected directly from suppliers as well as information sourced internally, meaning that it holds a wide coverage of information across multiple product ranges. All data input into EPIC undergoes a rigorous checking and validation process and its accuracy has been verified by the Environment Agency.

The drinks container market data presented in this report has been developed using EPIC combined with, and verified by, wider sources and industry insight.

DRS Deposit Return System

EPIC Environmental Product Information Centre

k Thousand

m Million

OTG On the go

POM Placed on the Market

RVM Reverse Vending Machine

t Tonnes

Definitions

A deposit return scheme (DRS) sees consumers pay an up-front deposit when they buy a drink, ranging from around 5p to 25p, which is refunded to the consumer on return of the empty drinks container. This is often done through a network of 'reverse vending machines' (RVMs), where the empty drinks container is inserted and the machine returns the deposit value, with the container then being sent for recycling. These large automated RVMs are normally complemented by an extensive network of manual take back points, for example in small retailers and cafés, which bulk containers by hand and then return them to central depots for counting and financial reconciliation. Figure 1 summarises how a DRS generally works.

DRS can be 'full scope' including all drinks containers or 'targeted' on specific drinks container formats e.g. PET plastic bottles. A potential UK DRS system could target drinks containers commonly consumed and disposed 'on the go' (OTG). OTG is considered to be in a public space such as a street, station, airport, etc. Collection infrastructure for OTG packaging is lacking in the UK and the quality of material collected is poor.

OTG differs to drinks consumed 'away from home' which is defined as any consumer-type packaging disposed of outside of the home (therefore including OTG drinks packaging, but also that disposed of in offices, at events etc.).

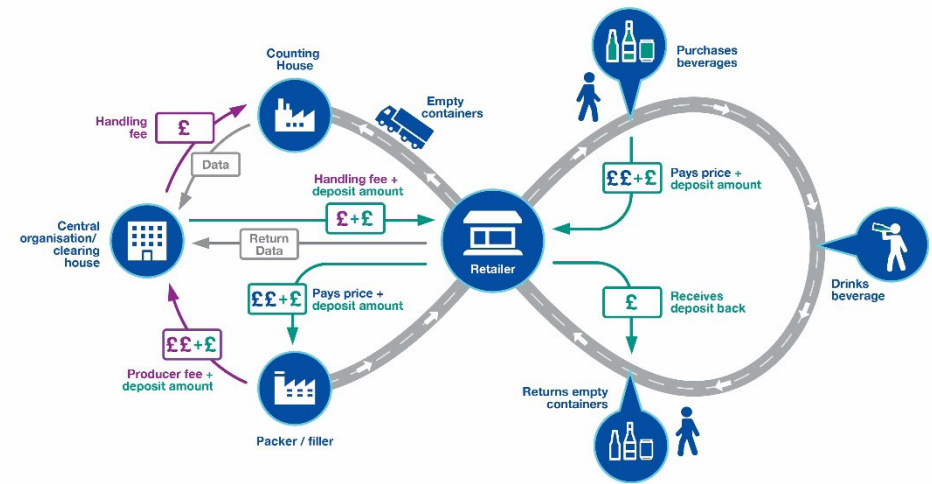


Figure 1: DRS Overview

Drinks Containers Placed on the Market (POM)

In 2016, Valpak estimates² that 2,474k tonnes of drinks containers were placed on the UK market³.

This includes drinks sold to consumers for consumption both at home and away from home (including OTG). UK market tonnages of drinks containers by key packaging materials and by UK nation (estimated using population data), are provided in Figure 2.

Packaging Type	UK	England	Scotland	Wales	Northern Ireland
Glass drinks bottles	1808k	1523k	149k	86k	51k
Plastic drinks bottles	440k	371k	36k	21k	12k
Aluminium drinks cans	129k	108k	11k	6k	4k
Steel drinks cans	41k	34k	3k	2k	1k
Cartons	57k	48k	5k	3k	2k
TOTAL	2474k	2084k	203k	117k	70k

Figure 2: UK Drinks Market POM (tonnes)

Working with Recoup, Valpak estimates that approximately 20% of plastic drinks bottles⁴ and 14% of metal drinks cans⁵ are consumed OTG.



⁴ Estimated by Valpak and Recoup using ratios of PET bottles to cans in recycling OTG collections by Local Authorities. This is being updated as part of the 'Consumption, Recycling and Disposal of On the Go Drinks Containers' project for WRAP by Valpak and Recoup.

⁵ Alupro/ICARO survey - In 1 week, 1,051 respondents consumed 7,180 drinks cans. Valpak and Recoup have established the disposal splits through grouping and dividing various categories used in the survey. This is being updated as part of the 'Consumption, Recycling and Disposal of On the Go Drinks Containers' project for WRAP by Valpak and Recoup.

