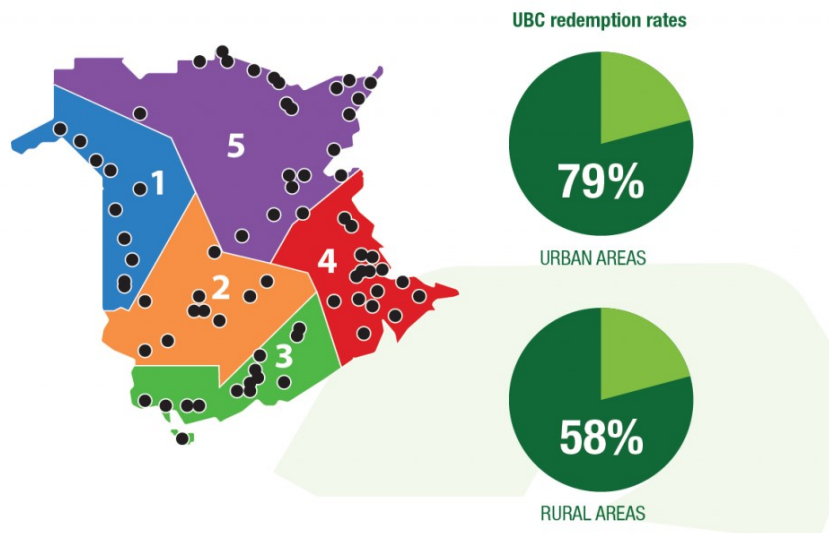


Encorp Atlantic's Research to Improve Container Recycling and Redemption Model – Encorp Atlantic Inc.

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Redemption rates for used beverage containers in New Brunswick, Canada, have been decreasing over time and are lower in New Brunswick than in most Canadian provinces with similar recycling programs. [Encorp Atlantic](#), the organization responsible for managing the recycling of all non-alcoholic deposit-bearing beverage containers collected by redemption centres in the province, has been particularly concerned with the declining recycling rates. The organization has taken a leadership role to research ways of improving the current container redemption and recycling model. Research results from its recycling pilot projects have successfully demonstrated and identified convenient ways for consumers to return used beverage containers which can optimize labour productivity for redemption centre operators.

Background: New Brunswick's Current Beverage Containers Program Was Not Designed with Consumer Convenience in Mind



In 1992, [New Brunswick's Beverage Containers Act](#) established a beverage container deposit/redemption program for the province. Prior to this, a network of depots that redeemed refillable bottles and returned them to distributors for reuse was in place. These depots expanded their activities and new redemption centres were created when the [Beverage Containers Program](#) was launched. Over 100 redemption centre licences were granted. But some centres have closed over time, leaving gaps in coverage and reducing opportunities available to consumers to redeem their used beverage containers. Today, only [69 redemption centres remain in operation](#). Consequently, some consumers, especially in rural areas, do not have convenient opportunities to redeem their containers.

Consumer fatigue with the current beverage container recycling and redemption

model in New Brunswick can be attributed to lack of convenience and expediency (limited number of redemption centres and inconvenient hours of operation), poor customer experience, and confusion about which containers are accepted. Encorp estimates that approximately 30% of deposit-bearing non-alcoholic containers sold in the province are not being returned by consumers to their local redemption centre, which represents not only loss of revenue for centre operators, but also unnecessary waste of resources as it can be assumed that a large portion of these recyclable containers are being put into the trash and sent to landfills.

Encorp believes that the modernization of [New Brunswick's Beverage Containers Program](#) is long overdue and is taking a leadership role in providing recommendations and guidance on moving forward. Since 2014, Encorp has been leading [innovative recycling research pilot projects](#) to explore and test new methods of redeeming used beverage containers.

The Re-Centre Model: An Automated Bag Drop Depot



Photo: One of Encorp Atlantic's two Re-Centre depots in Moncton, New Brunswick.

Encorp's first pilot project, [Re-Centre](#), has been testing public perception and technology involved in operating an automated and unmanned bag-drop beverage container recycling depot. With Re-Centre, customers sign up online, receive a membership card and are provided bags to collect their used beverage containers. Full bags are brought to one of the [two test Re-Centre depots](#) located in Moncton, New Brunswick. At the depot, members print bar-coded bag tags to stick on each of their bags to identify them. Using their member card, they then unlock one of three drop doors to deposit their bags. Bags are picked up on a regular basis and processed off-site by the project's local redemption centre partner. Customers are credited for the deposit-bearing beverage containers in their bags through an online account within three business days. Customers can check their balances online and make requests to cash out via cheque, Interac e-Transfer, PayPal or donation.

