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From: [Redacted]
Sent: 12 November 2020 12:08
To: wastecomments
Cc: [Redacted]
Subject: Deposit Return Scheme - Consultation on Potential Models for Ireland - RLG Input
Attachments: 20201112_DRS by RLG.pdf; 20201112_DRS Consultation for Ireland by RLG.pdf

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Dear Sirs,

Thank you for opening up consultation related to defining and establishing a Deposit Return Scheme in the Republic of Ireland.
RLG, being one of the systems operators in Germany and a pioneer in developing and implementing innovative, 21st century DRS is happy to provide our input.

Kindly refer to the attached documents, one addressing the questions, another one providing an overview of our SMART DRS system suitable for Ireland.

In case of further queries, we are available for discussions.

Yours sincerely,

[Redacted]
Head of Global Business Development

[Redacted]
[Redacted]
[Redacted]

T. [Redacted]
M. [Redacted]
E. [Redacted]
U. [Redacted]
U. [Redacted]

// RETURN TO VALUE

Geschäftsführer: [Redacted]
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Return to Value

**SMART DRS system as a Circular
Economy enabler for packaging**



SMART DRS SYSTEM

DRS – Consultation on Potential Models for Ireland



REVERSE LOGISTICS GROUP

November 2020

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Packaging market in the EU



PET BOTTLES SORTING FOR RECYCLING RATES

61%

EUROPE

Eunomia/EFBW/Petcore/PRE
2020 based on 2017 data + *Slovakia
(Institute for Environment Policy report,
2018) *Denmark (Dansk Retursystem
2019), *Spain (Ecoembes, 2017)



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ALUMINIUM CANS RECYCLING RATES

74.5% EUROPE

Source: MPE/European Aluminium, 2019
(2017 data) except * (latest reported
data) – DRS countries in darker colour



Return to Value

EU Plastics Strategy – reduce, collect, use

The EU Single Use Plastics (SUP) Directive

All plastic packaging

By 2030, all plastic packaging re-usable or easily recyclable

Plastic beverage packaging

Integrate recycled plastic in PET bottles: 25% by 2025

All EU members must implement EPR schemes for all packaging by 2025

Recycling target: **50% by 2025**

all beverage containers: 30% by 2030

Collection target: **77% by 2025**
90% by 2029



➤ Can only be achieved with a deposit system

Return to Value



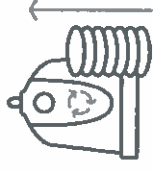
Smart DRS system as an enabler for Circular Economy

Key Concerns from some stakeholders about conventional DRS



SPACE

Retailers are concerned about losing premium space to RVMs



COST

High performing conventional DRS requires a subsidy from producers (typically EUR €1-3 per item placed on the market)



HARMONISATION BETWEEN COUNTRIES

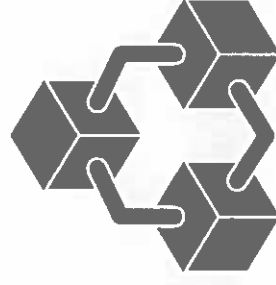
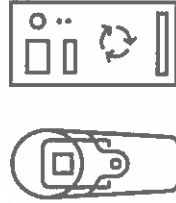
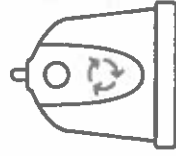
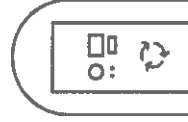
Danger of proliferation on non-harmonised, non-compatible DRS in each country and use of DRS as a protectionist measure against the EU single market



Return to Value



Well designed serialization-enabled Deposit Return System becomes an alternative solution



Individualized and unique marking with security feature

Inexpensive collection points adapted to different (consumption) environments

Centralized ownership and data management allowing flexibility, transparency and scalability

➤ **Scalable, Flexible, Easy to understand and convenient for consumers**

SMART DRS as an alternative to the conventional DRS system

Collection Methods	Marking Method	Product coverage	System Organization
<ul style="list-style-type: none"> ▪ "Return to retail" 	<ul style="list-style-type: none"> ▪ DRS mark and EAN code 	<ul style="list-style-type: none"> ▪ PET, Glass, Alu 	<ul style="list-style-type: none"> ▪ Decentralized / Centralized ▪ Stakeholder Owned ▪ ...
<ul style="list-style-type: none"> ▪ Collection beyond "Return to retail" 	<ul style="list-style-type: none"> ▪ Unique data matrix code and security mark to limit fraud 	<ul style="list-style-type: none"> ▪ Anything of fixed form 	<ul style="list-style-type: none"> ▪ Centralized (e.g. Data) ▪ Flexible: <ul style="list-style-type: none"> ▪ Stakeholder Owned ▪ Not For Profit ▪ Unredeemed deposit ▪ Material Sales

Conventional DRS

Smart DRS

Return to Value

RLG Next Generation DRS offers solutions to flaws in the historically implemented DRS systems and generate innovation potential

Historical DRS systems

DRS are based on outdated technology permitting fraud activities

High investment in RVMs

PoS collection, inconvenient and inefficient operational system setup

90s/00s technology based

Fixed deposit values

(EPR) fees paid per mix of packaging

Discrimination of materials and exemptions of types of packaging

Next Generation DRS

Sophisticated and secure technology preventing fraud activities

Lower investments in collection infrastructure

Decentralized, hassle-free collection and platform-based solutions

Data based system operation and process optimization

Different deposit levels (modular, flexible)

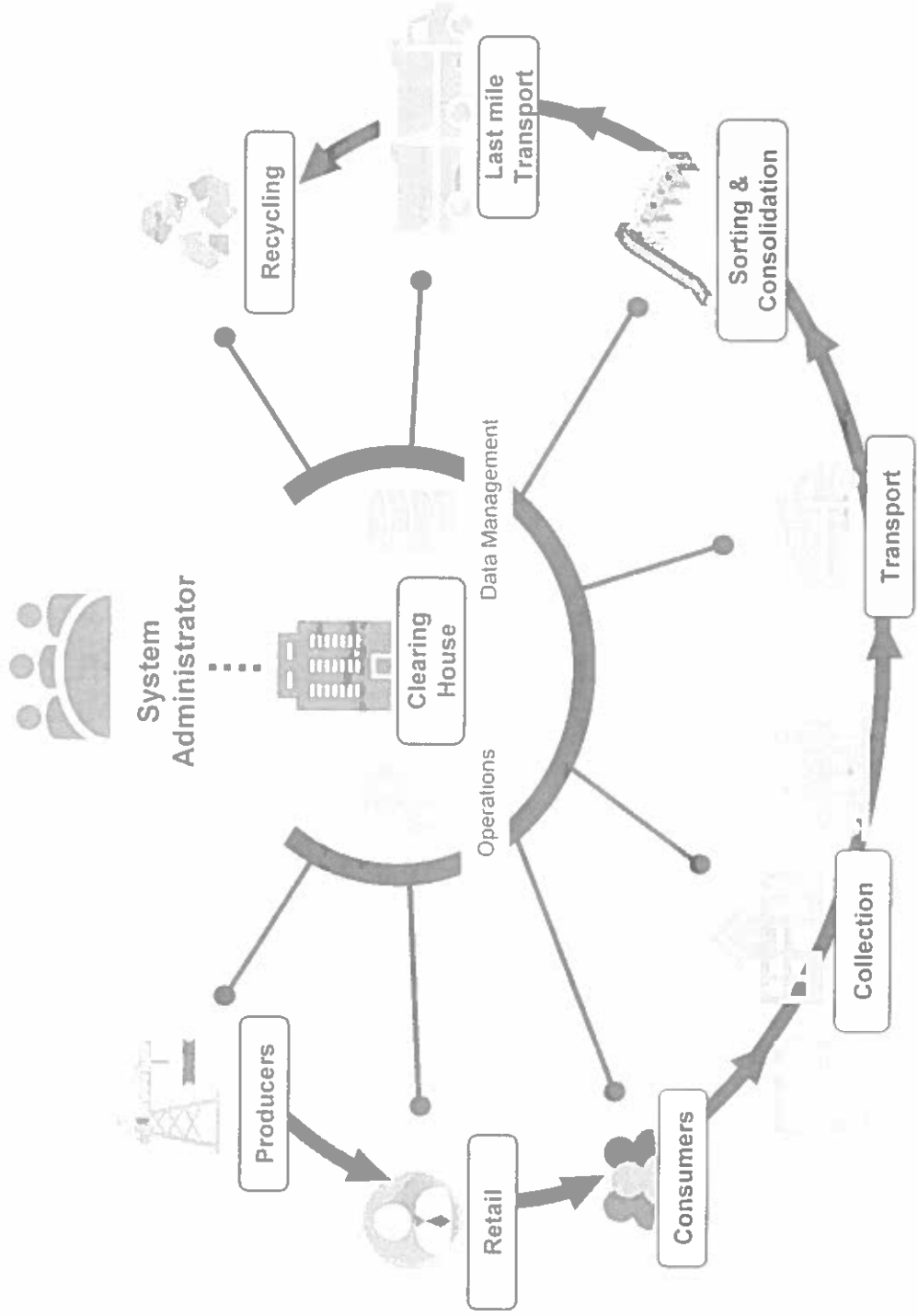
Individualization of (EPR/DRS) fees based on real recycling cost usage of recyclable materials

