# Solid Waste Master Plan: Engagement Series Two – What We Learned Report

City of Ottawa July 2022

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# **Executive Summary**

Between February and May 2022, the City of Ottawa (City) engaged residents, stakeholders, and equity deserving groups on specific options that will be implemented in the City's new Solid Waste Master Plan (Waste Plan).

Building on the results of Engagement Series 1 (ES1) and the City's engagement on curbside garbage collection options, a long list of options was developed to address gaps in the City's current Solid Waste Plan. As part of Engagement Series 2, participants were asked to provide input on those options to better inform the Waste Plan and help work toward the goal of a Zero Waste Ottawa.

People were asked to engage in the process in a few different ways:

- A website survey hosted on the Engage Ottawa page
- A panel survey completed by a representative sample of 1,000 Ottawa residents
- A series of question and answer and workshop events held online between February and May
- A series of focus groups with key organizations that represent equity seeking groups

People were asked how far, how fast and what cost the City should implement options across the following areas:

- Waste avoidance, reduction and reuse
- Recycling and collection
- City facilities, events and parks
- Emerging technologies
- Multi-residential properties

There was also an emphasis on promotion, education and outreach surrounding these options.

#### Waste avoidance, reduction and reuse

Residents and stakeholders were asked about various waste avoidance, reduction and reuse activities. Engagement participants agreed that convenience and ease of use are top priorities when it comes to participation, while factors like inclusiveness and cost to household are less important. It was also noted that the City should play a role in supporting residents and local groups in their avoidance, reduction and reuse efforts through the use of subsidies, rebates and grants. In the face of a lack of awareness about specific options such as the Take it Back! Program and the Green Bin Program, engagement participants emphasized the importance of tailored education and communication to help support the adoption of these options. People similarly highlighted the importance of taking advantage of existing resources like public spaces and partnering with community organizations that are already doing work in this area.

#### **Recycling and collection**

When looking at recycling and collection, engagement participants expressed support for temporary neighbourhood drop-off depots for divertible materials as well as the expansion of curbside collection. Similarly, participants highlighted the need for further education and transparency about recycling programs including, for example, information about what happens with materials that are recycled. It was felt that reassurances about the effectiveness and benefits of recycling programs could be key to bolstering participation. Accessibility of services is a key influential factor, especially when it comes to options like the mobile recycling depot program. In general, it was noted that people with disabilities, people without vehicles, or seniors who cannot take items to the drop off locations, face barriers when accessing this type of programming. To help offset some of these



challenges, participants raised several suggestions to collection challenges and barriers, such as the use of off-season facilities or drop-offs and transit vehicles not in circulation for pick-ups.

#### City facilities, events and parks

Diverting more waste from City facilities, events and parks is an area of focus for the new Waste Plan. We also heard that the City should focus waste reduction efforts on organizations that hold special events such as festivals, outdoor events and events using City facilities, which, according to participants, is a higher priority than putting more recycling and green bins in public spaces. When speaking specifically about City facilities, participants said that initiatives that reduce the use of single-use items are a priority, followed by expanded diversion programs. Engagement participants echoed the need for more ways to divert waste from City facilities, events and parks, including targeting organic waste at the source, using closed above-ground bins, standardization in bin design and labelling with symbols, braille and large print, and/or having City ambassadors attend large events to educate residents on waste management.

#### **Emerging technologies**

Engagement participants were asked for their input on emerging technologies, including mechanical biological treatment, mixed waste processing, mass burn incineration and a Zero Waste Fleet. In general, people were hopeful about the potential for these technologies to produce 'win-win' outcomes by diverting waste, cutting pollution and creating energy at the same time. However, there were concerns about the potential financial impact of these new technologies, with additional concerns about the environmental and human impacts of options like incineration or mechanical biological treatment. It is worth mentioning that many people are opposed to any type of new technology altogether, preferring a focus on options that prioritize and support reuse, reduction and recycling and community behaviour change. It was suggested that providing more information about the technologies and their risks and benefits could help people understand their uses, and potential benefits better.

#### Multi-residential properties

When it came to multi-residential properties, participants were engaged on specific measures being considered, including the closure or conversion of garbage chutes, new building development standards and promotion, education and outreach initiatives. In the case of chutes being potentially converted or closed, most respondents indicated that they feel this change would not lead to more residents sorting their waste. According to participants, barriers to green bin use by multi-residential residents include a worry about cleanliness, pests and a perceived lack of convenience, as well as accessibility challenges for seniors and people with disabilities. For other participants, ensuring compliance on the part of property managers was also highlighted as a potential issue. At the same time, people would be encouraged to use the green bin program if organic chutes are introduced and are made available at properties. Other suggestions to help foster uptake include community strategies and providing better promotion, education and outreach.

#### Promotion, education and outreach

On the whole, engagement participants were in favour of more promotion, education and outreach across all options under consideration. Participants shared innovative ideas for reaching broader, more diverse audiences such as partnering with community organizations, translating materials in different languages and featuring promotions on pins, bags, reusable bottles and the like. However, there was hesitation among participants surrounding greater financial investment in these measures. Participants shared varied reasons for not supporting increased investment, some of which include questions about the effectiveness of some of the options being considered, concerns over higher taxes and satisfaction with the status quo.



#### Moving toward a Zero Waste Future

Residents were asked how far, how fast and how willing they were to make changes that support moving toward a Zero Waste Future. Broadly speaking, engagement participants indicated that all options being considered are important priorities and that they are willing to make big changes to their waste practices, with cost and environmental implications being the main driving forces. In order to extend the life of Trail Road Landfill, survey respondents supported measures that focus on behaviour change and minimizing the amount of waste that is sent to the landfill. People prefer additional fees for special services and a utility or rate-based model for financing them. When it came to the speed at which changes should be implemented, the majority of participants were generally in favour of taking action at a somewhat accelerated timeline, while others raised the benefits of using a gradual approach to bring residents on board.

# 1. Overview of Engagement

# 1.1. Background

The City along with Hill+Knowlton Strategies (H+K), carried out an extensive public consultation with people across Ottawa on the development of the City's new Waste Plan.

Following the development of the City's first Waste Plan in 2003, there have been many advancements and changes, including a renewed focus on environmental stewardship, a growing City, and new and emerging technologies in the Waste Sector. The new Waste Plan will provide the City with a framework, direction, and goals for solid waste management over the next 30 years.

Developing a new Waste Plan is important for a number of reasons, including:

- Allowing the City to plan, anticipate, and meet the needs of a growing City
- Achieving a balance between environmental sustainability, resident and stakeholder interests, and fiscal responsibility
- Ensuring new approaches are considered to managing waste
- Helping to advance the City's stagnant diversion rate
- Working to ensure the complex and integrated waste management system is managed effectively

The development of the City's new Waste Plan began in 2019 when City Council approved the scope and framework. This was followed by **ES1** which saw extensive engagement with residents and stakeholders on an assessment of the City's current waste management practices. From this consultation, we learned that residents want the City to focus on improving the waste diversion rate, including the adoption of a "zero waste" target. Residents told us that improved diversion should be accomplished through education, providing more ways of diverting waste, and making it easier for people in multi-residential buildings to use recycling or green bin programs. We also learned that residents and stakeholders want the City to see waste as a resource, and think that the City should consider the adoption of innovative and emerging technologies in waste management.

#### At-a-Glance

- 2019: Project begins
- 2021: City conducts Engagement Series 1 (ES1)
  - 2022: City conducts Engagement Series 2 (ES2)
    - Stream 1: Formal Public Opinion Research (Panel Survey)
      - Stream 2: Online Survey
      - Stream 3: Online Workshops and Focus Groups

## 1.2. Methodology and Parameters

Throughout 2021, the City produced a series of short-listed options for consideration based on resident input and an extensive technical planning process. **ES2** sought feedback on the different options and recommendations identified to achieve the Waste Plan's objectives. People were asked to consider:

- How fast should the City implement the Waste Plan's goals?
- How far should the City go in terms of achieving the Waste Plan's goals?
- How much should it cost and what are you willing to pay to achieve the Waste Plan's goals?

Input from ES2 will help inform the City's draft Waste Plan, which will be presented to Committee and Council in early 2023. More engagement with residents and stakeholders on the draft Waste Plan will happen in 2023 before the final Waste Plan is presented for Council consideration by mid 2023.

Engagement opportunities included a deliberative style, survey open to all residents and stakeholders through the Engage Ottawa website in 10 languages, a supplemental public opinion

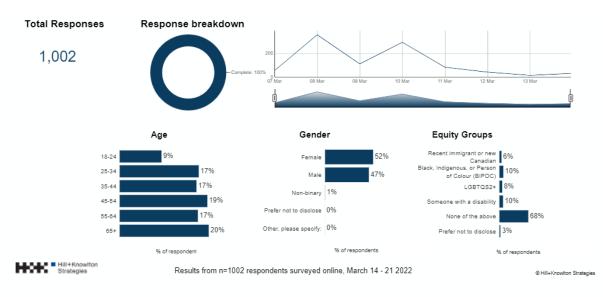


research sample (panel) of representative Ottawa residents, a series of public workshops and question-and-answer (Q&A) style events, and five focus groups with equity-seeking groups.

In addition, the City produced a series of two-page background infographics on Engagement Series 2. These were also available in 10 languages.

#### Stream 1: Formal Public Opinion Research (Panel Survey)

Panel responses to the survey were solicited through Leger, a market research firm. In total, 1,002 respondents completed the survey between March 14 and 22, 2022. Respondents were representative along 1) area of the city where they reside, 2) age and 3) gender. The margin of error for the research was ± three %. For demographic results of the panel survey, please refer to Figure 1 below.

