Board of Directors Meeting Highlights Held on October 15, 2020 at 8:30 AM as a Virtual Meeting



2021 Budget

For the last three years we have had to adapt our operations to succeed in a Post-China world as they removed themselves from the commodity market. Their doors will finally close in 2021. During that time the US exchange rate has doubled our capital costs. The labour market continues to be difficult as the population ages and the younger workforce is not interested in careers in our industry. As we conquered each challenge, the world delivered us COVID-19 just to keep things interesting.

In 2020, the per share cost will rise to \$64.40 which represents 1% increase on recycling fees. Waste automated rates are based on the CPI rate estimated at 0.4% based on the June rates as published by Statistic Canada. The actual increase will be based on September data published later this month. Commodity revenue for 2020 is based on current tonnages and the current prices. Grants are based on what was projected for this year's but since the budget was approved in principle, we have learned that we will actually receive \$131,000 less as a result of a new model introduced by RPRA. The bottom line will have to reflect this latest twist.

	2020 Budget	2020 Projection	2021 Budget	\$ Diff.	%
Sales					
Commodity Revenue	1,306,000	1,427,000	1,475,000	48,000	3.4%
Grants	2,621,000	2,648,000	2,648,000	0	0.0%
Municipal Levy	4,338,000	4,349,000	4,601,000	252,000	5.8%
Co-Collection Revenue	3,635,000	3,629,000	3,719,000	90,000	2.5%
Containerized Services	1,454,000	1,493,000	1,500,000	7,000	0.5%
Other	821,000	1,103,000	837,000	-266,000	-24.1%
Total Sales	14,175,000	14,649,000	14,780,000	131,000	0.9%
Total Cost of Goods Sold	2,004,000	1,872,000	1,795,000	-77,000	-4.1%
Gross Profit	12,171,000	12,777,000	12,985,000	208,000	1.6%
Operating Expenses					
Total Administration Expenses	955,000	1,026,000	1,053,000	27,000	2.6%
Total Collection Expenses	6,114,000	5,993,000	6,484,000	491,000	8.2%
Total Processing Expenses	2,460,000	2,582,000	2,468,000	86,000	3.3%
Total Operating Expenses	9,529,000	9,601,000	10,205,000	604,000	6.3%
Operating Income	2,642,000	3,176,000	2,780,000	-396,000	-12.5%
Total Nonoperating Expense	2,613,000	2,591,480	2,577,000	-14,480	-0.6%
Net Change in Cash Position	29,000	584,520	203,000	-381,520	-65.3%
Share Charge	\$63.75	\$63.75	\$64.40	\$0.65	1.02%

Ontario Makes COVID-19 Workplace Screening Mandatory

Since the reopening process began, regulatory authorities across Canada have made it clear that employers may implement screening measures to prevent COVID-19 infections in the workplace. Some agencies have even recommended screening as a health and safety measure. On September 26, Ontario became the first province to require workplace screening.

Waste and Recycling Industry Placed on COVID-19 Priority List

The National Academies of Sciences, Engineering, and Medicine's (NAS) committee included the waste and recycling industry in its list of recommended industries to receive the COVID-19 vaccine in Phase 2 along with other industries identified as critical workers. NWRA was the only trade association representing the waste and recycling industry to submit comments.

RPRA's Consultation on the Proposed Blue Box Program Transition Plan

Stewardship Ontario held consultation sessions throughout the spring and summer on the proposed Blue Box Program Transition Plan.

After approval from the Board of Directors, Stewardship Ontario submitted its proposed Transition Plan to the Resource Productivity and Recovery Authority (RPRA).

RPRA has posted the Transition Plan and its consultation schedule which started this week, with feedback due by November 10.

The Minister anticipates RPRA will approve the plan no later than December 31, 2020.

RPRA Consultation on Blue Box Program Wind-up and Transition to IPR now underway

The Resource Productivity & Recovery Authority (RPRA) has begun consultations on Stewardship Ontario's (SO) proposed plan to wind-up the Blue Box Program and transition it to the new Individual Producer Responsibility (IPR) framework.

During the week of October 13 to 16, RPRA is hosting five consultation webinars, each focused on a key element of the wind-up plan and process.