Allows different types of fixed form packaging to be covered under the system with different deposit levels

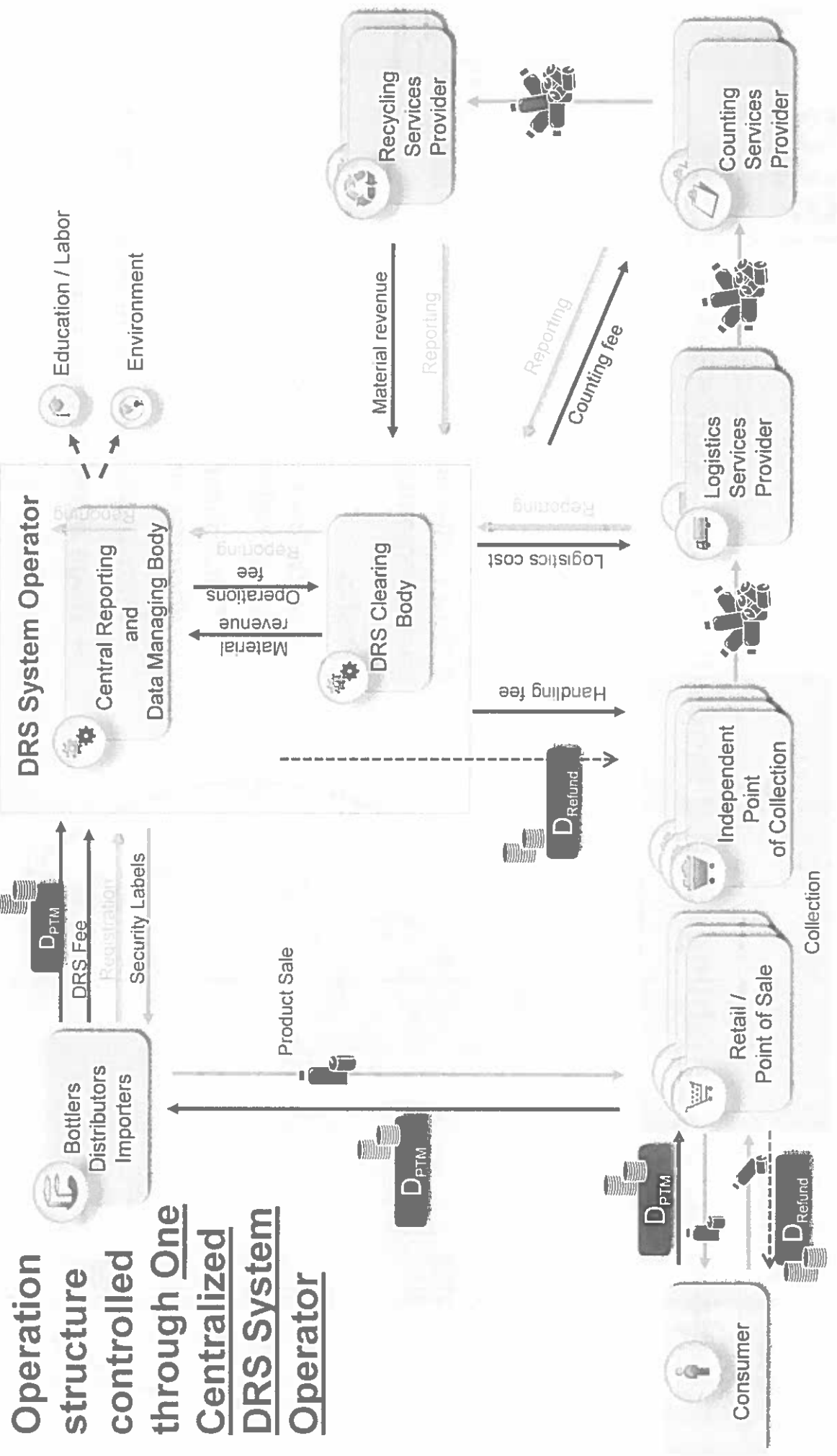


Return to Value

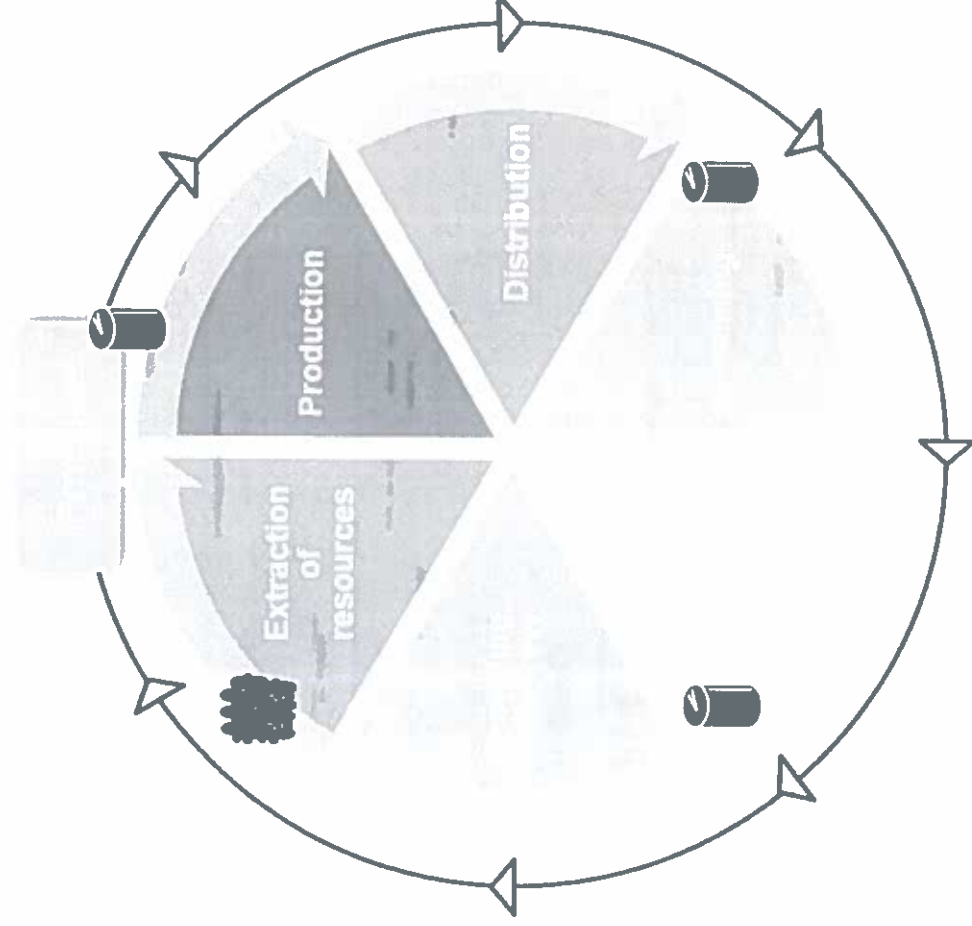
SMART DRS operates through a centralized platform managed by a System Administrator