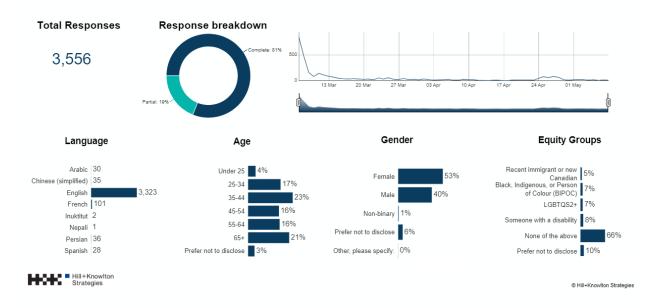


#### Figure 1

#### Stream 2: Online Survey

The online survey was open to all residents of Ottawa between April 7 and May 8, 2022 and generated 3,556 responses. Respondents were provided with the option of responding to the survey in a number of languages, including English, French, Farsi, Spanish, Arabic, Chinese (simplified), Nepali, Somali, Inuktitut or Anishinaabemowin. Overall, most respondents replied in English (94%), followed by French (three %) and Farsi (one %). The majority (81%) of respondents completed the full survey, meaning they navigated to the end of the survey.

The online survey aligns with current Ottawa demographic trends, with over half (53%) of respondents identify as female, while 8% identify as someone with a disability. 64% of respondents live in a suburban area of the city, followed by 24% of respondents in urban areas and 12% in rural areas. The most prominent Wards among respondents were Orleans (9% of respondents), Barrhaven (seven % of respondents) and Stittsville and Kitchissippi (6% of respondents each). For demographics of the public survey, please refer to Figure 2 below.





While respondents from the panel and website surveys were very similar, noticeable differences include:

- There were more panel respondents who identified as male (47%) compared to website survey respondents (40%).
- There were more website survey respondents who identified as living in a single-family home (61%) compared to panel survey respondents (49%).
- There were more panel respondents who identified as living in an apartment high rise (six floors and over) (14%) compared to website survey respondents (7%).

#### Stream 3: Online Workshops and Focus Groups

In total, there were 25 public and stakeholder events hosted during Engagement Series 2. Events ranged from a question-and-answer style event where participants were invited to ask questions of clarification from City officials to more dialogue-driven events where participants were invited to discuss key topics in breakout rooms. Residents and stakeholders were invited to register to participate in the engagement events through the City's Engage Ottawa platform.

The City led 17 events, including information sessions, councillor-led sessions, and focus group sessions. H+K led 8 events, including Q&A sessions and focus group sessions. In total, there were 25 events led by the City and H+K. There were 85 participants in the H+K-led sessions and 144 participants in the City-led sessions. In total, there were 229 participants across all of the events.

During Engagement Series 2, participation from a broad range of residents from across Ottawa was encouraged. This included ensuring residents were able to participate regardless of primary language, ability, or familiarity with the issues. The engagement survey and background content were made available in 10 languages, while participants to the engagement events were offered the option of participating in English or French and were also provided with closed captioning or sign language interpretation where required.

With regard to the qualitative analysis below, the use of the expression "most participants" represents a very strong support or an impression of near unanimity for an idea. Similarly, the term "many" indicates predominance or support by a large number of respondents, while the expression "several" indicates a frequent but not predominant theme. The expression "some" represents a notable but minority view, while "a few" represents an even smaller minority.

# 2. What We Learned

The following are the key findings and messages received from the ES2 process.

# 2.1. Waste Avoidance, Reduction & Reuse

#### PANEL SURVEY

When asked to consider **what types of activities residents would participate in** (related to avoidance, reduction and reuse):

- 61% of respondents said food waste reduction initiatives<sup>1</sup>
- 44% cent said lending libraries<sup>2</sup>
- 46% cent said community reuse events<sup>3</sup>
- 44% said community swaps<sup>4</sup>
- 43% who said repair cafes<sup>5</sup>
- 30% said sharing spaces<sup>6</sup>

Of note, those who identified as living in urban areas are more likely to participate in sharing spaces (22%) compared to suburban (10%) and rural (9%). There were no significant regional differences for other avoidance, reduction and reuse activities.

Ease of use and types of materials accepted were ranked highest as influential factors in participation (74% and 75% respectively), followed by location (67%), cost to household (60%) and inclusivity (26%). When looking at influential factors, there were no significant regional differences.

Respondents were also asked specifically about **the expansion of the City's Take it Back! program**<sup>7</sup> to include more products. 75% of respondents said the expansion is "very important" or "important," whereas only three % said it was "not important at all." Respondents ranked locations close to where they live (78%) and an increase of accepted materials (71%) as factors that would influence their participation the most in the Take it Back! program. On the topic of the Take it Back! program, some respondents noted they were not aware of the program. Overall, there were no significant regional differences when asked about the expansion of the program.

With the federal government's pursuit of actions to protect the environment and reduce plastic pollution across the country, panel respondents were also asked to discuss the role that the City can play in delivering its commitment to ban certain harmful single-use plastics.

- 48% of respondents said the City should support/pilot innovative ideas to reduce community reliance on single-use items
- 29% of respondents said to explore opportunities with local businesses to reduce reliance on other non-medical single-use items
- 12% said nothing, as long as the Federal Government introduces these regulations

<sup>&</sup>lt;sup>1</sup> Educating residents and implementing initiatives to avoid wasting food

<sup>&</sup>lt;sup>2</sup> Places that allow people to borrow items such as tools, equipment, and toys rather than buying them

<sup>&</sup>lt;sup>3</sup> Any event that promotes reusing, sharing, repairing, and repurposing items

<sup>&</sup>lt;sup>4</sup> Events that allow people to 'swap' no longer wanted items

<sup>&</sup>lt;sup>5</sup> Places where people gather to work on learning and repairing objects of everyday use such as electrical and mechanical devices, computers, bicycles, and clothing

<sup>&</sup>lt;sup>6</sup> Providing a space (temporary or permanent) where multiple people can share space and resources without having to buy new resources

<sup>&</sup>lt;sup>7</sup> The City's Take It Back! Program partners with over 500 retailers to take back more than 900 products that they sell. While the program includes products like electronics, furniture, used paint, and old reading glasses, it could expand to include more products and locations.



- Nine % did not know
- Two % said other

Survey respondents expressed support for **the City's initiative to advance the federal government's commitment**. It is worth noting that there are no key differences between demographic variables in this question. Some respondents further stated that tougher restrictions should be imposed. Some respondents advised the City to be an environmental leader by developing bylaws to expand the number of products to be recycled through residential recycling programs. Further noting that the City needs to expand its support for pilot programs and welcome innovative ideas from the public to reduce community reliance on single-use items.

Beyond taking a lead in regulating plastic pollution, survey respondents reiterated that they feel the City has a role to play in:

- Developing recycling incentive schemes to financially reward consumers with **subsidies** and **vouchers** (pay-as-you-throw program and deposit refund schemes)
- Ensuring that used plastics are effectively collected and diverted from landfills
- Supporting the research on improving recycling technologies
- Educating the public about plastic recycling

"The federal government's current commitments to ban certain single-use plastics are lacking urgency. The City should use this opportunity to take a proactive approach to lead environmental initiatives and ensure all plastic packaging is banned." – Panel survey respondent

**Reselling items was a secondary priority area that emerged from some respondents**. They also recommended the City **develop a program that allows consumers to resell items** that do not fit into the current criteria for recycling regulation. This will ensure that hard-to-recycle materials in good conditions can be reused or repurposed to prevent pollution caused by reducing the need to harvest new raw materials and sustain the environment.

One way the City is looking at avoiding, reusing or reducing waste in Ottawa communities is through the implementation of **subsidies**, **rebates or grants for local residents**, **resident groups**, **or non-profit organizations**. The majority of respondents (70%) said that the City should provide this financial support, whereas 30% said the City should not.

While the majority of respondents agree that the City should provide financial support, those who have lower household incomes are more likely to say "yes" (87% of respondents with a household income of \$20,000/year or less) than those in higher income brackets (60% of respondents with a household income of \$100,000 - \$119,000/year).

"An initiative like this could persuade reluctant people to change their behaviour and priorities when it comes to waste management, it's a way of educating and motivating people." – Panel survey respondent

The majority of the respondents noted that government subsidies and recycling grants will **incentivize businesses manufacturing their products to use recovered materials**.

"The city should be a large source of demand for recycled materials or products made with the recycled materials - with strong, consistent demand, more recycling/product manufacturing businesses will start." – Panel survey respondent

#### WEBSITE SURVEY

When asked about what types of avoidance, reduction and reuse activities residents would participate in (n=3,404), the majority of survey respondents (60%) said they were "very interested" in food waste reduction initiatives, followed by lending libraries (55%), community reuse events (52%), and community swaps (51%). Repair cafes and sharing spaces had lower interest (47% and 29% respectively). Respondents were also asked to rank what would influence their participation in these activities the most (n=3,404). The location of these activities (78%) and how easy they are to use (77%) were ranked highest among influential factors for respondent participation compared to types of materials accepted (64%), cost to household (58%) and inclusivity (e.g., services provided in various languages) (18%).

There are notable regional differences with respect to likeliness of participating in these avoidance, reduction and reuse activities. Of note, those who identified as living in urban areas are more likely to participate in all the listed avoidance, reduction and reuse activities, compared to those who identified as living in suburban and rural areas. Below is a breakdown of significant regional differences by activity:

- Those who identified as living in urban areas are more likely to participate in sharing spaces (26%) compared to suburban (15%) and rural (15%).
- Those who identified as living in urban areas are more likely to participate in community swaps (39%) compared to suburban (30%) and rural (26%).
- Those who identified as living in urban areas are more likely to participate in repair cafes (40%) compared to suburban (28%) and rural (24%).
- Those who identified as living in urban areas are more likely to participate in lending libraries (48%) compared to suburban (28%) and rural (26%).
- Those who identified as living in urban areas are more likely to participate in reuse events (41%) compared to suburban (30%) and rural (25%).
- Those who identified as living in urban areas are more likely to participate in food waste reduction initiatives (52%) compared to suburban (39%) and rural (36%).