- Session 1: Consultation, program and transition overview
- Session 2: Supporting competition while maintain data security
- Session 3: Maintaining program performance and municipal funding
- Session 4: Financials and steward operations

Session 5: Winding up the CIF

In the following week, October 19 to 23, RPRA will be hosting four smaller group discussions. This is an opportunity to engage in a more open discussion about the proposed wind-up plan with a smaller, stakeholder-specific group:

- Stewards
- Municipalities, waste management industry
- First Nation communities, northern/rural communities
- NGOs and the general public

Ontario Proposes to Further Reduce Landfill Food Waste - Public Input Wanted

The Ontario government is seeking public input on its proposal to reduce the amount of food and organic waste going to landfills. Proposed amendments to the Food and Organic Waste Policy Statement would clarify and expand the types of materials that should be collected by municipalities in green bins and encourage innovation in the processing of compostable products.

"Consumers and businesses want to cut down on the amount of waste they create by composting food and other organic materials, but with programs and services varying from community to community, there is a lot of inconsistency and confusion about how to do this," said Jeff Yurek, Minister of the Environment, Conservation and Parks. "Our proposal provides greater clarity and encourages innovative compostable products and packaging, so we can help businesses and the public make better decisions about packaging and food waste in order to keep it out of our landfills."

The Food and Organic Waste Policy Statement provides direction to municipalities, industrial and commercial businesses, and institutions on reducing and diverting food and organic waste.

Proposed changes to the policy statement would:

- Clarify and expand the types of materials that may be collected in municipal green bins and other collection systems, including certain compostable products and packaging such as certified compostable coffee pods.
- Support consumers and businesses in making better decisions about packaging and food waste and spur innovation in the management and processing of compostable products, for example, through technology updates, research, and piloting.
- Reduce waste from going to landfill.

EEE Regulation

The Ministry of Environment, Conservation and Parks has posted the final Electrical and Electronic Equipment Regulation. The existing program with Ontario Electronic Stewardship (OES) will end on December 31, 2020

December 31, 2020.

They hosted a webinar on Thursday October 15, 2020 from 11:30 am -1:00 pm on the implications of the new Regulation and what it will mean for municipalities. Similar to previous webinars they've held on used tires and batteries, they had presentations/updates from **RPRA** and interested/available producer responsibility organizations.



Domestic Markets More Critical For Recovered Paper, Plastics

China's scrap import regulations have made domestic markets for recovered paper and plastic more important in recent years, and more capacity is coming online to consume this material.



The way exports of OCC flow out of North America have shifted considerably in the last four years. In 2016, about 3 out of every 4 tons of exported OCC would be shipped to China. In 2019, only 4 out of every 10 tons of exported OCC were shipped to China. Next year, that number likely will be zero, and about 4 to 5 million tons of North American OCC that were exported to China this year will need to find new homes.

Even though China's consumption of U.S.-based OCC is going down, other Asian countries are stepping up to consume those tons. India, Indonesia, South Korea, Malaysia, Taiwan, Thailand and Vietnam have added about 5.5 million metric tons of containerboard capacity in recent years to supply China's containerboard needs.

The overall demand for packaging and tissue papers is growing, but printing and writing paper demand has gone down substantially in the last decade.

- Newsprint demand declined 47 percent between 2010 and 2019.
- Printing and writing paper demand declined 21 percent between 2010 and 2019.
- Containerboard demand increased by 17 percent between 2010 and 2019.
- Boxboard demand increased 5 percent between 2010 and 2019.
- Tissue demand increased 34 percent between 2010 and 2019.

Much of the containerboard and boxboard demand growth has been driven by packaging and hygiene products. The global paper industry is being fed by about 60 percent recycled fiber.

E-commerce has benefited from the pandemic, which has increased demand for corrugated boxes. Despite this growth, residential recovery of old corrugated containers (OCC) has been unable to make up for the reduction in commercial and institutional recovery during the pandemic.

Commercial OCC recovery is nearly 90 percent, while residential recovery is approximately 40 percent. Even as commercial recovery comes back after the pandemic, the OCC supply likely will tighten because residential collection of this material is weak by comparison.