Return to Value



“Bottle to Bottle”: enabling closed loops through a well-designed DRS



SMART DRS enables **traceable Closed Loop** through collecting pre-sorted/high quality packaging material

Benefits:


- **Network design** integrating all the relevant stakeholders
- **Transparency** incl. data, reporting and documentation
- **Innovative and sustainable program**
- **Huge marketing potential**

Creating growth opportunities and integrating existing market players




Logistics Companies

- Become DRS system partner and continue transporting the collected packaging material with actual tendency to increase their business through higher volumes




Bins/RVM producers

- Need for innovative collection devices and collection bins. They may need to adapt the existing solutions to cover deposit reading but with the tendency to increase their business through higher sales



Recyclers and Waste management companies

- Become DRS system partner and receive higher quality material for processing. They may need to deliver the recycled material to the producers



Retailers

- Become not the only one collection point type but can continue receiving additional traffic as in traditional DRS



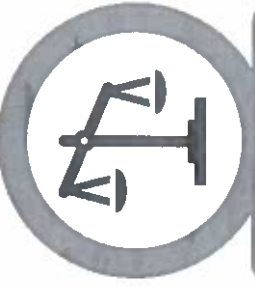
EPR Compliance schemes

- Continue operating non-DRS fractions

➤ Developing sustainable and green industry ecosystem

DRS system implementation has the potential to generate tax benefits for the State


Potential tax benefits



Market formalization

A share of the PTM is currently not declared and DRS marking system helps track & trace each product, reducing the sales not subject to taxes

Calculated based on PTM & VAT taxes per product type



Job creation

Implementing a DRS system creates jobs in counting, sorting, clearing and recycling activities, as well as on network maintenance

Calculated based on different criteria considering expected returns




Business creation

Implementing a DRS system generates business income, specially in the recycling sector and for producers of collection devices

Calculated based on revenues from sales of collection devices & material revenues

3-level security marking enables convenient collection and reduce system costs








Fraud Protection
Each item carries various security markings which can be applied by sticker or directly on the product. (Digital water mark, fine print, logo, guilloche, Coating)

Unique ID
Each individual item can be identified by a unique alphanumeric ID

EAN Code
Industry-Standard product code will be scanned upon product return.

- Possibility for decentralized collection points (No need for "Return to Retail" and crushing)
- Unique Code ensures product genuity and customer protection
- Zero fraud (>99%) is only possible with a 2-factor verification (individual code and security marking)

RLG DRS marking options (RLG tested examples)

				
Custom labels	Inline marking	Pre-printed labels	On-top direct laser printing	
E.g. sleeve etiketts with integrated security and marking	Security element integrated in packaging, UID direct print	for smaller batches / import products	For cans with limited body space	

Tested and running verification with the industry

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Convenient return options supported by RLG technology

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SMART DRS Increases the # of return points making the system more convenient for consumers and less CAPEX intensive

					
Mobile App for home recycling	Handheld Collection	E-bins	E-bin with manual crushing unit	Simplified / Gravity Based RVMs	Standard RVM
Households integrating Kerbside Collection	Kiosks Small retailers E-commerce Petrol stations Post office Charities	Pedestrian zones Neighbourhood Blocks of flats Music Festivals Parking Transport hubs	Pedestrian zones Neighbourhood Petrol stations Workplace Beaches Hotels	Retailers Stadiums Shopping centres Community centres	Hypermarkets Recycling centres

Flexibility and scalability ensured through leveraging the use of core technologies