Location accessibility emerged as a top priority by many respondents. Respondents shared several examples of key location accessibility considerations. One example that was shared by many respondents was the proximity of these events to public transit. These respondents mentioned how they do not own or have access to a car, and therefore cannot access activities like these as easily as someone who does. These respondents said they rely on public transit to be able to participate in activities like the Take it Back! program, lending libraries, repair cafes, etc.

#### "Accessibility is important. Although I have a car now, I didn't before and found it very difficult to get to places where certain services are offered. If it's possible for these events to be accessible by LRT or major bus routes, I think more people would turn up." – Website survey respondent

Some respondents also mentioned that the way these events are structured can result in long car lineups and traffic jams in various communities. This is seen as a barrier to participation and can cause confusion. Other respondents also explained that the way these activities are currently run requires residents to transport their waste or items all over the City, which is an inconvenience, especially for certain groups such as seniors, persons with disabilities and single parents with young children.

Other examples of accessibility considerations from respondents include:

- Proximity to parking
- Walking distance
- Biking distance



• Volunteers to pick up items from households (particularly for persons with disabilities and seniors)

The flexibility of scheduling and an increased frequency of activities emerged as top priorities from many respondents. Many respondents noted that having weekend options for these activities would be beneficial as they would provide opportunities outside of regular working hours to participate in these activities. Other respondents asked that the hours of operation of these activities be extended.

#### "If the events run during work hours we probably can't attend and that has more influence on our decision to take part than the cost, inclusivity and location." — Website survey respondent

Another top priority that emerged was further education and communication. Many respondents also explained how further education and communication about these activities and events can play an influential role in uptake and participation.

Examples shared by respondents of educational initiatives that would be beneficial:

- Community education sessions on topics like how to reduce waste
- Further information about what items can be recycled
- Clear information about how materials get reused
- Regular messaging across platforms, such as social media posts and website updates, about these events and activities
- Community focused programming and resources that meet the needs of residents

#### "Communication is critical, I can't participate in events that I don't know about." – Website survey respondent

Other respondents emphasized the importance of raising awareness of and educating the public about the City's reuse and reduction activities themselves, such as where and when they are happening, and clearly defining the purpose of each activity and program.

In the survey, respondents were asked specifically about the Take it Back! program and how important it is that the City expand it (n=3,459). When asked, the majority of respondents (78%) ranked this as "very important" or "important." Respondents were also asked to rank what would influence their participation in the program (n=3,404). 81% of respondents ranked location close to where they live as having a lot of influence on their participation the program, followed by 80% who said an increase of materials accepted and 55% who said bans preventing these items from being placed in the garbage. Of note, respondents who identified as living in urban areas ranked location close to where they live higher (62%) than those who identified as living in suburban (53%) and rural (55%) areas.

Respondents further explained what would influence their participation in the program. Lack of awareness emerged as a key theme from many respondents. Many respondents noted that they did not know it existed or did not understand what purpose the program serves. For example, the program was described as "poorly advertised" and not "straightforward to use".

#### "I have vaguely heard of this but have no idea what qualifies and have never used it. I would focus on making it better known and more used rather than expanding it." — Website survey respondent

Not only did respondents highlight their lack of awareness about the program itself, but some respondents also explained that more needs to be done with respect to **the participation of retailers in the program**. Respondents mentioned how they are unaware of which retailers currently participate in the program and finding that information has proven to be a challenge.



#### "I have tried to use the Take It Back program, but I haven't had any success. I would consider it more if it were easier to find the Program partners (i.e., physical signage)" — Website survey respondent

Other respondents also commented on how retailers need to be held accountable and need to be committed to stopping the waste at the source, rather than having to find ways of disposing excess items and waste.

Along with accessibility and usability, **convenience emerged as a top priority** with respect to the participation in reduce, reuse and avoidance activities, particularly with the Take it Back! program. The way the Take it Back! program is structured is seen as too much of an inconvenience to most respondents. For example, respondents said the program was a waste of time and gas, given that it largely requires a car to participate. It was explained that this approach is not convenient for those with mobility issues as well as seniors and there should be an option to have the City pick up items from households.

#### "For those with mobility issues, a curbside pick up would be great. Others do not have access to vehicles so it makes pariticipating problematic." – Website survey respondent

**Cost also emerged a secondary priority as it was seen as a barrier** to participation by some respondents. Those respondents mentioned that the cost of the City's reuse, reduce and avoidance activities should be minimal or free. A few other respondents mentioned how these activities and programs are an additional cost to taxpayers.

Single-use plastics was another area of exploration. Given that the federal government recently released draft regulations to ban certain single-use plastics by the end of the year, respondents were also asked about the role that the City should play in further influencing a reduction (n=3,060). **Leadership from the City emerged as a top priority with respect to banning single-use plastics.** Most respondents called for the City to be a leader in banning single-use plastics by putting its own ban in place that either matches or exceeds the federal one and by encouraging manufacturers to stop producing plastics or to use alternative materials. The next group of respondents suggested that **the City do nothing** as a means of avoiding raising taxes or having the ban harm residents inadvertently. Similarly, other respondents were against any action given their belief that the ban will be ineffective. Otherwise, **respondents recommended additional reforms**: considering bans on medical waste including face masks, opting for waste to energy technologies as a solution, following the best practices shared by other jurisdictions, focusing on making single-use items recyclable, starting with reducing or eliminating fast food containers and running a pilot program to measure the cost of a ban before implementing it.

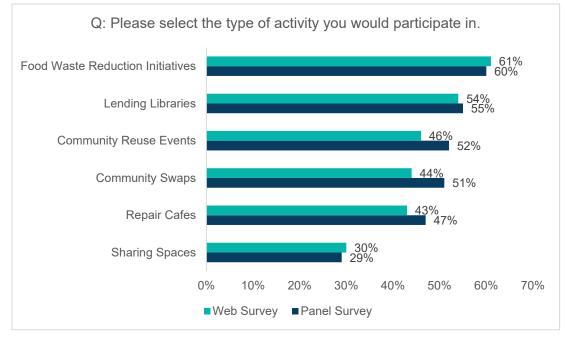
In the survey, respondents were also asked if the City should provide **subsidies**, **rebates or grants** to local residents, resident groups, or non-profit organizations for ideas or programs that avoid, reduce or reuse waste in communities (n=3,301). The majority of respondents (68%) said "yes" and 32% said "no." Respondents who said yes said the City should provide these subsidies, rebates or grants as they act as incentives and motivate people to take action. It was also explained that these efforts by the City could act as a "bottom-up approach" where communities can generate new ideas, rather than a directive from the municipality.

#### "A community based program can help inform and help get residents to participate in their local community efforts easier then a directive from the municipality." — Website survey respondent



#### COMPARISON OF PANEL AND WEBSITE SURVEYS

Respondents to the panel and website surveys were closely aligned across their priorities for waste avoidance, reduction and reuse programs.



#### Figure 3

• The only notable difference in responses was that panel survey respondents identified that they would be more likely to participate in community swaps (51%), repair cafes (47%) and community reuse events (52%) compared to website survey respondents (44%, 43% and 46% respectively).

#### **ONLINE WORKSHOPS AND FOCUS GROUPS**

Participants at many of the City- and H+K-led events highlighted the lack of capacity and resources of community organizations in supporting waste avoidance, reduction, and reuse options, especially community strategies. Thus, participants expressed a preference for **using free**, **local**, **or public spaces** (including spaces in multi-residential properties) for hosting programs. Participants also asked that **volunteers or City representatives be available** to staff programs. To aid with capacity and resource demands, participants recommended **partnering with organizations already engaging in similar work** across the city.

Next, participants shared input on **on-site organics management** at the event called *Beyond Curbside*. Participants expressed that on-site programs could promote behaviour change and food security through creating healthy soil. At the same time, they identified some challenges associated with programs: accessibility concerns for composting at home and rats in on-site compost bins at municipal facilities. Participants then came up with many ideas for overcoming challenges and improving on-site programs as a whole: running seasonal campaigns, involving high school students through volunteer hours, using vermicomposting to address accessibility concerns and incorporating on-site composting into some sort of landscape incentive. A few participants drew attention to converting food waste at the source, including having restaurants and grocery outlets redistribute edible food. They suggested that the City partner with Just Food, the Community Garden Network (via Just Food) and the Cooking for Cause initiative (via Parkdale Food Centre) as a starting point.

Additionally, participants at the City-led events shared reflections specifically on **the green bin program**. They called for the City to allow leaf and yard waste to be composted locally, give small



businesses free recycling and green bin services and provide better education around tips and tricks for making green bin use more convenient. As is also revealed in <u>Emerging Technologies</u>, participants' negative perceptions of green bins led to questions and concerns. At the City-led events, these perceptions were fueled by a lack of knowledge about the program.

When it came to **promotion, education and outreach**, participants across the board recommended that programs be better advertised, especially the Take it Back! program for which support among participants was mixed. In line with survey respondents, some participants suggested providing **financial incentives** to encourage participation. Participants also called for **smoother communications** between residents looking to donate and residents receiving donations for community programs. In all, education and convenience were the preferred approaches over enforcement and penalties as a way to achieve buy-in from residents.

Finally, at many of the events, **accessibility was raised as a key consideration**. Participants discussed the challenge of accessing programs without cars and the issue of bed bugs being a barrier for reuse programs. Participants also **considered the experiences of residents from equity-deserving groups**. For low-income residents, participants offered the idea of redistributing items from high- to low-income neighbourhoods. And, for newcomers, participants advocated that the City provide one-on-one, door-to-door outreach and execute communications in languages other than English and French. Participants also added that the lived experiences of residents should be considered by, for example, talking to people with these experiences and creating resident networks for people with disabilities.