The reduction in commercial generation coupled with increased demand from the e-commerce sector helped to drive up OCC prices in the spring. Pricing cooled off in July and August and is "going sideways" as of mid-September.

Significant new domestic capacity is coming online in the next five years to consume OCC and mixed paper. Projects have been announced that will consume an additional 1.2 million tons of OCC and mixed paper combined this year, 1.9 million tons in 2021, 0.3 million tons in 2022 and 0.6 million tons in 2023. Of these 13 projects, three are speculative and may not materialize.

Much of that new capacity will be coming online in the Pacific Northwest, with the rest being fairly well distributed throughout the U.S., with the Southwest being an exception.

Exports of recovered fiber declined 24 percent in the first half of 2020 compared with the same period in 2019. However, domestic demand increased by 6 percent.

Old newspapers (ONP) generation in the U.S. has been declining since 2005, as has ONP demand. We expect newsprint demand to decline nearly 18 percent this year compared with last year, adding that ONP largely has become an export grade.

While Pratt Industries, Green Bay Packaging, Cascades and Bio Pappel are among the companies that have announced their intentions to use more mixed paper in their recovered fiber furnish, the material remains chronically oversupplied in the U.S.. However, when OCC prices are up, mills tend to seek more mixed paper, and material recovery facilities (MRFs) are producing cleaner mixed paper than they have in the past. The higher percentage of OCC in mixed paper also makes it more attractive to the mills.

India has helped to pick up some of the slack in mixed paper buying created by China's exit, having tripled the volume of this material that it purchased in 2018 and 2019.

With China's outright ban on recovered fiber imports looming in 2021, Nine Dragons has announced plans to produce recovered fiber (RCF) pulp in the U.S. for shipment to its board mills in China. RCF pulp did not exist before 2017.

The pandemic has helped to highlight recycling's role as part of the manufacturing industry. Recycling is essential to the manufacturing base.

Demand for natural HDPE bales has increased during the pandemic. Mixed color HDPE, however, is sold into the automotive sector, which was affected by the pause in manufacturing. That activity resumed earlier in the summer and that demand is expected to be back to where it was prelockdown.

Richmond's Single-Use Plastics Ban

The Ministry of Environment and Climate Change Strategy has approved the City's Single-Use Plastic and Other Items Bylaw No. 10000 to ban:

- plastic checkout bags;
- plastic straws; and
- foam food service ware for prepared food (such as foam plates, clamshell containers, bowls and cups).

Due to impacts from the COVID-19 pandemic, the City does not yet have an adoption date for Bylaw



10000. Depending on what happens with the pandemic, the City will assess the timing for adopting and implementing the Bylaw.

We all know it's better to avoid single-use items -- it's the right thing to do for our community and the environment. Bylaw 10000 remains a priority for the City; however, to be successful, we need businesses to join with us and move forward with commitment and support. Delaying implementation during this unusual and challenging time will strengthen our ability to make that happen and give business more opportunity to evaluate the alternatives that will work best for them.

Why we need to reduce single-use plastic and other items

Here's what we all know...

- Single-use items create unnecessary waste because they are barely used once before being tossed out.
- These items are lightweight in nature, which can result in them being blown into public spaces, as well as polluting oceans, lakes, rivers and streams.
- Huge amounts of plastic are used annually 3.84 million tonnes each year in Canada alone, with only 9% actually collected for recycling.
- There are better alternatives some are compostable or recyclable, others can be re-used multiple times.



NextGen Cup Challenge: Testing Of Zero-Waste Cups Begins In California

Independent cafes in California's environmentally progressive Bay Area are participating in a pilot program that could eventually lead to a recyclable or compostable cup solution for national chains such as McDonald's and Starbucks.

Testing of "smart" reusable cups begins this week at local coffee shops in Palo Alto and San Francisco, Calif. The experiments



are the first live or "real world" retail testing of cup solutions under the NextGen Cup Challenge, a global competition between 12 incubators working to develop a zero waste cup solution at scale.