² Using Valpak's EPIC database and packaging flow reports

³ Valpak and Recoup are currently working with WRAP to update these tonnages for 2017 as part of 'PlasticFlow 2025' and the 'Consumption, Recycling and Disposal of On the Go Drinks Containers' projects. It is anticipated that results from these will be available in October/November 2018.

In 2016, Valpak estimates that 70% of all drinks containers, by weight, were collected for recycling. Of those consumed OTG, only around 3% of plastic and metal drinks containers⁶ are estimated to have been collected for recycling⁷.

Using a combination of Valpak POM data, PackFlow reports and industry estimates, the collection rates for each of the key packaging materials are presented in Figure 3 and range from 37% for cartons to 74% for consumer plastic bottles.

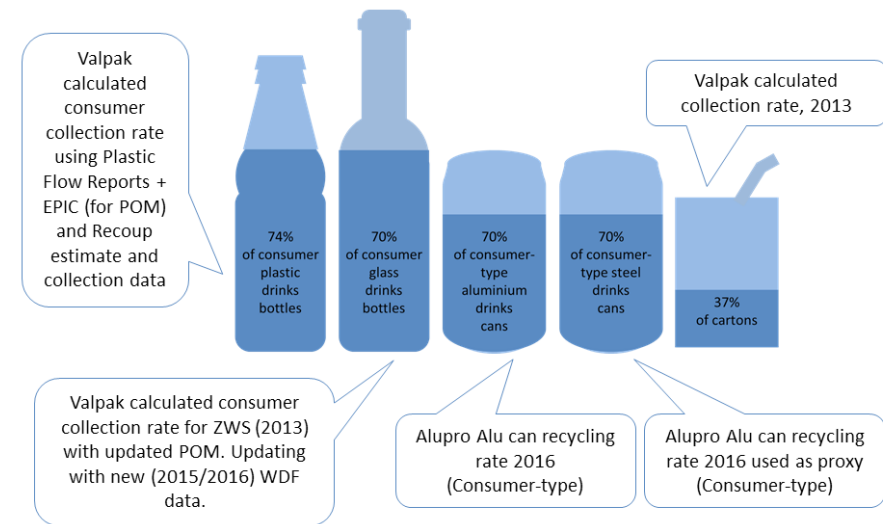


Figure 3: UK Drinks Collection Rates

Valpak and Recoup estimate OTG recycling rates for plastic and metal drinks containers using Local Authority recycling data. The sample used for these estimates was limited and as such should be considered as indicative; however these estimates do highlight a clear difference in household and OTG recycling levels in the UK.

⁶Based on 40% of Local Authorities believed to have OTG recycling collections (Recoup Household Survey 2017) and data relating to tonnage of cans and plastic bottles collected per Local Authority (based on data provided by three Local Authorities).

⁷Valpak and Recoup are currently working with WRAP to update these estimates as part of 'PlasticFlow 2025' and the 'Consumption, Recycling and Disposal of On the Go Drinks Containers' projects. It is anticipated that results from these will be available in October/November 2018.

In late 2017 Valpak formed a DRS Working Group with members from across the supply chain. Valpak's role within the Group was to coordinate and facilitate meetings and provide independent data, analysis and modelling.