# 2.2. Recycling & Collection

#### PANEL SURVEY

One of the areas the City wanted to further explore is recycling and collection. In the survey, respondents were asked to **rank priorities and preferences** with respect to various recycling options:

- 65% of respondents ranked temporary neighbourhood drop-off depots for divertible materials<sup>8</sup> as a high priority.
- 58% ranked collection of more materials at the curb<sup>9</sup> as a high priority.
- 55% saw separating bulky waste collection and recycling<sup>10</sup> and having a Waste Diversion Program in parks and other public spaces<sup>11</sup> as a high priority.
- 52% ranked expanding drop-off areas for divertible materials at the Trail Waste Facility as a high priority.
- 51% said that textile waste diversion enhancement<sup>12</sup> should be a high priority.

It's worth noting that across urban, suburban, and rural areas, priorities were closely aligned.

Respondents were also asked about **approaches for hazardous waste recycling**. 76% of respondents said they support expanding the number of temporary hazardous waste events making them accessible to more residents. 76% of respondents also said they support adding more locations to the City's Take it Back! Program. 75% of respondents said they support partnering with producers for permanent drop-off depots in select locations across the city. Respondents who identify as LGBTQS2+ were less likely to support this approach (9%) compared to other equity-deserving groups. Respondents aged 18-34 were also less likely to provide support (34% for ages 25-34 and 29% for ages 18-24) compared to those 65 and older (54%).

When asked further about their **recycling preferences**, 54% of panel respondents said they prefer to collect more recyclable materials at curbside, which is a more convenient, yet more expensive option, whereas 46% said they prefer the City collect more recyclable materials through mobile depots, which is a less convenient yet less expensive option. There were no notable differences between demographic areas for this question.

Regarding **mobile recycling depots**, 81% of respondents said that ease of use and location close to where they live have influence on their participation in the program. 79% said accepted materials, followed by 70% who said cost to household and 26% who said inclusivity (e.g., services provided in various languages). There were no notable regional differences with respect to these influential factors.

Respondents were also asked to rank how much of a priority it is that the City **explore various collection technologies** in order to increase waste diversion and making collection more efficient. 55% of respondents said the use of alternate collection containers in parks, public spaces and multi-residential properties should be a priority, followed closely by 54% who said working toward a zero-emissions vehicle fleet at Solid Waste Services should be a priority. 34% of respondents said automated cart-based collection for curbside garbage should be prioritized and 30% said Radio-

<sup>&</sup>lt;sup>8</sup> The City could host temporary depots for divertible materials to make waste diversion more accessible and convenient. Materials could include textiles, electronics, plastics not accepted in the blue box program, bulky items, hazardous waste, and more, depending on the availability of end markets.

<sup>&</sup>lt;sup>9</sup> Curbside collection of additional materials such as textiles, construction, and demolition materials

<sup>&</sup>lt;sup>10</sup> Collecting bulky waste separately from garbage to reuse/upcycle materials such as mattresses, scrap metal and furniture

<sup>&</sup>lt;sup>11</sup> Comprehensive waste diversion in parks and public spaces across the City, including recycling and/or organics bins

<sup>&</sup>lt;sup>12</sup> Ways to enhance current textile waste diversion such as more convenient placement of donation bins and providing more education to residents on textile diversion options



Frequency Identification (RFID) Technology on waste collection containers should be prioritized to improve operational efficiencies. 63% of respondents indicate it is important to look at new technologies that will help us work towards zero waste emissions from the solid waste vehicle fleet, 20% of respondents indicated this was not a priority. Notably, among respondents who did not think this was a priority, they mostly commented on the burden of added costs and taxes for little environmental benefit or change.

**Ensuring the sustainability and inclusivity of practices emerged as a top priority.** The key recommendation that respondents noted is to ensure **sustainable practices are inclusive** and can be effectively used by people of all abilities. Several respondents addressed their concerns about how the current garbage collection program is not friendly to those with accessibility issues and barriers. Additionally, respondents highlighted that **the sustainability movement has left lower-income individuals, seniors, and those with disability barriers behind**, thus recommending that the City develops alternative services to help transport items for those who do not live in close proximity to any public transportation.

#### "The initiatives included in the program will need to consider convenient access to transit as it would be difficult to carry heavy items across town on public transportation." – Panel survey respondent

#### WEBSITE SURVEY

Respondents were asked to rank which efforts they feel the City should prioritize implementing (n=3,404). Most respondents (73%) ranked **temporary neighbourhood drop-off depots for divertible materials as the highest priority** for implementation, followed by the collection of more materials at the curb (60%), having a Waste Diversion Program in parks and public spaces (58%) and textile waste diversion enhancement (58%). Separating bulky waste collection and recycling (53%) and expanding drop-off areas for divertible materials at the Trail Waste Facility (45%) were seen as less of a priority. Respondents were also asked specifically about their support for hazardous waste recycling approaches (n=3,404). 78% of respondents strongly support expanding the number of temporary hazardous waste events making them accessible to more residents. 77% strongly support partnering with producers for permanent drop off depots in select locations across the City and 76% strongly support adding more locations to the City's Take it Back! program.

Of note, those respondents who identified as living in urban areas are more likely to rank textile waste diversion enhancement, temporary neighbourhood drop-off depots, and Waste Diversion Program in parks and other public spaces as higher priorities for the City, compared to those who identified as living in suburban and rural areas. Below is a more detailed breakdown:

- Those who identified as living in urban areas are more likely to rank textile waste diversion enhancement (39%) as a higher priority for the City compared to suburban respondents (27%).
- Those who identified as living in urban areas are more likely to rank temporary neighbourhood drop-off depots (49%) as a higher priority for the City compared to suburban respondents (42%).
- Those who identified as living in urban areas are more likely to rank Waste Diversion Program in parks and other public spaces (37%) as a higher priority compared to rural respondents (23%).

Respondents were also asked about their preference of curbside collection versus recycling through mobile depots (n=3,169). 58% of respondents said that they prefer collecting more recyclable materials at curbside, noting that this option is more convenient yet more expensive. 42% of respondents said they prefer collecting more recyclable materials through mobile depots, which is



less convenient but less expensive. There were no notable regional differences with respect to preference.

Regarding mobile recycling depots, respondents ranked what would influence their participation in this program (n=3,404). 84% of respondents said that a location close to where they live would influence their participation the most, followed by 83% of respondents who said accepted materials and 82% who said ease of use. 58% of respondents said cost to household would have a lot of influence and only 14% of respondents said inclusivity (e.g., services provided in various languages) would have a lot of influence. Of note, those who identified as living in suburban areas (41%) are more likely to be influenced by cost to household compared to urban respondents (27%).

Accessibility emerged as a top influential factor for their participation in the mobile recycling depot program. Respondents explained that these mobile recycling depots are not conducive to people with disabilities, people without vehicles or seniors who do not have the ability to take items to the drop off location. This option is centered around residents who have the means (e.g., vehicles and income) to access the depot.

#### "Accessibility is important to me. If it's not easy and accessible, it's not something as a person with multiple disabilities I can participate in" – Website survey participant

Some respondents highlighted that the accessibility of the depots by foot, public transit, or cycling would influence their participation. It was noted that the City should consider locations that people can easily walk or cycle to.

**Convenience of mobile depots emerged as another top influential factor** when comparing mobile depots with curbside collection. It was noted that there is an added barrier with mobile in that residents have to drive to the depots to participate in the program. Curbside collection is seen by respondents as more efficient and convenient.

The **importance of public education and communication** was also emphasized by many respondents as a top influential factor in the success of the mobile recycling depots. Respondents identified the following examples of educational efforts that would contribute to successful participation in the mobile depots:

- Clear information available about the recycling depot events and disposal sites
- A better understanding of what materials are accepted at the depots
- Clear information about times and locations of the mobile drop-offs
- Information about the benefits of recycling, such as environmental benefits and community benefits

**Frequency** emerged as a secondary influential factor for the participation in mobile recycling depots. Some respondents explained that a regular schedule with increased windows of availability for the drop-offs is ideal and that the depots should be offered multiple days in a row.

#### "If it's a long time between events/opportunities, a lot will likely end up in waste because I don't want to or am unable to hang onto things for months at a time." — Website survey respondent

**Some respondents also highlighted accountability and transparency** as secondary influential factors in the participation of residents in mobile recycling depots. Some respondents mentioned wanting transparency about the percentage of materials that actually get recycled. They also want reassurance that this diversion program is working and that the materials are actually being recycled.

#### "Knowing that the material was being properly recycled afterwards, increasing the percent of our recycled materials that do actually get recycled instead of ending up in landfill." – Website survey respondent

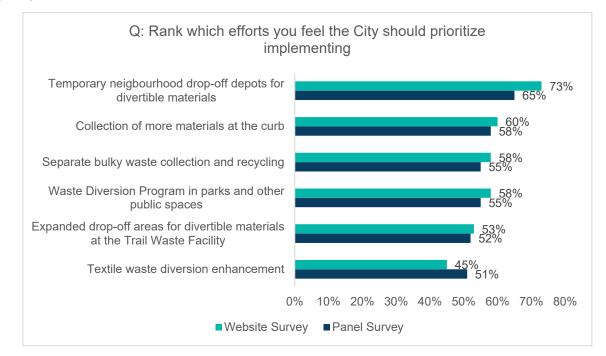


A few respondents also noted that the use of **financial incentives** could influence participation in mobile recycling depots. Respondent suggested there could be financial incentives for participation and financial penalties for non-compliance. For example, one respondent suggested:

#### "a cost to put recyclable materials in the garbage rather than recycling them, r a rebate given upon returning recyclable materials to an urban/central depot/drop-off" — Website survey respondent

Along with exploring recycling options, the City asked respondents about how much of a priority it is that they explore various collection technologies in order to increase waste diversion and make collection more efficient (n=3,404). 56% of respondents ranked the use of alternate containers in parks, public spaces, and multi-residential properties as a priority and 52% ranked working towards a zero-emissions vehicle fleet at Solid Waste Services as a priority. Automated cart-based collection for curbside garbage (24%) and RFID Technology on waste collection containers to improve operational efficiencies (23%) were seen as priorities for respondents. While it's important to 58% of respondents to look at new technologies that will help us work towards zero waste emissions from the solid waste vehicle fleet, 20% of respondents indicated this was not a priority. Notably, among respondents who did not think this was a priority, many thought it was not a wise investment nor did they think it would yield many positive environmental benefits. Respondents mostly commented on the burden of added costs and taxes for little environmental benefit. Some respondents also mentioned how there are more effective ways of spending money for the environment (e.g., expanding composting, investing in recycling programs and services).