Closed Loop Partners manages the NextGen project, which launched in 2018 with large pledges from founding partners Starbucks and McDonald's. Other partners include The Coca-Cola Company, Yum Brands, Nestlé and Wendy's.

Consumers will use drop off sites to return reusable cups.

The pilot programs mark a significant step in the project, which initially sought submissions from companies developing a fully compostable solution for hot and cold beverages cups. However, along the way, project managers discovered that a handful of startups were making strides with "smart" refill and reuse cups.

Customers will be served coffee in a "smart" reusable cup, which is embedded with a tracking device. Once done with their coffee, customers can return the cup to participating cafes, or other designated drop off points such as the City of Palo Alto.

The [NextGen] company will come and collect the cups and sanitize them and re-deploy them.

While many restaurants and coffee concepts such as Starbucks have reusable cup programs, this solution is different because it removes the burden from the consumer. They don't have to buy the cup

or remember to take it with them all the time.

Roughly 600 billion paper and plastic cups are distributed worldwide, by some estimates. Of those, McDonald's projects its distribution to represent about 3%. Starbucks cups account for an estimated 1% of that total.



A Singular Solution

Gerber has released the first single-material, recyclable baby food pouch.

In May, Gerber replaced its multilayer baby food pouch with a single-material pouch that is designed to be easy to recycle.

Nestlé subsidiary Gerber launched its first baby food pouch in 2011 using a multimaterial structure made from polyethylene terephthalate (PET), aluminum foil and polyethylene (PE), which has become the industry standard, according to the company.

The company began the transition to a nonfoil, multilaminate structure in 2017 to provide transparent and window options so consumers could see the product inside the pouch.

All elements of the stand-up pouches, cap and spout included, are made from the same material, polypropylene (PP), which is one of the most common and versatile forms of plastic.

The pouch offers a high oxygen and water-vapor barrier for shelfstable products that undergo hot-filling and pasteurization, such as baby food, as well as for less demanding cold-filled or dairy applications, the manufacturer says.



The single-material IncrediPouch, as Gerber has dubbed it, is the latest initiative in the company's journey to make its packaging recyclable or reusable by 2025.

Gerber chose to launch this product exclusively on its e-commerce website before rolling it out to brick-and-mortar retailers because TheGerberStore.com proved the quickest way to get the product to market and also gave it the opportunity to gain market experience before hitting stores, Hilbert says.

When designing the IncrediPouch, "food safety, sustainability and performance were our top priorities, with a focus on recyclability, ease-of-use, shelf life and durability," she says. To address these considerations, Gerber identified new filling parameters and barrier solutions to ensure the quality and performance of its pouch.

The pouch is 100 percent recyclable through a national recycling program Gerber launched with TerraCycle, Trenton, New Jersey. To ensure consumers are aware of the pouch's recyclability, the TerraCycle logo with instructions to "Recycle Through TerraCycle" are featured on the pouch.

Gerber launched its national recycling program with TerraCycle in October 2019 to ensure consumers have a free and easy way to recycle Gerber packaging that is not recyclable in curbside programs. Consumers sign up for the program online and ship their empty pouches as well as their rigid plastic packaging, shrink labels, plastic lids and small and large Gerber baby clothing hangers to TerraCycle for recycling, earning points they can redeem for a donation to schools or organizations of their choice.

TerraCycle and MRFF are working to find markets to consume the recovered pouches, such as roofing and composite lumber products.

Gerber says it plans to expand its product offerings in the monomaterial pouch by the end of the year. The company says the initial launch allowed it to gain experience in the market before expanding.

HolyGrail 2.0: Major Brands Sign Up To Explore Digital Watermarks To Improve Packaging Recycling

More than 80 major European brands, including P&G, PepsiCo and Mondi will collaborate to explore the feasibility of using "digital watermarks" to improve the sorting of recyclable packaging across the European Union (EU), as part of the HolyGrail 2.0 project spearheaded by the Ellen MacArthur Foundation.

AIM, the European Brands Association, has gathered more than 85 companies to join the HolyGrail 2.0 project



What you see vs what the scanner sees

In 2016, P&G's sustainable packaging expert Gian deBelder helped develop and spearhead the HolyGrail collaboration in Europe, as part of the Ellen MacArthur Foundation's New Plastics Economy.