Encorp's two Re-Centre depots have been able to serve customers with at least three bags (150 containers) in 30 seconds or less over 95% of the time. The Re-Centre model has proven that New Brunswickers prefer better and more convenient hours of operation for redemption centres, since 50% of Re-Centre visits occur when

neighbouring centres (in the test market) are closed. Furthermore, the improvements that the Re-Centre model offers has even convinced consumers who do not regularly redeem their used beverage containers to start recycling again. This represents a whole new volume for New Brunswick redemption centres. Participant feedback has been very positive, showing a clear need for faster, more efficient ways to recycle and redeem their containers.

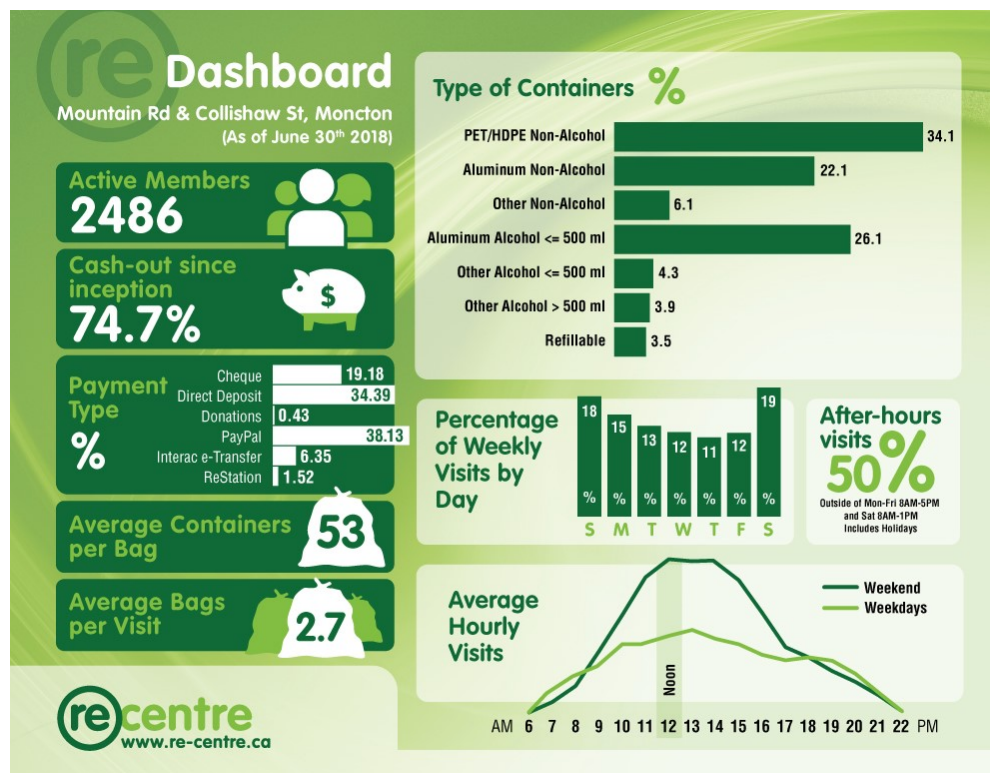


Image: Encorp staff monitors recycling data and trends for its Re-Centre pilot project via quarterly dashboard reports.

The Fixed Value Concept: Express (\$2/40) Bags and Re360 (\$3/60) Bins



Images: Fixed value “Express” (\$2/40) bag and “re360” (\$3/60) bin.

Parallel to [Re-Centre](#), Encorp has also been testing a concept which it believes has the potential of influencing more change to redemption centre productivity than any technology. Encorp started asking consumers to count their containers prior to redeeming them by introducing fixed-value bags ([Express Bag \\$2/40](#) project) and plastic bins ([re360](#) project). Customers who use these bags or bins are instructed to fill them with a fixed number of used beverage containers. Each bag or bin has a fixed

refund value (since most containers in the province equal a 5¢ refund, bags filled with 40 containers equal a \$2 payout per bag, and bins filled with 60 containers equal a \$3 payout per bin).