## COMPARISON OF PANEL AND WEBSITE SURVEYS



Respondents to the panel and website surveys were closely aligned across their priorities for recycling.

#### Figure 4

- Respondents to the website survey (73%) ranked temporary neighbourhood drop-off depots for divertible materials noticeably higher than panel survey respondents (65%).
- Textile waste diversion enhancement was the only area panel survey respondents ranked higher than website survey respondents.



#### **ONLINE WORKSHOPS AND FOCUS GROUPS**

Several of the insights and concerns raised in the survey responses were echoed by participants in the City- and H+K-led events. Participants similarly called for the **expansion** of mobile recycling depots, **transparency** on what happens to items being recycled and **better communication** surrounding depot location and frequency. Like in the survey responses, a lot of the insights shared centered on **the accessibility of services** and the barriers that seniors and residents with disabilities experience. For example, automated bins were likewise met with skepticism from participants given the physical demands of carrying carts to the end of the curb.

At the same time, participants at all of the events built on some of the recommendations shared by survey respondents. After respondents stated a preference for curbside collection, participants at the events advocated for **separating recycling from bulky items** and **collecting of a wider variety of items**. And, in line with the point on expanding mobile recycling depots, participants suggested **doing the same for hazardous waste depots**. Participants also sought **regulations for textile bins so that items can be better sorted** once donated. In combination with community strategies, participants offered the idea of **having drop-offs at central locations like schools or community centers**.

Finally, the focus groups generated **various solutions to the collection challenges and barriers** identified: use off-season facilities for drop-offs, use transit vehicles not in circulation for pick-ups, create a service that residents can call for pick-ups and strategically plan pick-ups around holidays when greater volumes of waste are expected. It is worth mentioning that for the recycling and collection options and for the series of options in the waste avoidance, reduction and reuse section, a few participants voiced their **preference for reduction being a priority**, which would shrink the amount of waste needing to be managed by many of the options listed in this and other sections.

# 2.3. City Facilities, Events & Parks

#### PANEL SURVEY

On the topic of recycling and green bin programs in parks and public spaces, 66% of respondents said it is "very important" or "important" to have these programs. However, some respondents explained that it would be difficult to enforce this initiative and instead suggests the City **divert its focus to addressing household waste options and recycling**. Several voiced that it will be an overpriced initiative and wasted effort as the City's current efforts in maintaining clean parks have been neglected. Without policing and enforcement on which items are deposited into which bin, this could lead to overcrowding of waste and contribute to air pollution.

#### "I don't think there is sufficient consumption of organics outdoors that would justify the investment in funding more bins especially during the winter." – Panel survey respondent

"It sounds expensive and will be a waste of time and resources. If the City is going to implement such initiatives, it should develop a waste to energy incinerator (and not pay lip service like that program from 5-10 years ago) like all the major cities in Europe do." – Panel survey respondent

#### "I fear that parks and public spaces will become an uncontrollable mess. I just see how disrespectful people are now leaving garbage and not picking up after their dogs." – Panel survey respondent

Of note, with respect to recycling and green bin programs in parks and public spaces, those respondents who identified as living in urban areas (44%) are more likely to have the City prioritize these programs, compared to those who identified as living in suburban areas (32%).

Along with parks and public spaces, respondents were asked about the importance of the City increasing waste reduction, **recycling and organics diversion requirements on organizations that hold special events** such as festivals, outdoor events and events using City facilities. 78% said this is "very important" or "important", whereas three % said it is "not important at all". Respondents who said it is not important explained that there is a need to focus on areas that are producing larger amounts of waste, such as household waste and that these efforts are too costly and a waste of taxpayer money. There were no notable regional differences for this question.

Respondents were also asked about the implementation of waste reduction and recycling strategies, specifically what they think the City should prioritize with respect to City facilities. 60% of respondents ranked **single-use item reduction** initiatives as a priority, followed by 57% who ranked **expanded diversion programs** at City facilities and 55% who ranked policies making it mandatory to divert waste in City facilities and operations. There were no notable regional differences for this question.

#### WEBSITE SURVEY

When asked about prioritizing recycling and green bin programs in parks and public spaces (n=3,180), 63% of respondents said it is "very important" or "important," whereas only 10% said it was "not important at all." Parks and public spaces emerged as a lower priority from respondents who ranked these efforts as "not important". A focus on residential and commercial waste collection emerged as a top priority. The respondents who ranked these efforts as "not important". The respondents who ranked these efforts as "not important" explained that these programs in parks and public spaces should be lower priority as parks and public spaces do not produce the most waste. These respondents emphasized that there should be more of a focus on residential and commercial collection as there are more opportunities to divert at home. It was suggested that people bring their waste home with them as this would divert more waste.



#### "Efforts should be made to educate people to bring their waste with them. Pack it in, pack it out has been policy in most natural settings across the country. This policy should apply to urban green spaces" – Website survey respondent

When explaining their thoughts on the City's program priorities, some respondents raised questions such as:

- "Is waste from public areas a large proportion of the city's waste?"
- "Wouldn't it be better to focus on reducing waste from businesses or households which contribute greater amounts of waste?"
- "How much of our waste comes from these events compared to businesses and apartment buildings which don't do these"

**Improper bin use also emerged as a key concern.** Other respondents raised concerns about people **not knowing how to use the bins properly** with respect to sorting waste. For example, it was noted that there are risks of non-recyclable materials ending up in recycle bins. It was noted that more education is needed if bins are going to be placed in parks and public spaces.

## "Too many improperly sorted materials would probably mean that it would all end up in a landfill anyway."

#### - Website survey respondent

Concerns of more rodents, wildlife, bugs and pest also emerged as a concern from some respondents. There are also concerns from some respondents about smell problems.

Of note, with respect to recycling and green bin programs in parks and public spaces, those respondents who identified as living in urban areas (49%) are more likely to have the City prioritize these programs, compared to those who identified as living in rural areas (33%).

Along with parks and public spaces, survey respondents were asked about the importance of the City increasing waste reduction, recycling and organics diversion requirements on organizations that **hold special events such as festivals**, outdoor events and events using City facilities (n=3,060). 80% of respondents said this is "very important" or "important," whereas only five % said this is "not important at all." Of note, respondents who identified as living in urban areas (67%) are more likely to support the City increasing these requirements compared to those who identified as living in suburban areas (58%).

The allocation of resources emerged as a top priority from respondents who ranked these efforts as "not important". They emphasized that resources should be allocated to other areas such as industrial waste, apartment waste and residential waste, as events constitute a small percentage of the City's garbage production. These respondents would rather see resources allocated to areas that will have more impact.

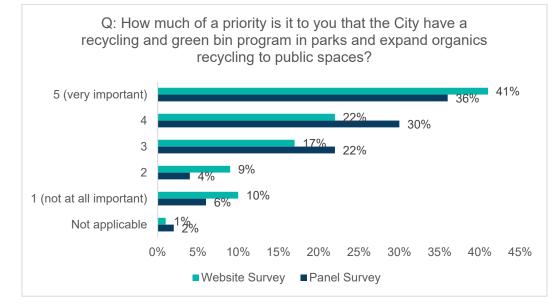
#### "The impact of this on waste reduction and recycling would be minimal, while it would add to the cost and complexity of special events." — Website survey respondent

Level of care and compliance also emerged as concerns. Some other respondents explained that people who attend special events, like festivals and outdoor events, **do not prioritize what they are throwing away** and that they do not "care enough to be careful". They said that it is more challenging for attendees to comply at those events.

Respondents were also asked about the implementation of waste reduction and recycling strategies, specifically what they think the City should prioritize with respect to City facilities (n=3,404). 67% of respondents ranked a **single-use item reduction initiative as a priority**, followed by 61% who said there should be expanded diversion programs at City facilities and 60% who said the City should prioritize policies making it mandatory to divert waste in City facilities and operations. Of note,



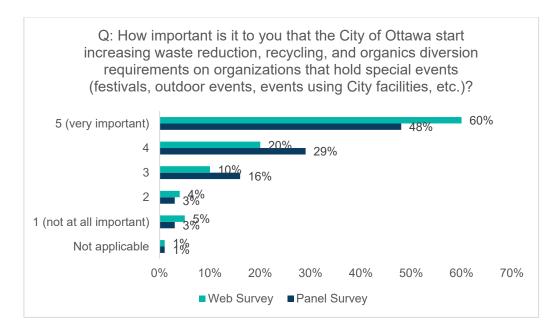
respondents who identified as living in urban areas are more likely to prioritize a single-use item reduction initiative (59%) and policies making it mandatory to divert waste in City facilities and operations (44%), compared to those who identified as living in suburban areas (44% and 32% respectively).



## COMPARISON OF PANEL AND WEBSITE SURVEYS

#### Figure 5

• Of note, respondents to the website survey (41%) are more likely to prioritize recycling and green bin programs in parks and expand organics recycling to public spaces compared to panel survey respondents (36%).



#### Figure 6

• Respondents to the website survey (60%) are more likely to prioritize increasing waste reduction, recycling, and organics diversion requirements on organizations that hold special events, compared to panel survey respondents (48%).



#### **ONLINE WORKSHOPS AND FOCUS GROUPS**

Participants at the City-led events were in favour of waste management systems being implemented at City facilities, events, and parks. At the H+K-led events, however, there was more nuanced discussion on the tension between the waste diversion potential of these options and their ability to reduce operational capacity at the City. While some participants called for the implementation of as many options as possible, other participants recommended that reuse, reduction, diversion, and innovation be prioritized while bearing in mind the issues that might arise if costs are too high. Promotion, education, and culture change were seen as useful tools when looking to introduce new measures.