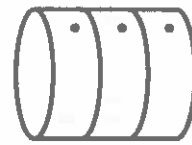
Key platform components



Reading unit



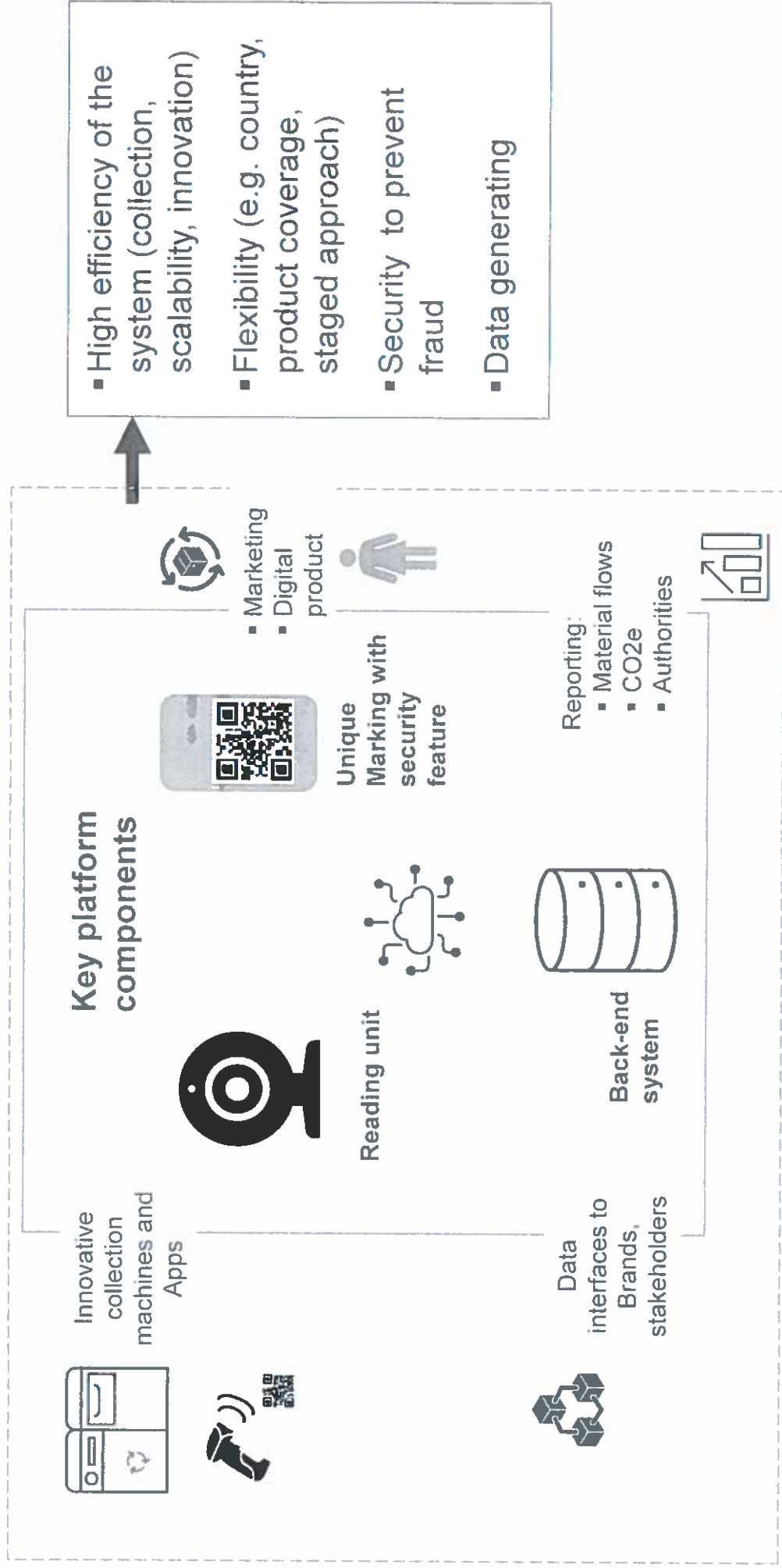
Unique Marking with security feature



Back-end system

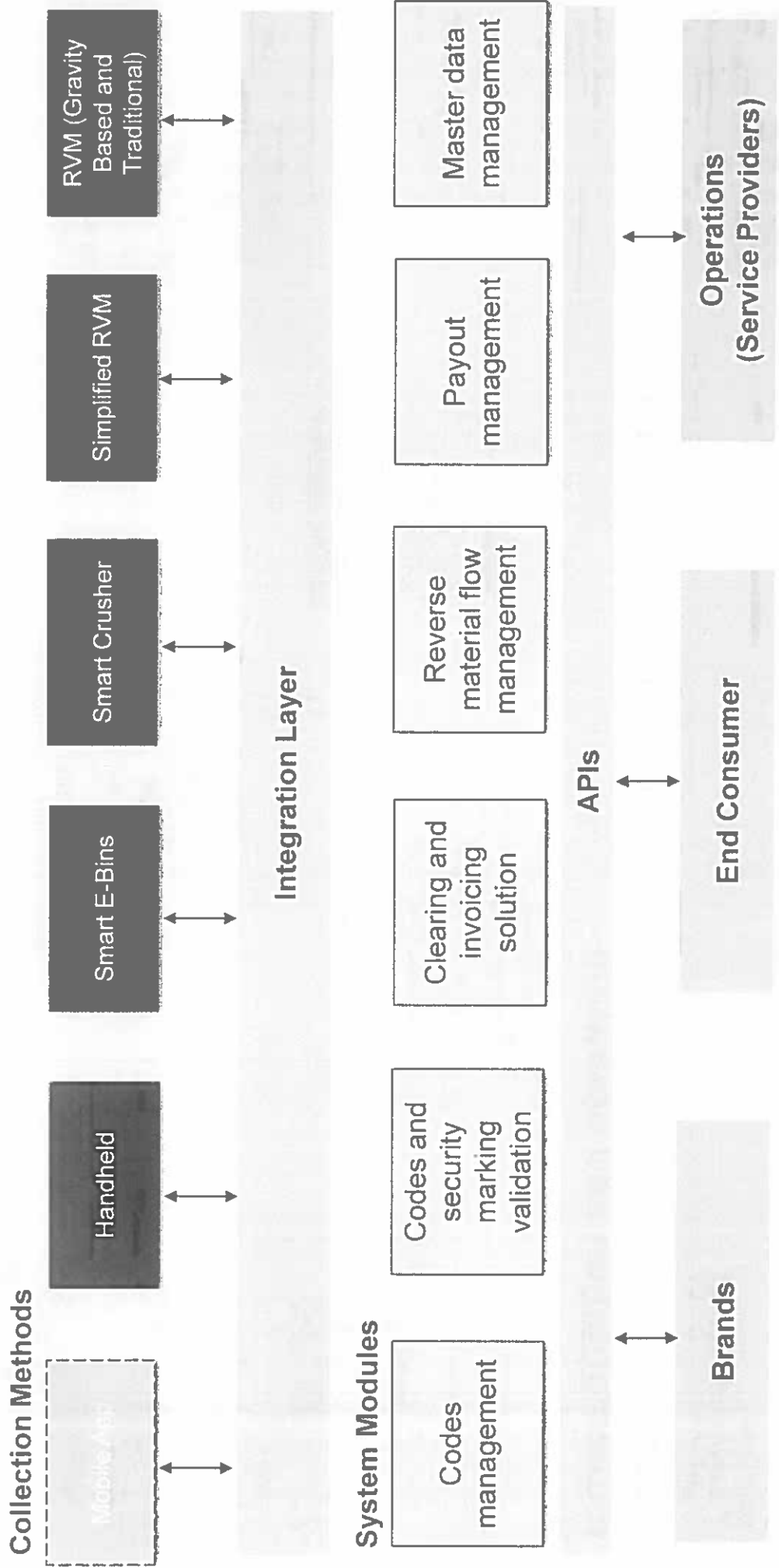
- **Reading Unit:** to be implemented in various collection devices
 - RLG already works with RVMs, smart bin and handheld producers
- **Marking:** same marking for various countries with security pigment
 - Code generation algorithm developed by RLG
 - Discussions with GS1 are in progress to make it compliant and coherent with the industry standards
- **Back-end systems:** modular setup with APIs (Interfaces) towards the relevant stakeholders.
 - Can connect to IT systems (incl. blockchain based) of Brands (ERP, Marketing, Product Master Data), Recyclers, LSPs, Retail, Payment providers

Key system components provide flexibility and scalability of DRS while adjacent solutions generate additional value add for brands and consumers



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SMART DRS Business Architecture

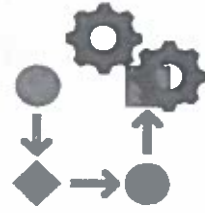


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Modular and flexible DRS IT covers the complexity of the DRS implementation and operation



Core solutions for collection methods (reading technologies)



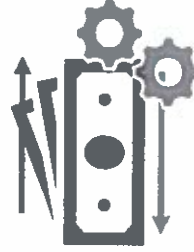
Reverse material flow management



Codes management



Stakeholders and systems integration and customization



Payout management



Codes and security marking validation



Clearing and invoicing solution



Master data management

Return to Value



DRS System revenues

Centralized DRS System generates revenues from DRS Fees, material revenue and unredeemed deposit

Revenues

- Material revenues
- Unredeemed deposit
- DRS fees based on net principle



DRS System
Operator

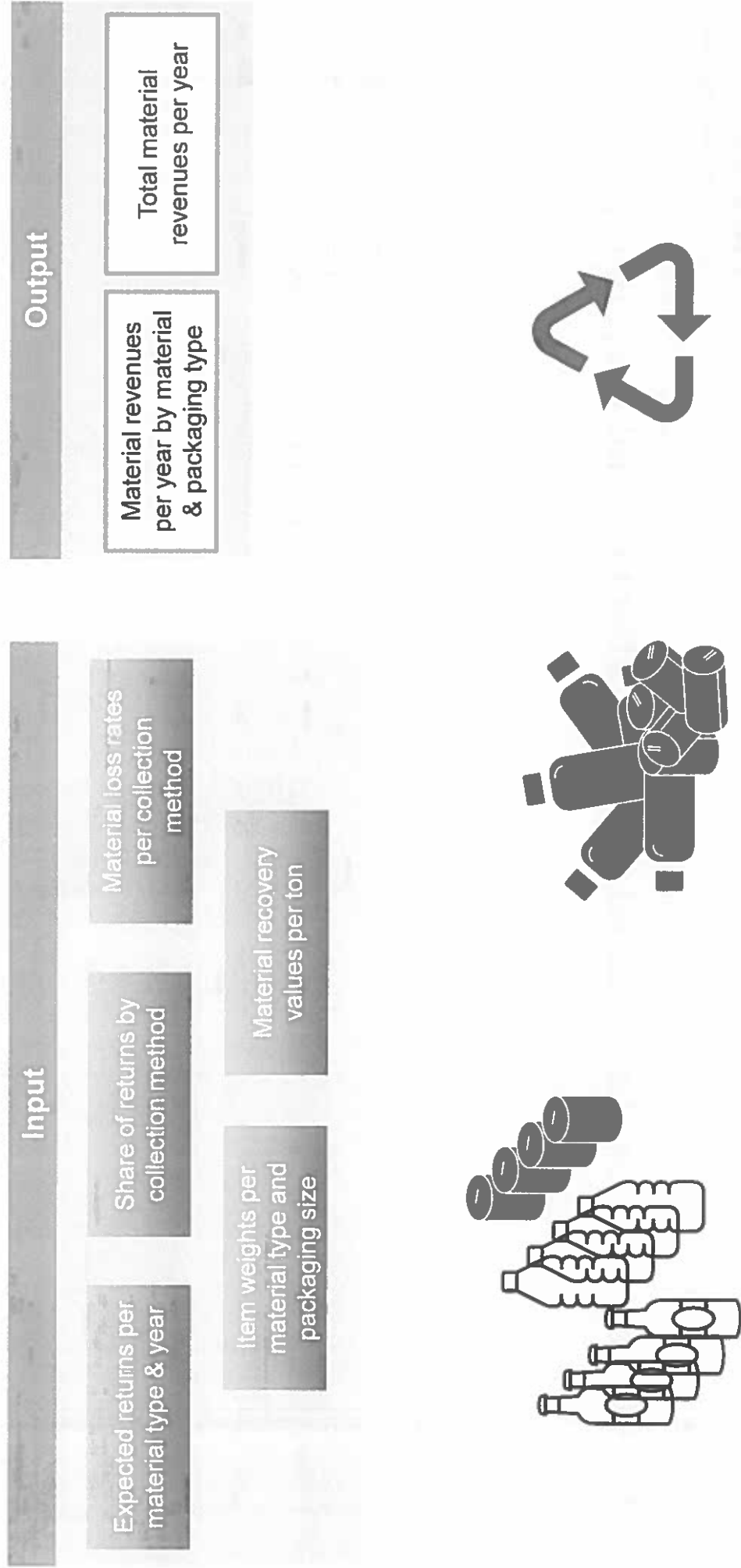
To ensure fair, effective and efficient DRS system RLG proposes the following:

- DRS fees specific for material type taking into consideration net cost of the material (Eco modulation)
- Material shall be owned by the system operator and resulting revenues remain in the system
- Unredeemed deposit, in case exists, should remain in the system and support financing of the system operations*

*As per Article 8a, 4 of the DIRECTIVE (EU) 2018/851 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 May 2018 amending Directive 2008/98/EC on waste

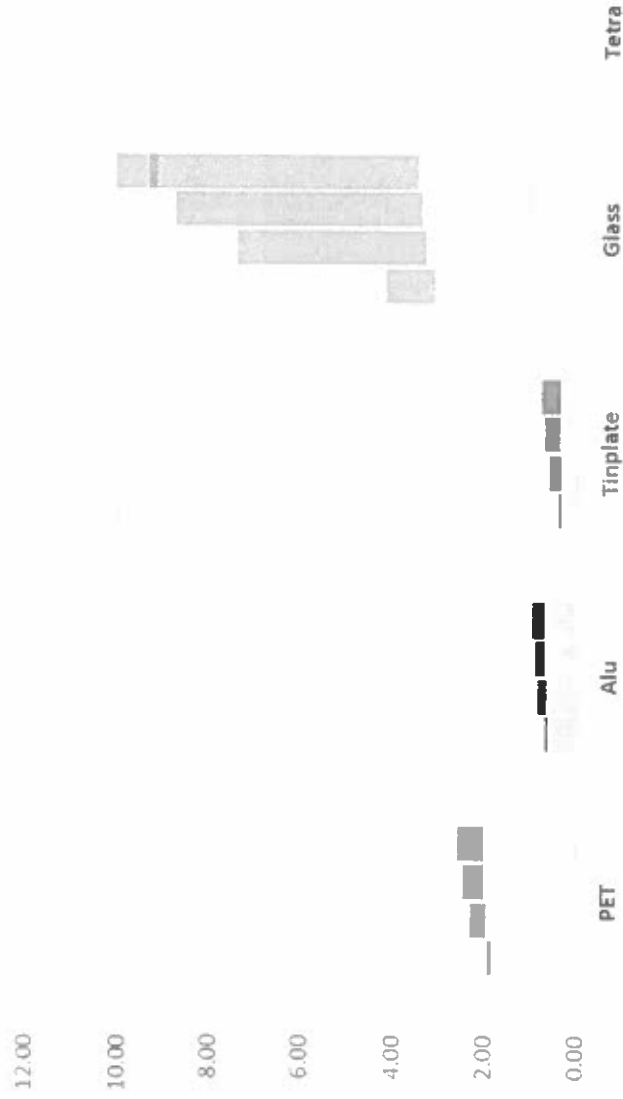
Return to Value

Material revenues are calculated based on returns, material recovery value & loss rates per collection method



DRS Fees depend on the material type and reflect the net recycling cost*

DRS fees evolution per material type (€ cents/item PTM of each material)



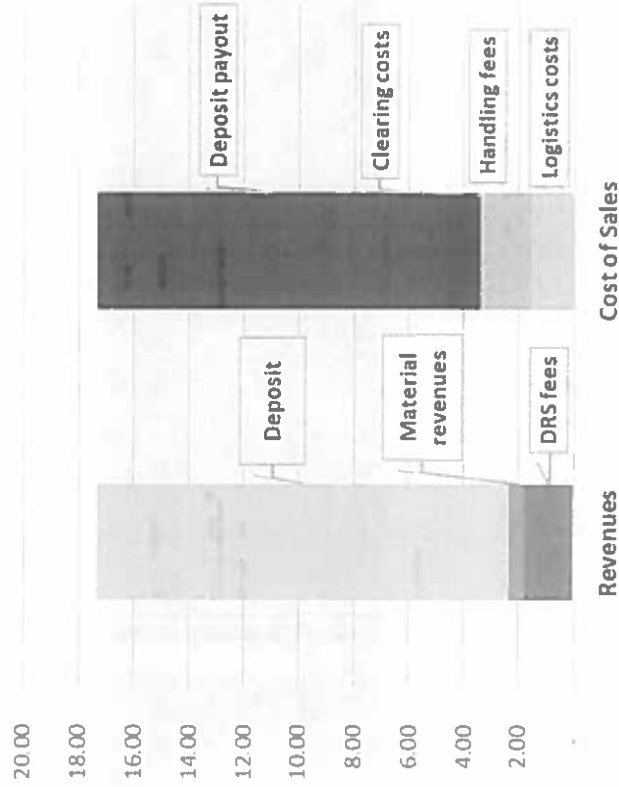
The fees support eco modulation and reflect the net recycling cost taking into consideration:

- Collection cost
- Logistics cost
- Recycling revenue

*This is only an example of how the results are visualized. The numbers and graphics are not representative nor applicable to any specific country or situation

Unredeemed deposit supporting system financing*

System P&L Statement (€ cents/item PTM)



In the visualized scenario unredeemed deposit is balancing the DRS fees

- There is a possibility of remaining unredeemed deposit amounts when the collection rate is <100%.
- At least in the first years of system operation unredeemed deposit will be of significant value and will remain within the system.
- DRS system shall be designed where the cost and benefits analysis of the system aim for a 100% return rate.
- It is suggested to keep the unredeemed deposit within the system and use it to finance the operations

