## PRODUCT STEWARDSHIP

# by Clarissa Morawski

"The RVM has a UPC code recognition system to accept valid containers and then spits out a voucher to the customer for their refund."



# **RVM**

# Reverse vending machines arrive ... at last!

he age of automation is going to be the age of 'do it yourself," wrote Marshall McLuhan.

Today we don't think twice about using a bank machine, automated parking attendant, airport check-in, and self check-out at retail stores. So, it shouldn't surprise anyone that machines designed for empty bottle return should become part of our everyday lives as well.

Considering that Ontario's Beer Store has been taking back over two billion empty beverage containers for reuse or recycling each year, it's amazing that there have been no machines to help them — until now.

Last fall The Beer Store (TBS) launched a pilot program aimed at assisting with two issues associated with the new Ontario Deposit Return Program (ODRP) for alcohol containers sold by the LCBO. First, TBS wanted to improve convenience for people waiting to return their empties, and second, they wanted to offer an opportunity for customers to return empties during off hours.

The answer is the reverse vending machine or "RVM." RVMs are commonplace in many grocery stores in Europe and United States (and the province of Quebec) where deposit return programs exist.

TBS' pilot involves placing these machines at three store locations, all in the Toronto, Ontario area. One machine accepts all beverage alcohol cans and the other accepts all wine and spirit glass bottles. The RVM has a UPC code recognition system to accept valid containers and then spits out a voucher to the customer for their refund which can be redeemed in the store.

So far, store managers are reporting that there are few operational issues and that customers seem "excited" about the additional convenience options. TBS employees welcome their new automation counterparts, as they ease the flow of customers during busy times.

In addition to helping on the convenience side of things, the automation has also improved efficiencies by breaking the non-refillable



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The RVMs generate receipts for in-store redemption

glass into plastic bins and increasing their compaction rate by two times. The bins also fit three times the aluminum from the compaction feature in the can machines. More containers in bins mean greater efficiencies in terms of saving in-store space and reduced shipping costs.

Because the RVMs are located outside the stores, the winter weather serves as a deterrent for some users. As such, the pilot will be extended into the warmer months, after which, if successful, TBS plans to roll out more machines at other stores.

#### The system

The RVMs are built by Tomra, the world's leading RVM manufacturer. Tomra's RVM models are diverse in an effort to address the various needs of retailers all over the world.



AET Consultants forged a merger with EcoServices, Eco2 Systems and Integrated Green Building Concepts (IGBC) to form the AET Group. The merger completes the first step towards a collaborative effort to establish a solutions-based multi-discipilinary environmental consulting company and professional team recognized as a leading-expert in waste, ecology, building sciences, energy, and environmental management.

This partnership allows the AET Group of companies to provide a diverse range of sustainable environmental solutions that will greatly enhance the resources and technical expertise available to our clients while maintaining the high quality service that they have come to expect from each of the member companies.

More information about AET Consultants and the member companies (under the Affiliates web link) can be found at www.aet-group.com. This website will be updated in the near future to reflect the newly formed AET Group.









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Tesco is currently operating this Tomra-automated recycling centre

The RVMs at The Beer Stores are pretty basic in terms of available technology today. RVM technology can also collect refillables in cases, multiple beverage container packages in one machine, as well as multiple packaging and fibre mediums together or separated. The attractions to automation for deposit bearing containers are many, including: Reducing labour costs, ensuring accurate accounting, eliminating fraud, automated accounting, improving efficiencies, increasing storage capacity, providing additional revenue, and (perhaps most important) increasing traffic.

As more and more jurisdictions enact producer responsibility programs with expensive fees associated with joining stewardship collectives, the list of possible benefits may include a retailer's ability to set-up its own collection system in an effort to by-pass the high costs of collective stewardship, while increasing traffic at the same time. This is probably what motivated Tesco, one of the largest grocers in the UK (and in the world) when faced with the costs associated with the UK's national producer responsibility scheme.

Tesco is currently operating a Tomra automated recycling centre (ARC), which attracts consumers to recycle by incentivizing them with Tesco Club Card points for each package recycled. The system then processes the material onsite to reduce storage and transportation costs, while increasing the value of materials like PET by processing bottles into flake (18:1 compaction). By collecting packaging materials onsite, Tesco by-passes the need to finance collection through third-party entities, all the while offering customers a greater service profile. Within two months after the first six centres were installed, recycling at the locations increased by 50 percent.

There are those who believe that using labour for container takeback is better than using a machine. Whichever side one might take on this issue, the reality is that RVMs offer cost efficiencies unattainable with labour. And it's these efficiencies that may finally convince retailers that take-back is a viable part of their business model.

Clarissa Morawski is principal of CM Consulting based in Peterborough, Ontario. Contact Clarissa at morawski@ca.inter.net



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