The HolyGrail project, which aims to place digital watermarks on packaging, so they can be identified by a range of key stakeholders, won edie's Circular Economy Innovation of the Year Award for 2020.

In developing the project, more than 30 companies across the plastics packaging value chain, including manufacturers, waste managers and academics, worked together for more than a year to prove the sorting concept.

It aims to use "digital watermarks" the size of postage stamps on consumer goods package that can be detected and decoded by a standard high-resolution camera on the sorting lines when in a waste sorting facility. Once identified, the facility is able to sort packaging into different streams. It is hoped this will deliver more accurate sorting streams, which in turn would create a larger market for higher-quality recyclates.

The project had secured the backing of more than 50 organisations to launch HolyGrail 2.0 – the second phase of the project, bringing it to the mass market for the first time.

Now, AIM, the European Brands Association, has gathered more than 85 companies to join the HolyGrail 2.0 project to drive better sorting, and therefore recyclability of packaging across the EU.

The businesses involved in the project will explore the viability of a mass-market rollout of digital watermarks, which can also detail information on the manufacturer and brands associated with the packaging. The watermarks could also be used to drive consumer engagement and deliver more transparency on supply chain sustainability and retail operations.

According to the Ellen MacArthur Foundation (EMF), just 14% of global plastic packaging ends up in recycling infrastructure, while 40% ends up in landfill and a third in ecosystems such as the oceans. By 2050, it is estimated there will be more plastic by weight than fish in the world's oceans.

As such, businesses are continuing to prioritise the circular economy. Just this week, the likes of Nestle, Co-op, Asda and Aldi have unveiled new commitments to phase-out single-use plastics.

Republic Services Takes Delivery Of First Electric Refuse Truck

The keys were handed over during a virtual ceremony and press conference Oct. 6 at Mack Trucks headquarters in Greensboro, N.C. The truck will be put into service on a residential route in Hickory, N.C., while Mack evaluates its performance before a commercial rollout in 2021.

The truck comes with two electric motors producing 536 peak hp and 4,051 lb.-ft. of torque. It's powered by four lithium-ion batteries, which can be charged in about 90 minutes. The body, a Heil Command ST automated side loader has been optimized for electric trucks, Mack revealed. It's a lightweight body that maximizes hauling capacity and only draws power when needed, helping to extend battery life. The ASL arm is body-mounted to free up frame rail space for batteries and other auxiliary components.

The waste segment represents about 7,000 trucks a year, with 55% being cabovers like the LR. Republic Services operate a fleet of more than 16,000 trucks and performs about five million pickups every day.

The Mack LR Electric will produce zero tailpipe emissions and will reduce noise. Those who wait till they hear the garbage truck approaching before rushing their trash out to the curb may have to begin planning ahead.

The LR Electric builds on an existing model that already featured excellent ergonomics, visibility and interior space. Electric Mack Trucks feature a copper bulldog on the hood. The LR Electric Republic Services is taking features four batteries, two mounted behind the cab and the others on the chassis. They're mounted transversely to create room on the passenger side for the side loader.

A modular power box sits where the diesel engine would normally be. It also houses the central charging unit, the electronic control units, fuse panels, thermal management system and junction box. The entire vehicle outweighs a diesel-powered Mack LR, but the company didn't disclose by how

much. Fans and other auxiliary equipment are electrified and an e-PTO is mounted on the chassis to drive the hydraulics. The truck can produce up to 536 peak hp or 448 continuous hp.

The LR Electric is monitored by Mack's GuardDog Connect telematics and remote diagnostics platform. Through this, Mack will be able to remotely monitor the truck's performance on its routes.

In addition to saving on fuel, Republic Services expects to see



maintenance savings, since brake wear will be reduced and oil changes will no longer be required. In fact, refuse is a perfect application for electrification since the trucks return home each night for charging and the regenerative braking from frequent starts and stops provides steady power to the batteries while on route.

Mack's first LR Electric was deployed earlier this year into the New York City Department of Sanitation fleet.