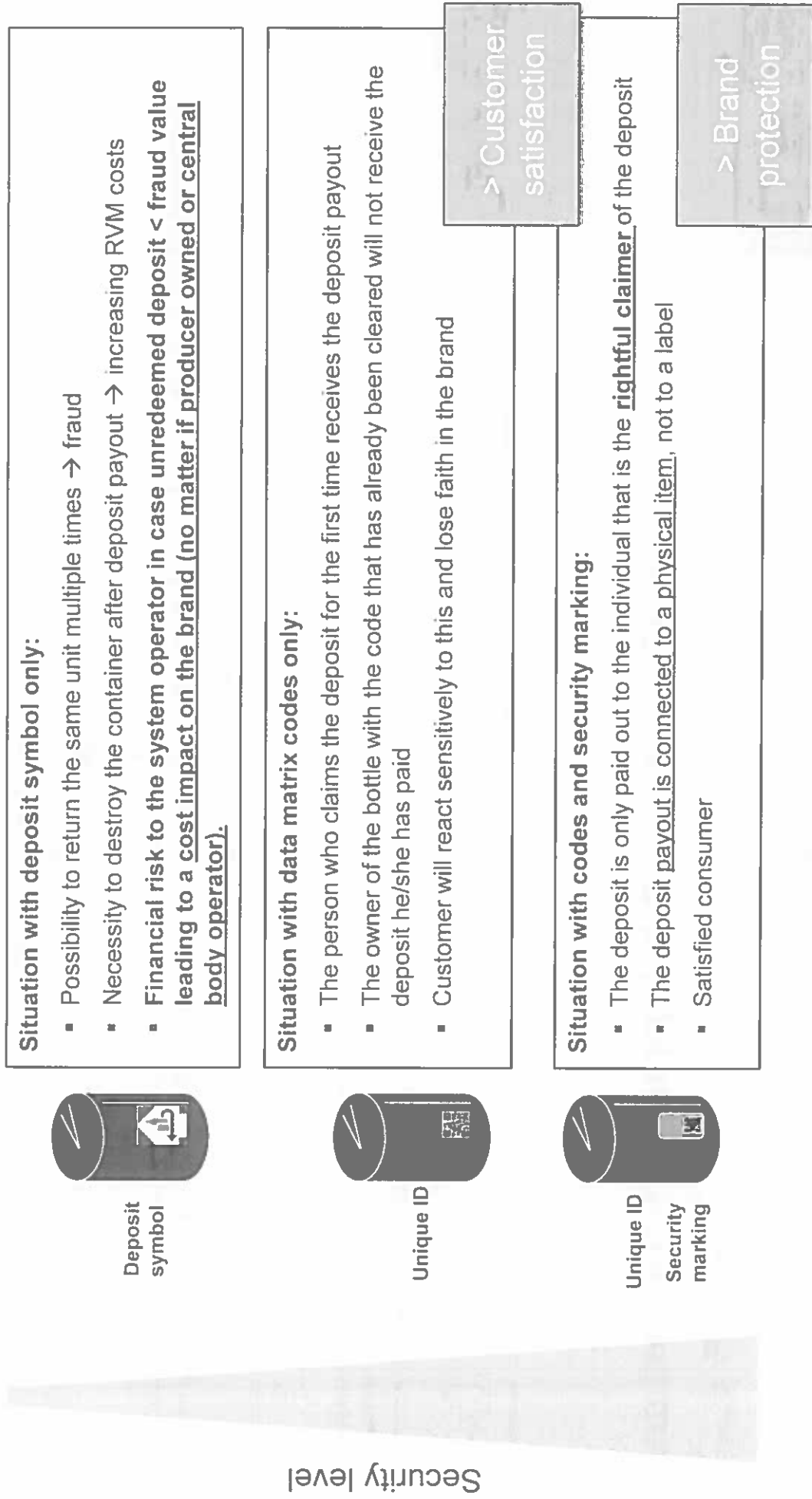
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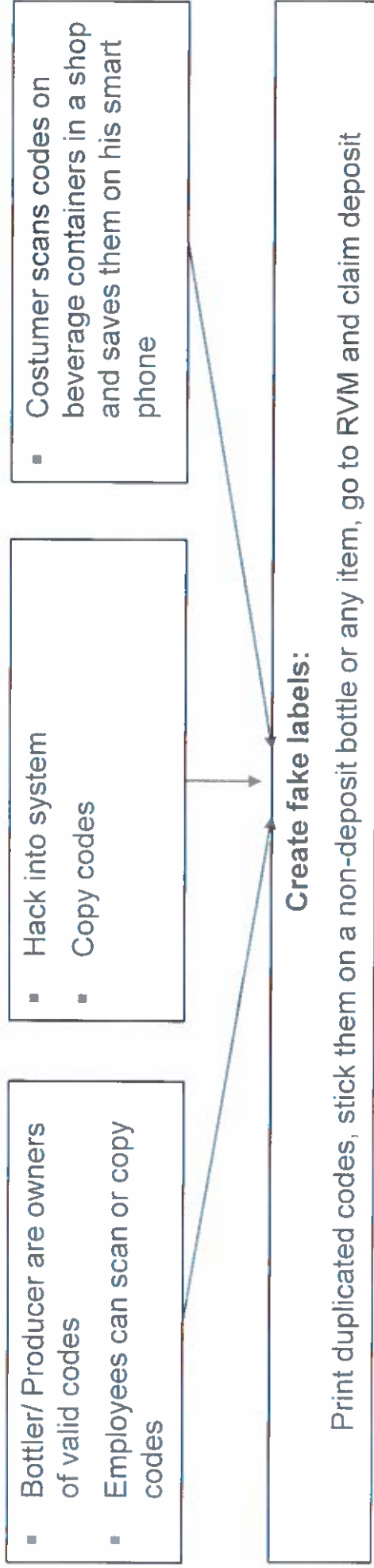


System Fraud

Why do we need a highly secured DRS marking?



Fraud scenarios under EAN or Data Matrix codes only



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Examples of DRS system fraud - Germany

Germany, recent cases

Case 1, under charge

- Manipulating RVM to print bottle return receipts
- Fraud was running from July 2013 until May 2014, reaching losses of **1,8 million Euro**

Case 2, convicted

- Returning one and the same bottle 177 451 times reaching losses of **50 000 Euro**

Case 3, under charge

- Stealing non-devaluated items and re-applying those to the counting process, reaching losses of **450 000 Euro**
- Nationwide prosecutors investigated around 60 cases in 2018
- In Germany the financial loss of fraud is claimed to amount to **more than 100 million €** since 2014¹

Directly
impacting the
cost towards
brand-owners

Source: RLG Knowledge/ Süddeutsche (2019): <https://www.sueddeutsche.de/panorama/pfandbetrug-urteil-kriminaltaet-1.4403519>

¹ No officially approved number but based on studies and confirmed by RLG specialists to be a realistic number while subject to uncertainty due to assumptions made

Examples of DRS system fraud - Sweden

Case 1¹

- Fake barcode stickers on counterfeit foreign cans
- 1,137 pieces of counterfeit cans and 303 unmarked cans of foreign variety were captured
- Fraudsters were prosecuted for fraud for being able to get a mortgage receipt for SEK 843

Case 2²

- Depositing counterfeit tins which do not have deposit value and generating receipt of high value



Indirectly
impacting the
cost towards the
brand owner

Sources : ¹ <https://www.ystadsallehanda.se/ystad/pantbedragare-atalas-for-flera-fall-av-fusk/?stopredirect>
² <https://svengestradi.se/sida/gruppsida.aspx?programid=91&grupp=3638&artikel=7322140>

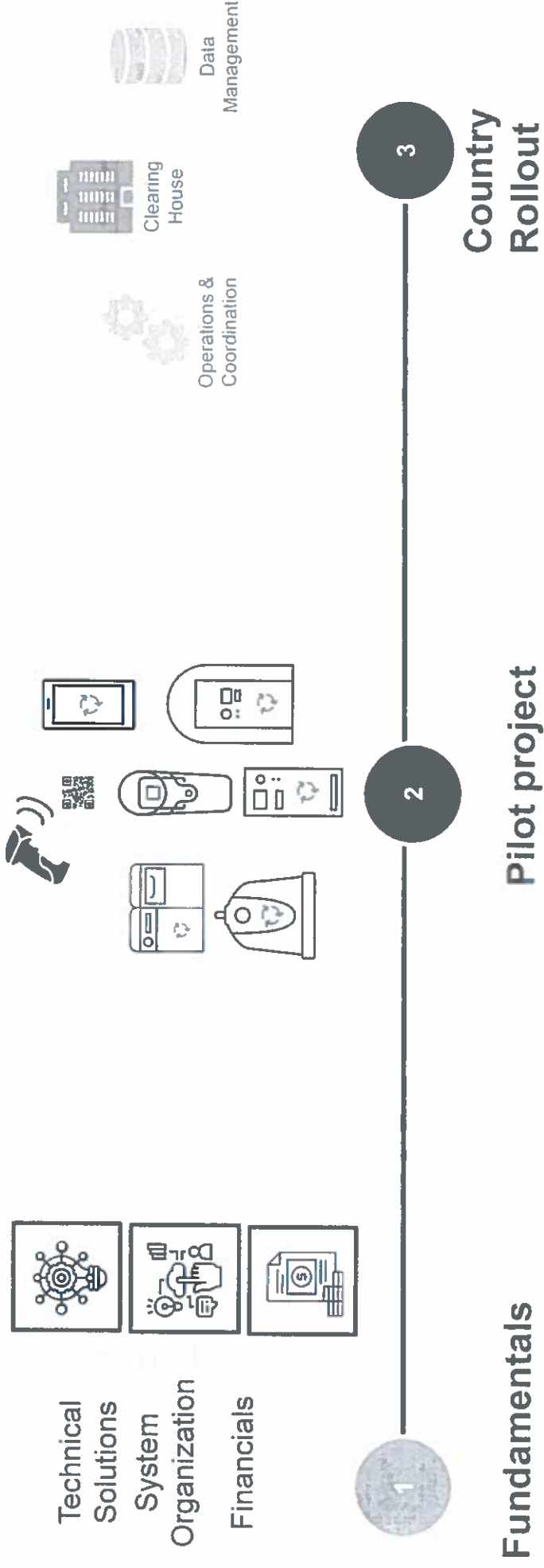
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System implementation