On the topic of organics, participants advocated for more green bins at public events and for on-site composting at parks. Other participants suggested targeting **organic waste at the source** through giving excess food to residents in need or through providing green bins to restaurants and grocery stores. **Organic waste as residual waste** was also discussed, with some participants supporting waste to energy technologies. All of the events raised the question of how to manage **animal waste** such as dog feces. Otherwise, specifically related to parks, a few concerns were raised about **contamination** in sorting waste and having bins be **secure** and **animal-proof**.

The H+K-led focus groups on accessibility and with CAWI offered unique insights across the areas of facilities, events and parks. For parks, participants thought that bins should **stay out** for more of the year and wanted to see the use of **closed**, **above-ground bins** with three holes and with a fire prevention mechanism. On the topic of bins, participants also sought **standardization in design and labelling** with symbols, braille, and large print in order to support accessibility and behaviour change. When it came to waste reduction and avoidance, participants suggested that the City **install water bottle filling stations** and **mandate contracts requiring details on the waste management plans** of their events. At another City-led event, one participant similarly suggested that the City have **ambassadors attend large events to educate residents** on waste management.

# 2.4. Emerging Technologies

#### PANEL SURVEY

The majority of panel respondents (84%) were supportive of the City investing in technology to generate renewable gas from food waste, as this measure will help achieve its goals of reaching zero greenhouse gas emissions by 2050. These respondents noted that exploring new opportunities to tackle climate change with clean technology will significantly **cut carbon pollution** and will **help businesses create new opportunities** for people in the clean energy economy. Additionally, a few respondents expressed their support for this adaptation to clean technology investments as a way to facilitate economic growth and long-term job creation.

#### "Waste is a great source of renewable energy as it also reduces the need for garbage storage and disposal facilities (landfills)." – Panel survey respondent

There were no notable regional differences when asked about investing in this technology.

When asked to provide feedback on the City's intention to explore technologies that will switch collection trucks and landfill equipment to renewable natural gas, hybrid or electric, 63% of respondents ranked it as 5 or 4 in terms of priority, with 5 being "very important" and 1 being "not at all important." For the respondents that ranked it as 2 or 1, they were concerned that the initial costs **will be overpriced** and **will not be impactful enough** to be worthwhile.

#### "Electric vehicles/hybrids may be better for air pollution, but batteries are made of toxic materials and this is simply pushing the problem to wherever they are manufactured. I highly doubt the effectiveness of this during winter." – Panel survey respondent

# "What is the cost of this going to be? What will happen to the old equipment? Will this change negate the environmental impact of manufacturing new equipment? I doubt it." – Panel survey respondent

Respondents were also asked, if they do not participate in the City's **green bin program**, whether knowing that their food waste is being used to generate renewable energy would encourage them to participate in the future. Half of respondents said "yes," while 9% said "no" and 41% said that the question was not applicable to them.

Respondents were then asked to provide feedback on efforts to further reduce the amount of waste going to the landfill. 57% of respondents said that **mechanical biological treatment**<sup>13</sup> should be prioritized, followed by 56% who said **mixed waste processing**<sup>14</sup> and 45% who said **mass burn incineration**.<sup>15</sup> When considering potentially developing an incineration facility to manage waste that cannot be recycled or composted, feedback varied. Some respondents noted that, while it may be expensive to implement these programs now, it will benefit the environment tremendously in the future by reducing the use of landfills. Some respondents also noted that incineration is notorious for creating pollution and that the City should consider mixed waste processing and mechanical biological treatment to make waste management more efficient. It is worth noting that there were no key differences between demographic variables in this question.

<sup>&</sup>lt;sup>13</sup> The development of a pre-sort facility to recover recyclables and organics that still make their way into the garbage, plus facilities that would treat the separated organics and create fuel from the residue

<sup>&</sup>lt;sup>14</sup> The development of a mechanical pre-sort facility to recover some recyclables and organics that still make their way into the garbage

<sup>&</sup>lt;sup>15</sup> The possibility of the City to develop an incineration facility to manage waste that cannot be recycled or composted and generate energy from the heat of burning waste



# "I think it is important to separate as many recyclables and organics as possible, and while an incinerator may be cheaper, it would increase air pollution, and is a direction I don't think the city should take unless necessary." – Panel survey respondent

When asked about top priorities for studying these technologies:

- 62% of respondents ranked financial impact on residents as a top priority
- 60% said impacts to human health
- 57% said impacts on climate goals
- 50% said financial impact on the City
- 31% said potential facility location.

Respondents who identified as a person with a disability are more likely to rank impacts to human health as a top priority (76%). Respondents between the ages of 35-44 are less likely to prioritize financial impacts on the City (40%) and financial impacts on residents (51%) than seniors aged 65 and over (62% and 72%, respectively). Also of note, respondents who identified as living in urban areas (65%) are more likely to prioritize impacts on climate goals and less likely to prioritize financial impact on residents.

In looking at the topic of innovation, 66% of respondents said the City should be at the forefront of **partnering with research institutions, other levels of government and the private sector** to test out new technology. 77% said that the City should **pilot new technologies** that have seen some success in other cities, and 84% said that the City should **adopt proven and well-established technologies**. Of note, those respondents who identified as living in urban areas (75%) are more likely to believe the City should be at the forefront of partnering with research institutions, other levels of government, and the private sector to test new technology, compared to those who identified as living in suburban areas (64%) and rural areas (61%).

#### WEBSITE SURVEY

Respondents were asked about how much of a priority it is that the City explore emerging technologies in order to help reach its climate change goals, specifically new technologies that will help work toward zero waste emissions from the solid waste vehicle fleet (n=2,979). 58% of respondents said that it is "very important" or "important." The City also asked respondents which efforts it should prioritize in further reducing the amount of waste going to the landfill (n=3,404). 57% of respondents said that the City should prioritize mechanical biological treatment, followed by 56% who said mixed waste processing and 45% who said mass burn incineration. Of note, those who identified as living in urban areas are more likely to prioritize mechanical biological treatment, compared to those who identified as living in suburban areas (29%) are more likely to prioritize mass burn incineration, compared to those who identified as living in urban areas (29%) areas who are less likely.

When asked about the City investing in technology to generate renewable gas from food waste to help achieve the City's climate goals (n=3,013), 85% of respondents **support this investment** as a means of achieving its climate goals, whereas 15% were not supportive. Relatedly, when asked about further studying these technologies (n=3,001), 62% of respondents said that the financial impact on residents should be considered a top priority, followed by impacts to human health (60%), impacts on climate goals (57%), financial impact on the City (50%) and potential facility location (31%). Of note, respondents who identified as living in urban areas are more likely to prioritize impacts on climate goals (75%) compared to those identified as living in rural areas (56%) and suburban areas (60%). In comparison, rural respondents (68%) and suburban respondents (61%) are more likely to prioritize financial impact on residents compared to urban residents (47%).



These priorities are reflected in the insights shared in the next section, as respondents were asked to qualify why they supported, or did not support, investments in technology for generating renewable gas.

#### Debates on emerging technologies

When asked about support for increased investment in newer technologies, there was broad agreement among many respondents that their use should serve to protect the environment. In this vein, **the risk of negative environmental and health effects** was raised as a concern surrounding technologies like incineration. Their potentially harmful impact on vulnerable communities was also highlighted by a few respondents.

When it came to the disadvantages of emerging technologies, the potential for **higher taxes** and **changes to property taxes** or quality of life were the top concerns raised by many respondents. Several respondents were also **wary of the City's ability to procure new technologies** given its challenges with past projects and insisted that good management and proven technologies be precursors to investment. It is worth mentioning that several respondents opposed using technologies altogether, preferring a focus on behaviour change in the Rs found earlier in the waste management hierarchy like reuse, reduction and recycling. They argued that technologies do not address the root problem of waste generation and that the other Rs, teamed with enforcement through penalties and incentivization, were better for diversion. Still some respondents disagreed, saying that attempts to change behaviour have been ineffective and that technologies can be convenient solutions for stubborn residents.

"Seeking a simple and fast solution through technology is not a solution, it diverts the solution to a new technological threshold, that may well be in the future a further problem, which means it conveniently relieves the individual and corporations of responsibility." – Website survey respondent

For respondents supportive of emerging technologies, many highlighted the "win-win" advantages of generating energy, diverting waste and inducing positive spillover effects like creating jobs. Several respondents encouraged the City to look toward other municipalities or countries for models of successful technology use given the possibility of it becoming a leader in the space. The use of high efficiency incinerators in European countries was an example raised frequently. Some respondents also recommended that the City partner with the federal government, schools and businesses for support with funding, leadership and research and development. The above insights were echoed in the quantitative results, for 61% of respondents said that the City should be at the forefront of partnering with research institutions, other levels of government and the private sector to test new technology. 76% said that the City should pilot new technologies that have seen some success in other cities and 90% said that the City should adopt proven and well-established technologies.

"Generating energy from waste is a sustainable and tested way to generate local energy. With the right technologies that achieve negligible to zero waste pollution from these facilities, these are overall beneficial. They reduce landfill, make us independent from importing energy and also generate jobs." - Website survey respondent

Another group of respondents recommended **a combination of technologies and other options** as a way to work toward the City's climate goals. For example, some respondents suggested the process of engaging in reduction activities first, and for the inevitable waste that is left over, using mixed waste processing or mixed biological treatment and then incineration to remove of any remaining excess. A few respondents engaged on the broad topic of technologies by **offering alternative solutions entirely**. Terracycling, gasification plants and molecular recycling technology were offered as a few examples.



#### "Reduce, Reuse, Divert the organics. Use industrial composting facilities for the organics. Deploy waste to energy facilities for burnables." – Website survey respondent

A final group of respondents stated that they **lacked adequate information or expertise to assess the technologies**, with several asking for more detailed costing of proposed investments. Similarly, some respondents mentioned that the City should be required to **educate residents on any technologies in order to win buy-in**. To this end, top-of-mind for some respondents was ensuring the efficiency, effectiveness, reliability and long-term operation and sustainability of technologies.

