**Waste 2017 Abstract Submission**

**Unleashing innovation for best practice Container Deposit Systems**

*My presentation is relevant to the following topic area(s).*

🗹 Circular economy 🞎 Overseas experiences

🞎 Collection (inc MUD’s, transient population areas) 🞎 Problem/Hazardous waste (inc asbestos, clinical &

🗹 Container Deposit Schemes medical, ocean plastics, paint, tyres etc)

🞎 Economics (inc business cases, data gathering, 🞎 Product Stewardship

monitoring performance) 🞎 Regional issues

🞎 Education (inc community engagement) 🗹 Recycling (inc CRC’s, collection)

🞎 E-Waste 🞎 Regulations and levies

🞎 Grants (outcomes and processes) 🞎 Social enterprise

🞎 Infrastructure (inc major waste grants, EfW, organics) 🞎 State based issues (eg. Fit for the Future NSW)

🗹 Innovative projects (case studies preferred) 🗹 Technology

🞎 Landfill (inc operations, regulations) 🞎 Tenders and contracts

🗹 Litter and/or illegal dumping (inc litter initiatives) 🞎 Other 🞎 Organics (inc collection, processing)

**Presenter information**

**Presenter name:** Markus Fraval

**Presenter position:** Managing Director

**Presenter organisation:** TOMRA Collection P/L

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**Biography**

Markus graduated from Cambridge University in Engineering and Management Studies. His passion for environmentally and socially sustainable development led him to join the United Nations in its pioneering industrial ecology program, Zero Emissions, adopting systems-based thinking to redesign industrial processes and mimicking natural ecosystems to convert waste streams into resources.

Since 1997 Markus has been involved in packaging recycling, initially developing award-winning automated sorting technology for kerbside recycling, and then going on to found Revive Recycling to apply systems-based design and cutting-edge technology to the recycling of beverage containers. Revive partnered with TOMRA, the Norwegian public company which invented reverse vending machines. TOMRA have over 75,000 installations collecting in excess of 35 billion containers each year, and are also the largest non-retail operator of container deposit collection points. Markus is currently Managing Director of TOMRA Collection Pty Ltd and a Director of the Association of Container Deposit System Operators (CDSO).

**Abstract Summary**

To reach its key objectives of litter reduction and high-value recycling, a Container Deposit System relies not only on the deposit refund as an incentive but on the community embracing the system through the ease and convenience of returning containers. In this context, innovative technologies and systems play an important role.

Refund systems and technology, however, depend directly on the overall system framework which has the capacity to either facilitate or undermine the investments required. This presentation explores some of the latest technology offerings and the context required to make effective use of them for consumer engagement and overall system cost efficiency.

**Abstract**

The success of any Container Deposit Scheme in reaching its objectives – whether litter reduction or increased high-value or closed-loop recycling – depends on the community’s willingness to embrace it and to change habits as a result.

There are multiple factors that influence the level of community engagement with any CDS, including financial, practical and emotional incentives. Experience shows that the two key drivers are, firstly, the deposit value and its strength as a financial incentive, and secondly, the convenience of the infrastructure and how easy it is to return containers for a refund.

To some degree these can balance and compensate for each other. For instance, if the deposit value is very high, consumers will be willing to travel further and undergo more inconvenience to redeem their container (albeit at greater overall cost to themselves and the economy in doing so). Conversely, a relatively low deposit value can still be effective if it is very easy to return containers and there is little change required to existing habits.

When South Australia introduced its CDS 40 years ago, the value of its deposit was nearly 30 cents in today’s money. In addition, infrastructure and habits were already in place from the return of refillables. As NSW and QLD introduce their new schemes they face a larger challenge. There are no existing deposit return habits and the value of the 10c deposit is at the low end of international comparisons, particularly when compared with the price of beverages and the cost of living in general.

What this means is that the CDS infrastructure and redemption services will need to prioritise convenience and be designed in such a way that minimal change is required to existing consumer habits. In addition, it will likely be important to employ other emotional engagement mechanisms to supplement convenience and compensate for the low financial incentive.

Understanding consumer behaviours and taking a whole-system view of the challenge will help ensure optimal outcomes, by employing effective solutions using appropriate technology.

The infrastructure and service offering will, however, depend directly on the overall system framework and regulations. So, just as importantly, these need to be set in such a way as to support investment in the necessary solutions, technology and infrastructure.

Markus will share examples of TOMRA’s thinking in this area and examples of technology and consumer engagement methods used successfully in other CDS markets. In addition he will share examples of design and framework conditions that regulators would be wise to consider as they set the incentive and operating frameworks necessary to implement successful schemes.