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To address the complexities of implementation RLG suggests a 2-step approach towards defining and executing SMART DRS



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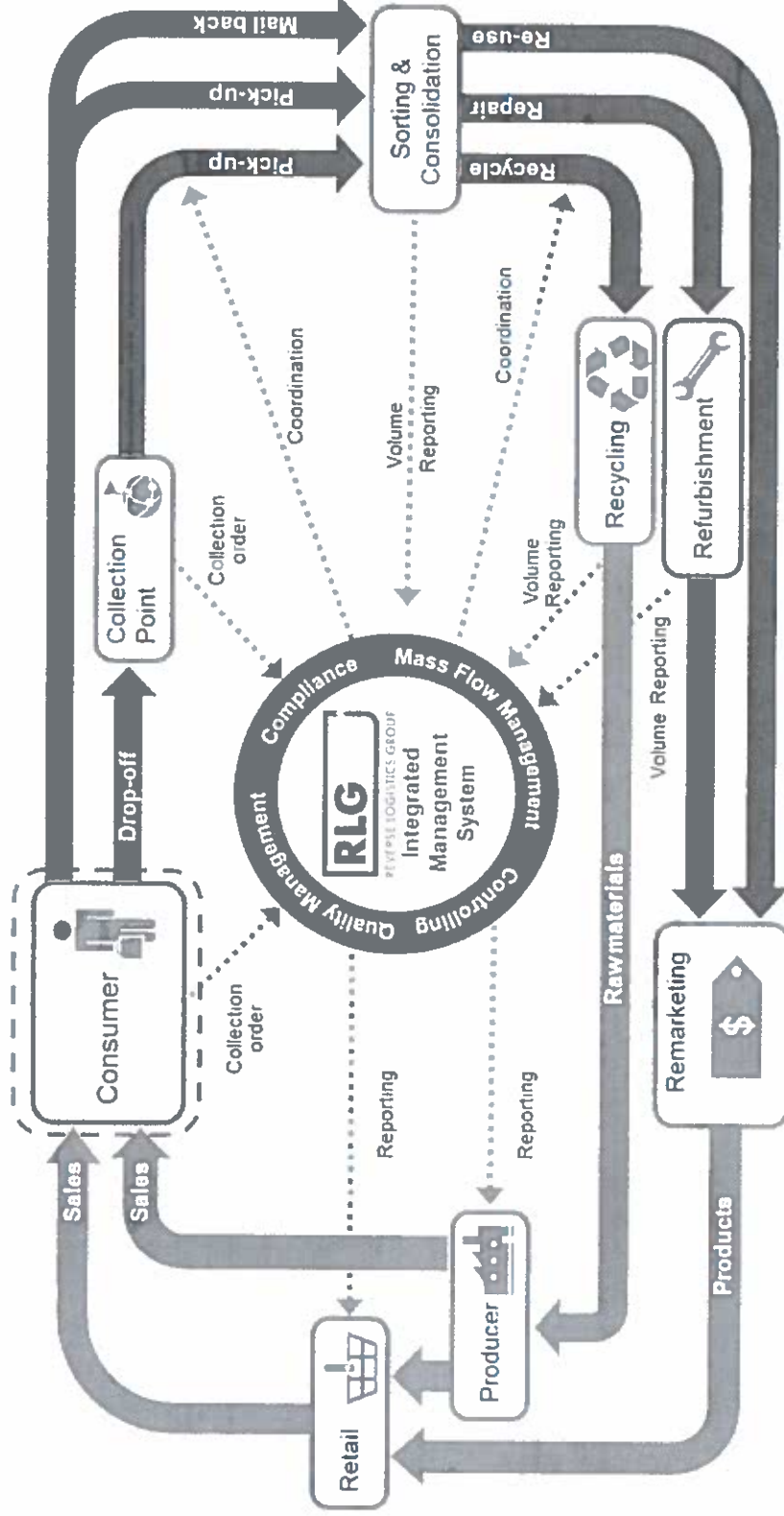
About RLG

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RLG is the leading provider of reverse logistics solutions

Start of reverse logistics process

Complexity of reverse logistics process addressed through a tech enabled, integrated management system



- 4 PL (Process + IT)
- Asset Light

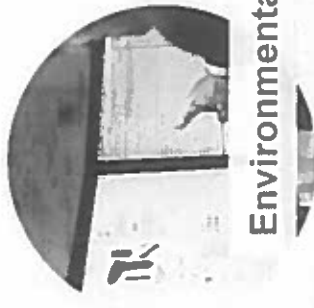
Forward logistics processes → Reverse logistics processes

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As a tech-enabled BPO we support customers in all types of product returns

Focus Areas



Environmental Compliance



After-Market Services



DRS

Solutions for OEMs, Retailers, Governments:

- Packaging (box icon)
- WEEE (circuit board icon)
- Batteries (battery icon)
- Automotive (car icon)
- Fashion (t-shirt icon)

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Our Offering

AMS Global



International
Returns
Management
Solutions

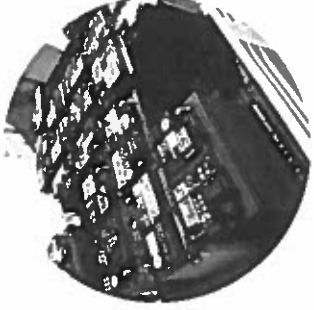
ECS Global



Returns
Recovery
Solutions



Reverse
Workshop
Services



Battery
Collection



Environmental
Compliance
Schemes (EPR)



Global Environmental
Compliance
Management



Consulting and Circular Economy Solutions



Return to Value

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RLG

REVERSE LOGISTICS GROUP

DRS Consultation on Potential Models for Ireland

Input to Department of Environment, Climate and Communications of the Government of Ireland

12th November 2020

1 Introduction

About RLG

Reverse Logistics Group (RLG) headquartered in Munich, Germany throughout the years, have extended the reach into more than 80 countries providing reverse logistics solutions to more than 5 000 customers in the areas of e-waste, batteries, and packaging. Global players, Fortune 500 companies and governments trust RLG in providing environmental compliance and recycling management solutions because we have a proven track record and a thorough understanding of operational challenges and legislative requirements globally.

RLG's subsidiary "CCR Clearing" is a specialist company providing clearing and handling services for disposable beverage packaging subject to DRS in Germany, since 2003.

RLG has deep operational DRS experience and understanding of the challenges and downsides of conventional DRS systems as implemented in Germany, Sweden, or Norway and has worked on a SMART DRS system that can be implemented in the 21st century utilizing conceptually improved and technologically advanced digital solutions.

We have reacted to the needs of the EU countries by developing over the last years a SMART DRS solution which is preventing fraud to maximum and enables traceability through a 3-level security solution based on serialization of products.

About SMART DRS

Smart DRS is the next level of Deposit System being based on state-of-the-art technology, providing various advantages vs the traditional DRS setup.

Through product serialization, it allows higher consumer convenience by enabling decentralized collection infrastructure beyond retail (including kerbside collection) and much more return points for empty beverage packaging and deposit refund, while requiring much lower investment into this infrastructure. At the same time, it prevents fraud to a highest degree and ensures secure deposit validation even with low cost handheld devices. Besides that, it is able to cover all kind of beverage packaging and could also be enlarged to include all kind of packaging in a fixed form (e.g. coffee cups) and with this support the buildup of a sustainable ecosystem for recycling and material recovery on highest quality level.

How does it work?