CNG Trucks Still Used By Many In The Industry, But Electric Vehicles Gaining Ground

Natural gas-powered vehicles have been the industry's preferred form of alternative fuel for years, but

while investments continue, 2020 is shaping up to be the year that electric breaks through.

Electric truck companies' pursuit of a zero-emissions future has yet to knock natural gas vehicles out as the waste industry's preferred fuel alternative. But the long view increasingly focuses on electric collection vehicles, even while investment in natural gas continues in the near term.



Beyond corporate sustainability targets, state and local mandates are one factor forcing the issue. In July, 15 states and Washington, D.C., signed a memorandum of understanding to work toward a goal of 100% of medium- and heavy-duty zero-emissions vehicle sales by 2050. Cities such as Los Angeles have been similarly optimistic on the technology.

Nevertheless, many haulers have been reluctant to take the leap. According to NGV America, more than 17,000 refuse and recycling trucks in the United States run on natural gas and about 60% of new collection trucks on order will be powered by the same. Waste Management previously said it anticipated 75% of the company's collection fleet could run on compressed natural gas (CNG) by 2021, and companies like GFL Environmental and Waste Pro foresee future investment too.

Republic Services added 158 new CNG trucks last year, bringing the total number of vehicles running on alternative fuels to more than 20% of the company's fleet. However, during a recent announcement about plans to purchase at least 2,500 new electric vehicles from Nikola – a move seen by some as a clear sign of the industry's future – President Jon Vander Ark said he considers natural gas a "bridge technology" that "doesn't offer the zero-emission future" electric power promises.

While some haulers are steadfastly sticking with natural gas vehicles, other companies are forging ahead with electric experimentation.

Waste Connections recently ordered two electric chassis from Lion Electric, which will be mounted with fully electric bodies manufactured by Boivin Evolution. The company also purchased a third electric body from Boivin, which is being mounted on a diesel chassis to run as a hybrid. This marks a shift for Waste Connections, which has been running a fleet of around 1,100 CNG vehicles (11% of its fleet), but have been looking for alternatives.

Because electric vehicles have no transmission, they are comfortable to operate. The absence of a transmission



contributes to quieter operation and easier maintenance. They drive like a golf cart. There are only 20 parts in the engine versus 2,000 in a diesel engine.

But there are challenges, such as cost.

Diesel is always cheaper, although overall operating costs for electric vehicles typically result in savings. Infrastructure can be another challenge, but many entities are changing their systems to work with electric utilities and provide reliable, economical charging. There's software available that makes sure the vehicle is charged and that all the trucks don't charge at the same time if there are a lot of vehicles are plugged in. You can time it to avoid peak times so it's more affordable.

Going electric with Class 8 trash trucks is a viable business model. The savings are so big on fuel and maintenance. The saving estimates are \$3,000 per month in maintenance for a diesel refuse truck, with an additional \$2,000 per month for fuel costs. You can gain 80% savings on an electric truck over a diesel. It's revolutionary.

In a further sign of this shift, the California Air Resources Board recently instituted the first-ever rule to transition trucks from diesel to electric over the next two decades. The rule takes effect in 2024, and by 2045 every new truck sold in California will be zero-emission.

A large landfill with a gas-to-energy project could fuel 40 natural gas-powered collection trucks, according to the U.S. EPA. In fact, because many landfills have on-site fueling stations – converting biogas into CNG, LNG or electricity –it's not a question of either/or in terms of vehicle types when biogas is the power source.

In contrast, Waste Management focused on CNG trucks for a recently-awarded hauling contract in Seattle that called for more use of alternative fuels. Recology, which also won a contract in the city, opted to pursue its first 100% electric collection trucks instead. The California-based company estimates 50% of its fleet is powered by "renewable or alternative energy sources" and is aiming for 90% by 2022. The first vehicle used in Seattle was a Class 8 collection BYD truck fitted with a New Way Viper mid-compaction rear loader body.

The higher initial cost of electric collection vehicles is offset by lower charging costs, especially in a region where much of the electricity comes from renewable hydropower. Thanks to a shared investment with the city and a subsidy from the state of Washington, Recology's out-of-pocket expenses are expected to be about half the cost of a standard collection truck.

