

# The revolution of circularity

TOMRA was founded on an innovation in **1972** that began with the design, manufacturing and sale of reverse vending machines (RVMs) for automated collection of used beverage containers. Today TOMRA provides **technology-led solutions** that enable the **circular economy with advanced collection and sorting systems** that optimize resource recovery and minimize waste in the food, recycling and mining industries.





1.4 trillion beverage containers are used around the world each year



This represents a vast amount of material that can be collected and reused or recycled



- Today, only 2% of plastic packaging, or two out of 100 units, is recycled in a closed loop\*
- Too many bottles and cans end up in our streets, oceans and landfills

\* Source: Ellen MacArthur Foundation









Climate Impact

Design

Sustainable Product





Supply Chain Sustainability

Double the avoided emissions enabled by TOMRA products in use

Commitment to Net Zero emissions and setting Science Based Targets (to be externally verified by 2024)

100% renewable electricity

>80% reduction in operational transport emissions

>90% sustainable materials and components in all new products

>50% of our products are circular at their end of life

Strive for zero work-related injuries and illness in providing a safe place for people and the environment

Attract diverse talents from all facets of humanity, with a goal of 50% women and men joining annually

Grow female representation in senior management to >30%

Improve employee satisfaction and engagement with top quartile NPS Score

Supply Chain Sustainability targets will be announced in 2023



# UNDERSTANDING DEPOSIT RETURN SYSTEMS (DRS)









# High collection rates achieved in two years' time



# What we've learned: High-performing deposit return systems prioritize four principles to frame their program



A collection target for all beverages plus a meaningful deposit **delivers strong** results. The redemption system is easy, accessible and fair for everyone.

Producers manage, finance and invest in the system with the use of unredeemed deposits and commodity revenues. Trust is built into the system's processes through transparent management, a data-driven clearinghouse, and reliable redemption technology.

### What makes a deposit return system so attractive within the circular economy?

1. Maximizing high quality and quantity collection of used beverage containers



#### The average collection rate in a DRS in Europe is > 90%

- Example Lithuania:
- 2015: < 33% collection for PET bottles
- 2016: 73,4% collection rate for PET bottles
- 2017: 90% collection rate for PET bottles

2. Maximizing high quality and quantity recycling of used beverage containers



- Construction of PET recycling plant in Norway to process 80% of domestic volume.
- Investor: Veolia PET DE
- Kapacity: ~18.000t = > 80% of oneway PET bottles in the DRS
- Process: food grade PET pellets
- Investment: ~€21 mio.
- Aim: 80% rPET in every new PET bottle

3. Constant and stable supply of high quality secondary raw materials



4. Litter reduction, particularly for beverages consumed on-thego



#### 2020: Coca-Cola Sweden to make all plastic bottles from recycled material

Returpak, is among the best in the world, and this played an instrumental role in Coca-Cola Sweden's decision to make the transition to 100% rPET in 2020 The deposit system has led to a significantly higher recovery rate of metal and PET beverage containers. This improves the life cycle assessments of disposable beverage

containers and prevents the blight of the landscape. This "Litterin" almost complete disappeared. Legislative outlook supports new and expanded Deposit Return Scheme (DRS) markets towards 2030



\* In addition, some markets have refillable deposit systems such as: Austria, Belgium, Chile, Czech Republic, France, Hungary, Potentian and South Korga

# **Deposit Return Schemes Case Studies**







	Norway	Lithuania	New South Wales
Population / Area	5.4 million / 385,207 km <sup>2</sup>	2.8 million / 65,300 km <sup>2</sup>	8.1 million / 809,952 km <sup>2</sup>
Population density	14.0 / km²	42.8 / km <sup>2</sup>	10.0 / km²
Established	1999	2016	2017
System Operator	Infinitum – owned by beverage producers and grocery chains	<b>USAD</b> – owned by breweries and trade associations	Scheme Co-ordinator: <b>Exchange for Change</b> (owned by 5 Australian beverage companies Network Operator: <b>TOMRA Cleanaway</b>
Governance	Voluntary response to Beverage Container Tax	Mandated by government regulation	Mandated by government regulation & appointed by Government tender



## Deposit Return Systems - Global development



Deposit system implemented / Political decision taken / Ongoing discussion

## **JEJU Vision:**

## PLASTIC FREE 2040

Vision for a Plastic-Free Jeju Island

•Government Vision: Jeju aims to become a leading example of a plastic-free environment in South Korea. This vision is driven by the need to manage the increasing plastic waste generated by both residents and the large number of tourists visiting the island.

•Waste Reduction Efforts: The local government has initiated several measures to reduce plastic waste. This includes banning disposable plastic bags, promoting the use of reusable containers, and encouraging businesses to adopt eco-friendly practices (Korea Joongang Daily).

•Community Engagement: The "Plastic Free Jeju" campaign has been active since 2019, involving the local community in activities like beach clean-ups and urban plogging. These efforts aim to change local mindsets and promote sustainable lifestyles (<u>Korea Joongang Daily</u>).

•Commitment to Sustainability: The Jeju government has pledged to continue supporting initiatives that reduce plastic waste and promote recycling. This includes expanding the DRS and other waste management programs to ensure long-term environmental sustainability (Korea Joongang Daily).

These ambitions clearly highlight Jeju Island's comprehensive approach to tackling plastic waste through community engagement, government support, and the possibility to undertake innovative and effective waste management systems like the DRS.





# DRS CONCEPT



## Concept & Design – Critical Success Factors For The Trial

#### **CONTROLLED ENVIRONMENT**

- Distinctly different from non-DRS environment to test consumers' behaviours
- Special label to communicate beverage has a deposit included
- Closed and controlled to ensure no compromise is created with the system

#### **PRODUCERS & RETAILERS**

- High level of cooperation from on-site retailers
- Retailers label and sell with deposit



#### INFRASTRUCTURE & TECHNOLOGY

- Knowledge sharing across all stakeholders, Key design principles
- Basic assessment and recommendations
- Support with the design proposal
- Leveraging expertise in collection points design & operation management
- Cost efficient & robust Reverse Vending collection technologies
- High Collection Rate

#### CONSUMERS

- Education & outreach critical to secure support from consumers
- Consumer must be aware that a deposit is included for pilot to work
- Communication and feedback through RVM app



At TOMRA, our vision is to Lead the Resource Revolution. It is our belief that businesses have the power and responsibility to help manage our planet's precious resources - today and tomorrow.