Knowing in advance the value of each bag or bin filled with containers means that staff at participating redemption centres can quickly issue out the correct refund to a customer and set aside his or her bags or bins to process the containers at a later time. Customers using the fixed value bags and bins no longer have to wait to have their containers counted. Redemption centres assume the financial risk of inaccurate container counts, although they have the right to refuse to accept bags or bins that clearly do not fall within the 40 and 60 container range and can opt to verify the customer's count on the spot. However, sampling performed by Encorp for the [Express \\$2/40 Bags](#) project showed that the average bag value is \$2.04 (in favour of the redemption centre). Encorp assumes that over time, customers may favour convenience over accuracy by filling the bag instead of counting. The bags are designed to contain at least 50 used beverage containers on average; therefore, redemption centres should not be at risk of lower value bags. Results have been similar with the plastic [re360](#) bins project – customers have been satisfied with the expediency of this approach while participating redemption centres have stated good to excellent accuracy.

Using fixed value bags or bins to collect containers and bring them to a redemption centre has many advantages. It sets a clear refund expectation for customers. Fixed value bags and bins also allow for bulk processing, whereas the bags used in the [Re-Centre](#) model require staff to credit each bag individually, adding more time to the process. In the future, fixed value bags and/or bins could eliminate the need for redemption centres to count containers at all. Sampling methods could simply be added by redemption centres to measure and monitor the overall accuracy of customers.

The Re-Express Model: An Automated Bag Drop Depot with Fixed-Value Bags and Retail Connectivity



In 2018, Encorp decided to combine its unmanned bag drop-off recycling depot

model with its fixed value bags concept, thus launching a new pilot project, Re-Express. Like for its [Re-Centre](#) counterpart, the goal of [Re-Express](#) is to make recycling empty beverage containers fast, easy and convenient. Customers register online to get a card linked to their account. They collect their used beverage containers, drop them off at their convenience at the automated [Re-Express depot](#), and collect their refund via an online account. But with the addition of fixed value bags, participants are instructed to collect their containers in specially designed \$2/40 bags and fill these bags with [40 New Brunswick deposit-bearing beverage container for a \\$2 refund per bag](#). Encorp will be closely monitoring the public's perception towards the \$2/40 bags and accuracy of container counts in this automated/unmanned drop-off recycling depot setting.



Photo: Local retail partner Sobeys Vaughan Harvey, sells the specially designed Re-Express \$2/40 bags in its store.

Furthermore, Re-Express is allowing Encorp to explore the benefits of retail connectivity for beverage product distributors, consumers and redemption centres as an avenue to improve [New Brunswick's Beverage Containers Program](#). Since consumers buy beverage products from retail businesses, Encorp believes there are many advantages for retailers to provide a convenient drop off point for empty containers to be collected by redemption centres. The project's local retail partner, [Sobeys Vaughan Harvey](#) (Moncton, New Brunswick), has provided space in its parking lot for the [Re-Express depot](#) and sells the [Re-Express \\$2/40 bags](#) in its store. An in-store cash out option—the [Re-Station](#)—for customers to access their refund is also being tested with a terminal located inside the Sobeys Vaughan Harvey store.



Image: The Re-Station allows customers to sign up to take part in the Re-Express pilot project as well as gives them the option to obtain cash from their online account in which they receive money for the deposit-bearing containers they recycle.

Encorp is currently recruiting participants for the project's trial phase and will be monitoring results from the project closely, since it believes that adding some type of bag drop recycling depot with fixed value reusable bags or bins is the most viable option for most New Brunswick redemption centres to improve their current business operations.

Encorp's pilot projects are set to continue until March 2019; after which the organization will issue a report with recommendations and start looking at ways to transfer technology and lessons learned to all stakeholders in [New Brunswick's Beverage Containers Program](#).



Photo: Ryan and Sarah Bastarache's family were among the first families to do inaugural bag drop-offs of beverage containers at the Re-Express depot, during the project's grand opening ceremony in June 2018.

About Encorp Atlantic

Encorp Atlantic provides used beverage container management services to organizations that distribute deposit-bearing non-alcoholic beverage products in New Brunswick. Encorp represents more than 85 non-alcoholic beverage product distributors. Every year, Encorp manages more than 160 million post-consumer non-alcoholic beverage containers in the province. Learn more at encorpatl.ca.