Collection will be confined to the hilly downtown area in proximity to the facility to allow them to evaluate changes in battery capacity based on the environment. Expectations of 200 pickups within a 40mile range are countered with an 8hour recharge, preventing the trucks from completing long-distance routes.



ISWA Communication Award Winners 2020

Every year ISWA recognises excellent Waste Communication Campaigns that increase public awareness and promote sustainable waste and resource management. They received some fantastic and incredibly creative submissions this year.



1st Place: HSY Waste Escape Room, By Helsinki Region Environmental Services Authority HSY

"We at HSY produce municipal water and waste management services to more than a million residents in the Helsinki Metropolitan Area. Together we will create the most sustainable urban region in the World.

The starting point of our campaign is to stand out and provide an adventure - in order to make waste sorting more attractive and to encourage residents to adopt new waste sorting skills. Based on a survey commissioned by HSY, young 18-30 -year-olds sort waste less than older age groups.

We aimed at creating a new and exciting way to learn about recycling. HSY's strategic goal is to recycle 60 per cent of domestic waste in the Helsinki Metropolitan Area by 2025; this means that there is a need for getting the residents motivated through innovative ways.

As a part of our Thank you for sorting your waste campaign, we created an HSY concept of a Waste Escape Room which uses the classic elements of an escape room. In the Waste Escape Room concept, waste sorting skills are the key to success.

Waste Escape Room has been introduced at a total of 8 events, reached 10 000 residents, aroused huge interest and was broadcasted live on national TV in 2019. The marketing channels included social media, a YouTuber, and events."

Ontarians In The Dark About Tire Recycling

Only a third (37 percent) of Ontarians know that tires are recycled in this province.

Nearly half (49 per cent) of Ontarians do not know whether they're recycled or thrown into landfills, and a surprising 14 per cent of residents – a whopping 1.5 million adults in Ontario– do not believe tires are recycled at all. In reality, tire manufacturers and automakers are responsible for recycling every tire they sell in Ontario, yet only 32 per cent know this is the case.

These are the findings of a recently released survey by eTracks Tire Management Systems.

The good news is 81 per cent agree that purchasing recycled products helps to combat climate change.

Most Ontarians unaware of tire recycling fees

In order to fund the jobs and services in the tire recycling industry, a small fee of approximately \$4 per tire is added to the consumer's cost when purchasing new car tires. This is generally broken out as a separate fee, but can be included in the price of the new tire.

However, more than half of Ontarians (55 percent) do not know there's a fee. Only one in four (25 percent) of Ontario residents are aware of the fee and its purpose, while another 20 percent know of the fee but do not know what it is for.

When asked to choose between a variety of options as reasons for the fee, nearly half (46 percent) said they believe it is a government tax, and 14 percent presume the funds are collected to pay for landfill fees. Regardless, the majority of residents (78 percent) say they're happy to pay a small fee when purchasing tires if it helps the environment.

Knowledge of recycled products is mixed

Once tires are recycled, they can be made into a variety of different products for both commercial and consumer use. Although 63 percent know that there are many products made from the scrap rubber collected from tires, their knowledge is mixed when asked what those products could be.

While a majority (70 percent) know that scrap tires can be used to make playgrounds and sports fields, fewer are aware that they can also be used for construction materials, athletic mats, asphalt and livestock mats. Surprisingly, only 18 percent know that garden mulch can be made from scrap tires.

Although a majority of respondents (83 percent) agree that recycling old tires into new products helps to combat climate change, and 69 percent believe products made from recycled tires are of high quality, only 28 percent agreed that they have intentionally purchased a product made from recycled tires – a missed opportunity for Ontarians.

More people could help combat climate change if they purchased recycled tire products after recognizing the high standards for recycling and knew more about the kind of products produced using recycled tires.

The survey was conducted between July 31 and Aug 4, 2020, on behalf of eTracks Tire Management System. For this survey, a sample of 1,000 Ontarians aged 18+ was interviewed online. Quotas and weighting were employed to ensure that the sample's composition reflects that of the Ontario population according to census parameters. The poll is accurate to within \pm 3.5 percentage points, 19 times out of 20.