#### Reflections on incentivizing green bin use

Respondents were asked for more specific reflections on whether the introduction of emerging technologies would incentivize better use of their green bins (n=2,962). For the respondents indicating that it would not, several explained that **they preferred other options** like incineration, that **the bins are too smelly or messy** and that **they are a waste of money**. Some respondents **deemed the program ineffective** and **stated that they were unwilling to change their behaviour** or would require some kind of incentive to do so. A few respondents did not use the program because they produced very little organic waste or because they experienced barriers related to accessibility or space.

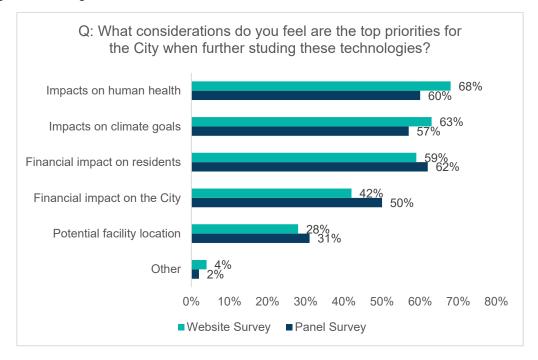
#### Reflections on prioritizing a Zero Waste Fleet

Respondents were also asked if they saw investing in a Zero Waste Fleet as a priority for the City. When respondents answered in the negative, many communicated concerns surrounding **cost** and their preference for prioritizing **other options**. Several respondents questioned **whether the impact of a Zero Waste Fleet would be significant** in the first place and even noted that the mining and manufacturing of electric batteries produces **harmful environmental and labour consequences**. Some respondents' contributions were more pragmatic in nature, questioning **reliability** throughout the winter, expressing preferences for **one technology over another** and scrutinizing the **logic behind decommissioning the existing fleet**. Otherwise, a few respondents were worried about the City's ability to action a Zero Waste Fleet. As a solution, they suggested waiting to invest until technologies are better proven and more affordable.



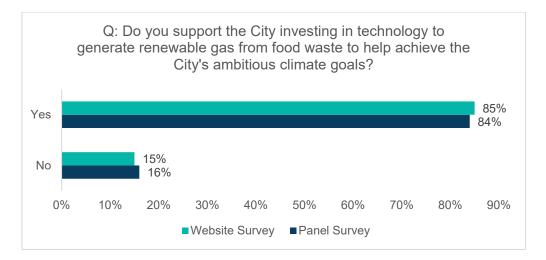
#### COMPARISON OF PANEL AND WEBSITE SURVEYS

Respondents to the panel and website surveys were asked what considerations the City should prioritize when studying emerging technologies. The surveys also asked if respondents support the City investing in these technologies to generate renewable gas from food waste as a means of achieving its climate goals.



#### Figure 7

- Respondents to the panel and website surveys are mostly aligned in what considerations they believe the City should prioritize when studying technologies.
- Respondents to the panel survey (50%) are more likely to prioritize the financial impact on the City than respondents to the website survey (42%).
- Respondents to the website survey (63% and 68%, respectively) are more likely to prioritize impacts on the City's climate goals and impacts to human health than respondents to the panel survey (57% and 60%, respectively).



#### Figure 8

• Respondents to the panel and website surveys are very closely aligned in their support for investing in technology to generate renewable gas from food waste.



#### **ONLINE WORKSHOPS AND FOCUS GROUPS**

Similar to the reflections shared by survey respondents, some participants at the City-led workshops suggested that the City **research other municipalities' experiences** with emerging technologies before taking action in this area. They reinforced the notion that the City should not be investing in technologies before they are properly **tested** and **proven**.

At the H+K-led event titled *Residual Waste Technology* participants discussed the advantages, disadvantages, priorities, and speed of implementing options including mixed waste processing, mechanical biological treatment, incineration and other emerging technologies. Across all of these options, several participants raised the advantages of **diverting waste** away from the landfill, removing the requirement of **behaviour change** and **allowing flexibility** based on the technology selected. Several participants also discussed the disadvantages of **higher costs** for technology, the **environmental implications** of energy generation and **the lack of waste reduction** encouraged by their use.

When it came to prioritization, some participants were not in favour of leading with any of the technologies and **named other options that should be addressed**: green bin use, reuse, reduction and diversion and promotion, education, and outreach to help with up-take for these options. Some participants also **suggested entirely different recommendations**, many of which spoke to the specific limitations or risks of particular technologies. In terms of speed, there was general agreement that action should be taken as soon as possible to address limited landfill life but that technologies may not be the best route to go. To substantiate this point, several participants wanted to see **more data on the risks and successes of technologies**.

H+K led another event called *Reducing Greenhouse Gas Emissions* and fielded questions on **anaerobic digestion, co-digestion, and co-location**. Participants asked the following questions:

Anaerobic digestion	Co-digestion and co-location
<ul> <li>What waste is included or excluded</li> <li>What to do in the case of contamination</li> <li>How to dis/incentivize community emissions</li> <li>How the technology would be funded</li> <li>Where the technology would come from</li> <li>The construction, cost and capacity of facilities</li> <li>The criteria, location and number of processors</li> <li>The possibility of decentralized anaerobic digestors</li> </ul>	<ul> <li>What waste is included or excluded</li> <li>What waste or biproducts are generated</li> <li>How to avoid the issue of fatbergs</li> <li>The land and labour needed for facilities</li> <li>The scope of participation based on type of dwelling</li> <li>The possibility of extending the technology to commercial operations</li> <li>How other jurisdictions are using the technology</li> <li>The capacity of the existing sewage system</li> <li>The timeline for implementation</li> </ul>

At a different event hosted in a Q&A-style format, participants asked questions about the option of a **Zero Waste Fleet**. Here, their questions centered on the number of vehicles in the fleet, the fuel options being considered, if other types of vehicles will be included and how this option interacts with the others in the Solid Waste Master Plan. Finally, several participants at the City-led events were in favour of having an electric fleet and suggested including a natural gas option as part of the SWMP.



## 2.5. Multi-Residential Properties

#### PANEL SURVEY

Respondents were asked if they would be encouraged to sort their waste if garbage chutes were closed and if residents were required to take their waste to garbage or recycling rooms. 64% said "no" and 36% said "yes." Of note, those who identified as living in rural areas are more likely to be encouraged to sort their waste (84%) compared to those who identified as living in suburban (33%) and urban (33%) areas, who are less likely.

A few respondents shared the concern that **seniors and people with disabilities will face challenges** in carrying all of their household waste due to mobility issues. Notably, some apartments do not have the proper infrastructure to allow for these changes. Some respondents in this group acknowledged that **more accountability is needed for apartment buildings and multi-unit properties** to contribute more to sustainable practices. They suggested that the City provide additional bins in garbage rooms and attach a penalty for those who do not sort out their garbage.

"Make the garbage, green bin, and recycling in our apartment building instead of having to go across the road to another locked building to dispose our waste and recyclables like we have to do now." – Panel survey respondent

Respondents were also asked if **they would be encouraged to use the green bin program should garbage chutes be converted** to green bin chutes. 68% of respondents said "yes" and 32% of respondents said "no." There were no notable regional differences for this question.

Respondents who said "yes" explained that it would be more convenient and easier to use. Those who said "no" voiced several concerns, including the inconvenience of having to bring garbage downstairs and the cleanliness of the chute.

Regarding barriers to participation for recycling and green bin programs:

- 48% of respondents said that pests and cleanliness are barriers.
- 47% said that there is a lack of space in their homes to store bins.
- 43% explained that it is easier to throw out garbage than to recycle or use the green bin.
- 43% said that their property does not have a green bin program.
- 30% expressed a lack of knowledge about how to sort waste.
- 26% said that it takes too much effort.
- 22% said that recycling and green bin storage is too far from their unit.
- 11% said that their property does not have recycling.

"Getting people to throw things in the correct bins (you see a lot of people putting plastics in the paper bins, food waste in all bins, paper the plastic bins etc.)" – Panel survey respondent

"People not caring about what they put in the bags. They will go for convenience over being responsible."

#### – Panel survey respondent

Of note, those who identified as living in suburban areas (33%) are more likely to identify recycling and green bin storage being too far from their unit as a barrier, compared to those who identified as living in urban (12%) areas.

Along with barriers, respondents were also asked about **their support for the green bin program**. When asked what would help them or neighbours participate in the program, 66% asked to make it more convenient to dispose of green bin waste, followed by 60% who asked to make it less messy or smelly. 55% sought better understanding of how the green bin works and how it benefits the



environment, while 40% called for more education when introducing the program. 27% said that educational printed materials in languages other than English or French would help, and 15% said that an ambassador program where neighbours can share educational tips would be beneficial. There were no notable regional differences for this question.

Other examples of ideas shared by participants include:

- Biodegradable bags to dispose of green bin waste
- Expanded list of what can go in green bins
- Free green bin collection pails
- Kiosk or booth in the lobbies of apartment buildings explaining the program
- Penalties for not using the program
- Greater financial incentives
- Better pest control efforts

#### WEBSITE SURVEY

In the website survey, respondents were asked if they would be encouraged to sort their waste should garbage chutes close and should residents be required to take their waste to garbage or recycling rooms (n=181). The majority of respondents (71%) said that **this measure would not encourage them to sort their waste**, whereas 29% said that it would. Many respondents noted that they already sort their waste or that their building already has a sorting system in place. A few respondents mentioned that they have a "tri-sorter" in their building, while others explained that they have to bring down their recycling and garbage anyways.

## "I already only put garbage down the chute and sort recycling in the garbage room." - Website survey participant

Convenience was a key priority identified by respondents, as some mentioned how the closure of chutes would be **inconvenient** for people with disabilities and seniors. Some respondents also mentioned that, even if they wanted to further sort their waste, they do not have access to certain programs like the green bin program in their multi-residential building.