The Smart DRS is using serialization technology in combination with further security elements. In simple terms, this means that every bottle (and potential packaging) gets marked with a unique code, which allows to digitally track and trace the product and manage the physical and financial processes highly efficient.

2 DRS Model for Ireland

The Report recommends a centralised, operational model for Ireland. Do you agree with this recommendation?

Answer:

In order to ensure system transparency, control and efficiencies RLG agrees that the designed system shall be centralized and managed by the impacted stakeholders.

Are there other models you believe could work in an Irish context?

RLG suggests considering an innovative DRS system (SMART DRS) where:

- Integration of existing collection methods is ensured (incl. kerbside)
- Collection of empty packaging is done "Beyond Retail" in convenient and engaging locations for the public:
 - Household collection
 - E-Bins in public places
 - Handheld devices in small shops and HORECA
 - Simplified and Traditional RVMs in retailers
- Serialization of products implies less capital-intensive investments into collection infrastructure and drives adjacent services on the packaging (e.g. marketing and rewards/loyalty programs)
- There is no need to build up counting centers

Kindly relate to the attached presentation for more details.

3 The Role of Waste Collectors in the Operation of a DRS

What role should waste collectors play in the operation of a DRS?

Answer:

In our view, the DRS in Ireland shall be inclusive and shall leverage on the expertise and currently existing operations of the existing system players.

In the Irish system, the existing waste collectors shall be an inclusive part of the system in the following way:

- Continue collection from households and businesses and integrate the DRS process through a potential change in contracting/financing structures (under DRS System Administrator)
- Through the integration of waste collectors, the recycling companies will receive higher quality material (pre-sorted on the basis on what is included in the DRS system). We believe the material shall be owned by the DRS system but it can be sold at a fair price to the existing waste processing companies
- As proven in multiple countries implementing DRS the expectation is that the collected volumes will increase, improving the inflows into the existing recycling operations and reducing pollution

4 Deposit Rate

The DRS study proposes a deposit per container of €0.20.

Do you think this is appropriate? If not should it be higher or lower or should different deposit rates apply depending on container size?

Answer:

Based on our analysis taking into consideration the average salaries in Ireland this level (€0.20) seems to be appropriate and shall apply in the same value to all covered packaging types.

5 Introduction of a DRS

Consumers need to know about a DRS long before it becomes operational – do you have any suggestions as to how best the introduction of a DRS can be communicated to the public?

Answer:

The SMART DRS system proposed by RLG will be very convenient and engaging to the public. The system aims to be very easy and intuitive to use. The approach towards communication would be to prepare a public education campaign to educate the public on the stated issues by working with the most relevant PR agencies.

The focus will be on building up awareness on 2 fronts:

Technical usage of the infrastructure – to educate the public on how to use the infrastructure efficiently and how deposit pay-outs will be processed

Environmental benefits of the system – to educate the public on the benefits of the DRS system and their contribution to sustainability/

After the appointment of the system administrator until the system launch, we believe 18 months for implementation and communication is required.

6 Enforcement Measures

What enforcement measures should be considered in parallel with the introduction of a DRS?

Answer:

As critical we see:

- To have a collection and recycling target clearly defined.
- Upgradability and future orientation of the system is required
- Unique codes shall be placed on each product sold on the market
- System administrator shall be obliged to select a system operator and implement the system within 18 months.

7 Treatment of Cross-border Issues

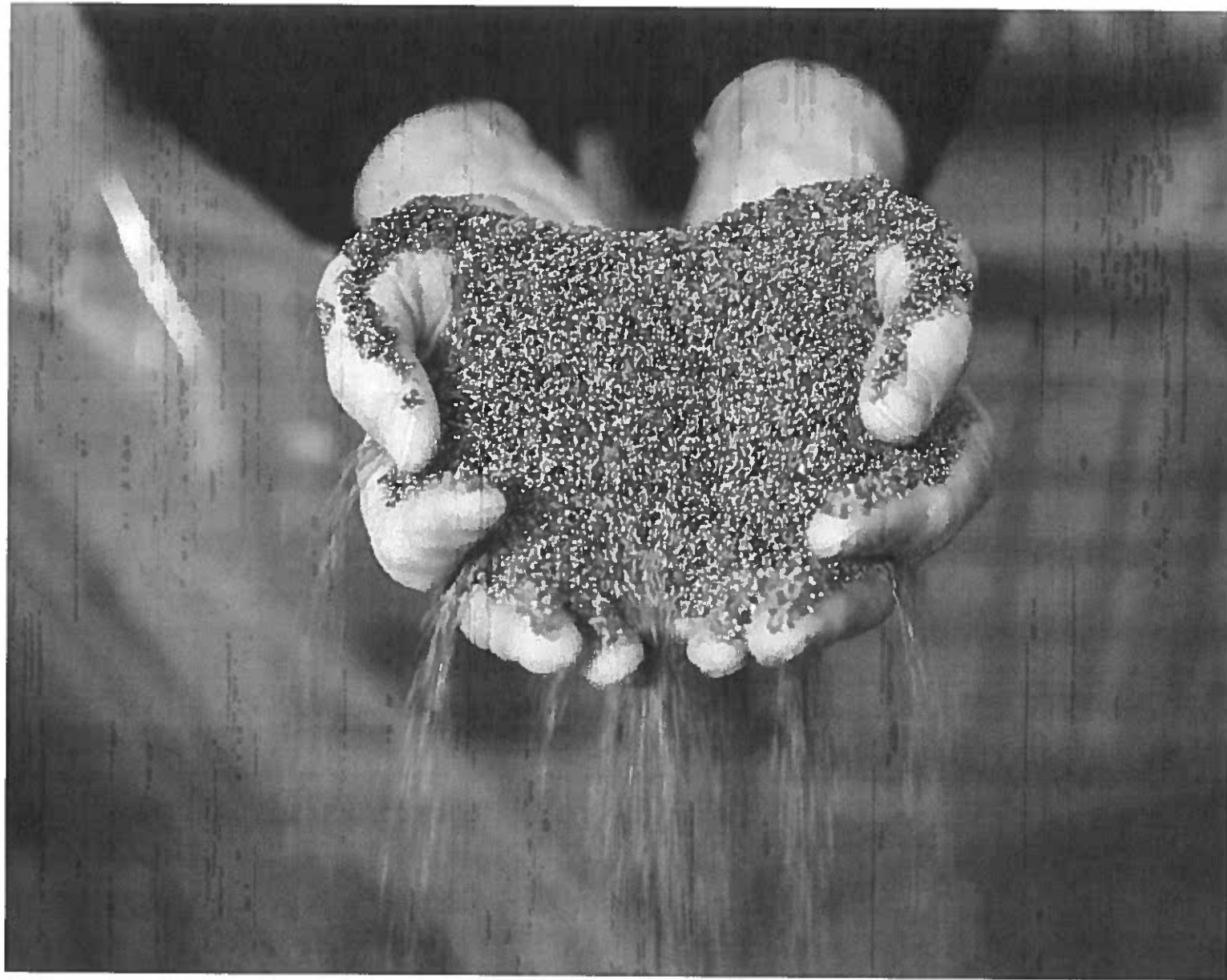
How should cross-border issues be treated to ensure producers are not at a competitive disadvantage relative to producers in Northern Ireland?

Answer:

RLG suggest having a unified approach for as many countries as possible with country specific setups guaranteed through serialization and unique codes.

In our view the products bought in Northern Ireland shall be accepted in the Irish DRS collection network but without a deposit value payout. The return of non-Irish products shall be incentivized though. It can be done through points/lottery systems where the system collects the data on how many products are returned from outside of the Republic of Ireland (and especially Northern Ireland). The DRS IT system will be able to collect this information and provide reporting which can be utilized to approach the Northern Ireland authorities, brands or retailers to finance the collection and recycling of the Irish DRS system in a proportional way, as they are the ones contributing to the waste generation in the Republic. Furthermore, there shall be an educational and awareness generation approach launched to educate the public on the differences between the systems.

In case of further questions, we are open for consultation.



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DRS Consultation Ireland - Tender Proposal