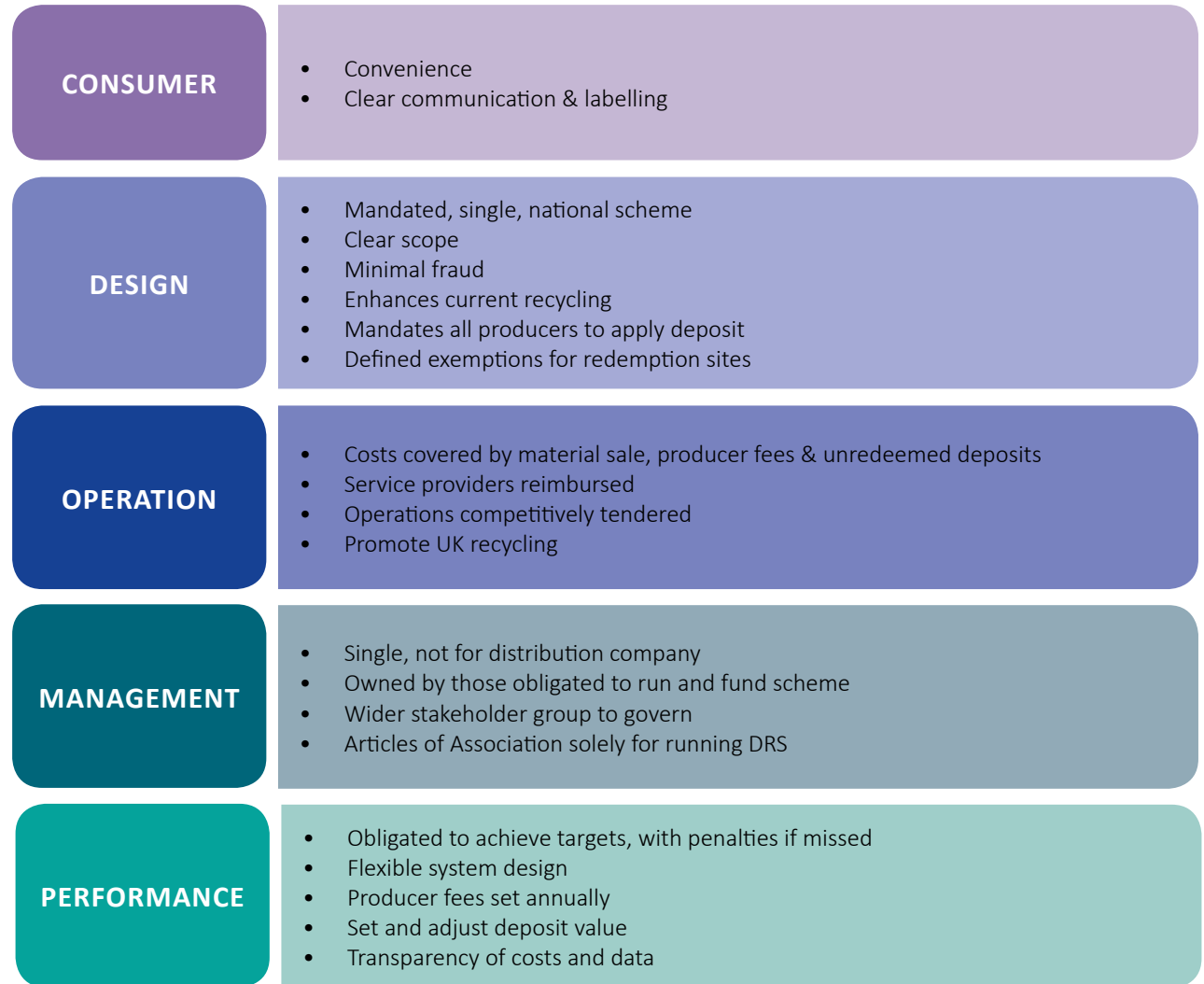
The Valpak DRS Working Group's aim is:

'To investigate a viable, commercial and well-designed DRS system and understand its impact on industry and consumers'



The Group has established key design principles for a DRS, which are presented in Figure 4.

Figure 4: DRS Key Design Principles



Whilst there are many possibilities for what a DRS could include within its scope, Valpak has categorised these into two main categories of system, Full Scope DRS and OTG DRS.

1. Full Scope DRS – a traditional scheme, like that in Norway or Germany, includes a certain number of key materials, normally plastic, metals and glass, with potential additions of cartons, pouches and cups, and no restrictions on volume or sales channel. We estimate that this system would require 30-40k reverse vending machines (RVMs), plus up to 60k manual redemption points.

2. OTG DRS – a targeted scheme that restricts the scope of the DRS to specific drinks container sizes or formats, to focus on those drinks commonly consumed OTG. This could be achieved by limiting the scope by volume (less than 750ml for example) and by including only single items and therefore excluding multipack purchases. Depending on the definition we estimate this system would require up to 20k RVMs, plus additional manual redemption points.

A general overview of the advantages and disadvantages of each of scheme type is provided in the table below.

	Full Scope DRS	OTG DRS
Advantages	<ul style="list-style-type: none"> • Maximises DRS benefits • Simple for householders to understand 	<ul style="list-style-type: none"> • Minimises disruption to current recycling infrastructure⁸ • Minimal householder burden
Disadvantages	<ul style="list-style-type: none"> • High cost • Disruption to current kerbside collections • Increased householder burden 	<ul style="list-style-type: none"> • Complicated for consumers • Definition and practicalities complex

⁸ 1.2mt-1.8mt of waste drinks packaging would continue to be managed by councils, based on around 25% of drinks packaging being consumed OTG when this is defined as singles <750ml (leaving 1.8mt out of scope) and 50% when defined as singles <1 litre (leaving 1.2mt out of scope).

Next Steps

Valpak will continue to use its unique packaging database to assess the UK drinks markets to support the development of a successful and well-designed DRS in the UK.

We will be publishing revised 2017 data before too long: if you would like to be added to the distribution list for this publication, please email

Kathy.illingworth@valpak.co.uk.

Valpak would be delighted to discuss the data and details of this report with those interested in finding out more, so please get in touch with Kathy on the above email address.



DEPOSIT RETURN SCHEMES FOR DRINKS CONTAINERS

Published

September 2018

Please visit www.valpak.co.uk for more information

Contact us

Please contact us at Kathy.illingworth@valpak.co.uk.