Respondents were also asked if they would be encouraged to use the green bin program if garbage chutes were converted to organics chutes (n=176). 71% of respondents said that this measure would encourage them to use the program, whereas 29% said that it would not. Many respondents emphasized that **it is less about encouragement and more about buildings taking part in the program and supplying the green bins**. It was explained that, currently, many buildings do not offer the program to residents and tenants.

#### "I miss having access to a green bin program now that I live in a multi-residential building." — Website survey respondent

There was debate among respondents about **the pros and cons of converting the garbage chute to an organics chute**. Some respondents said that they are happy to convert the chute, as it would be a more efficient, convenient option but should still be closely monitored.

#### "A chute for all decompostable items would keep those smelly things out of our homes, make it easy to dispose of them properly, and otherwise reduce our garbage." — Website survey respondent

Other respondents explained that it would be **more inconvenient** to convert the chute because it would mean that garbage would have to be brought downstairs and no longer be thrown down the chute.

#### "I had to take the other garbage down 14 floors, I would be really cross that the chute were converted for green bins. Green waste is not as heavy as garbage." – Website survey respondent



Yet other respondents highlighted how it would be **easier and more convenient** to have a green bin chute, however, a regular garbage chute is still needed. A few respondents recommended a "**tri-sorter**" **chute** for garbage, recycling and organics.

#### "I think the best approach would be to add a compost option to the tri-sorter, rather than replace the chute to only be used for compost only." — Website survey respondent

Another concern raised by some respondents was the **cleaning and decontamination of the chute**. Given that the chute would deal with food and organics waste, respondents were concerned about pests, bugs, rodents, dirt and smells.

#### "I can't imagine a way that this would not be filthy, smelly, and ridden with insects and cockroaches." — Website survey respondent

Respondents were also asked about **barriers** for multi-residential residents when it comes to participating in recycling and green bin programs. 65% of respondents said that their **properties not having a green bin program** is a main barrier to participation. 50% of respondents said that it is easier to throw out garbage than to recycle or use the green bin, followed by 47% who experienced a lack of space in the home to store bins and 45% who said that pests and cleanliness are barriers. Other barriers included a lack of knowledge about how to store waste (40%), recycling and green bin storage being too far from units (28%), participation taking too much effort (21%) and properties not having recycling (6%).

Along with barriers, respondents were also asked about their support for the green bin program (n=188). When asked what would help them participate in the program, 70% of respondents asked to **make it more convenient** to dispose of green bin waste, followed by 60% who asked to **make it less messy and smelly**.

56% of respondents said that a **better understanding of how the green bin works** and protects the environment would help them use the program, while 39% of respondents said that **offering more education when introducing the program** would similarly be helpful. Specifically, educating people about what happens to green bin materials after processing and describing the advantages of this process were highlighted by some respondents. It was also noted that ongoing education would be beneficial, especially as new tenants move into multi-residential buildings.

A few respondents mentioned the use of **fines and penalties** for residents who do not participate in the program. Those respondents said that this measure will act as an incentive for using the green bin.

Other thoughts shared by respondents include:

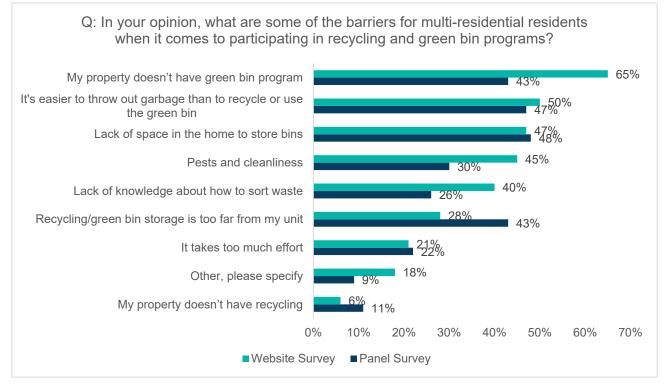
- Making bin sizes larger to accommodate waste and compost
- Having a larger number of bins available
- Scheduling more frequent collection and emptying of bins

It is worth noting that there were no notable regional differences from website survey respondents for questions related to multi-residential properties.

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#### COMPARISON OF PANEL AND WEBSITE SURVEYS

Respondents to the panel and website surveys were asked about the barriers that exist when it comes to residents at multi-residential properties participating in recycling and green bin programs.



#### Figure 9

- Respondents to the panel survey (43%) think that storage for recycling or green bins that's too far from their unit is a larger barrier than respondents to the website survey (28%).
- Respondents to the website (40%) survey think that a lack of knowledge about how to sort waste is a larger barrier than respondents to the panel survey (26%).
- Respondents to the website survey (45%) think that pests and cleanliness is a larger barrier than respondents to the panel survey (30%).
- Respondents to the website survey (65%) think that their property not having a green bin program is a larger barrier than respondents to the panel survey (43%).

#### **ONLINE WORKSHOPS AND FOCUS GROUPS**

Input shared from participants at the City- and H+K-led events was largely similar for multi-residential properties (MRPs). The options of new building development standards and chute closure and conversion to chute programs were seen as good opportunities for **waste diversion** by several participants. Specifically for the chute-related programs, however, several participants were concerned about **pests**, **smell**, **contamination**, and **barriers for residents with disabilities**. Some participants also identified the challenge of **non-compliance on the part of property owners** should new development standards be introduced.

In turning to solutions, many participants suggested that **garbage rooms be made more appealing** through promoting cleanliness, locating them in central places and, accessibility-wise, ensuring that they have enough space and automatic door controls. On the topic of chutes, a few participants shared additional recommendations: introduce **separate chutes** for different types of waste or have **multi-use chutes** with waste, recycling, and organics streams.



Other solutions for waste collection proposed by participants:

- *General*: Use MRPs as sites for piloting new options
- *Waste Avoidance, Reduction and Reuse*: Pool organics collection between buildings or between regions
- *Recycling and Collection*: Have a garbage room on each floor with a service elevator for staff to shuttle garbage to a central location in the building

MRPs were viewed by many participants as ideal spaces for introducing **community strategies** like community closets, give-away tables and reuse and swap events. These participants also suggested partnering with third parties to facilitate community programs. In general, several participants were in favour of more **promotion**, **education and outreach** being directed toward MRPs. Specific solutions in this area are discussed in the following section.



## 2.6. Promotion, Education & Enforcement

#### PANEL SURVEY

Throughout the survey, some respondents referred to current gaps in the system and how the City can provide the public with more education on recycling processes and environmental impacts. A few respondents recommended **resources in multiple languages** to promote inclusivity and meet the needs of a diverse public. Additionally, a few respondents recommended **a well-advertised promotional campaign** and for the City to set up introductory kiosks in apartment buildings to expand its reach, including:

- Promoting community workshops for sharing ideas and strategies to reduce waste
- Producing clear and concise messaging and protocols on the list of acceptable recyclables
- Providing easy sorting and clear instructions on which recyclables belong in which bins
- Developing programs to educate tenants that are advertised by both the City and local business partners

"City operations must show leadership and the power of example in order to encourage and stimulate community participation." – Panel survey respondent

"Educating residents on how to separate recyclables would help make these processes more efficient. The Waste Explorer app is great, but difficult for elderly people. It is needs a more simple interface."
– Panel survey respondent

"The city needs to invest in its capabilities to process and reduce waste first before starting an expansive advertising campaign. There are lots of businesses out there which do not have good waste management practice and contribute to significant pollution." – Panel survey respondent

When asked if they supported **an annual household increase in investment** toward promotion, education, and outreach activities, 43% of respondents said that they "strongly support" or "support" it, while 15% said that they "do not support [it] at all." It is worth noting that there are no key differences between demographic variables in this question.

For respondents that were unsupportive, their reasons varied. Many respondents worried that costs are already too high, while several respondents believed that enough information already exists. Some respondents wanted to see a demonstrable benefit of increasing investment. Other respondents preferred that the investment go somewhere else entirely, such as toward collection or technologies.

The final questions of the survey asked about **the City's collection calendar**, and specifically, the educational information provided on various waste-related topics. When respondents were asked if they had ever paid attention to the educational section, 56% said "yes" and that the information is useful, whereas 7% said "yes" but that the information is not useful. 31% said "no" and that they have never paid attention to the upper part of the calendar and 6% said it was not applicable to them. When asked about what they do with the paper copy of their calendar, 54% said that they keep it and refer to it frequently, followed by 21% who said that they recycle or dispose of it the moment they get it. 13% said that they keep it but do not ever refer to it and 12% said they do not remember ever getting it.



#### WEBSITE SURVEY

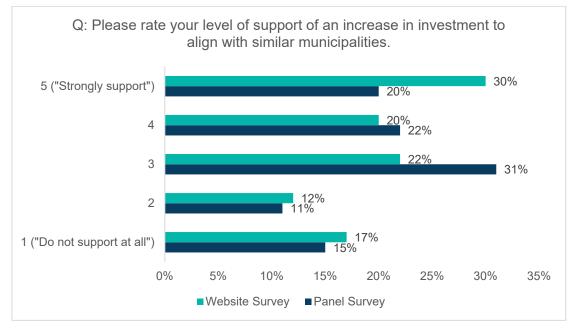
When asked if they supported an annual household increase in investment toward promotion, education, and outreach activities (n=2,892), 50% of website survey respondents said that they "strongly support" or "support" the increased investment, whereas 17% "do not support [it] at all."

Of the respondents that were unsupportive, their reasons varied. Many respondents said that they **would not support activities that might increase taxes**, and similarly, many **did not believe that the City could afford to spend** more on promotion, education and outreach. Several respondents articulated that promotion, education and outreach activities are either **redundant** or **ineffective**, as residents are unwilling or apathetic to change and would require enforcement to comply. Some respondents sought **greater emphasis on investing in other options** such as addressing business waste, making recycling easier and generating energy from waste before looking to promotion, education, and outreach.

To justify increased spending, seeing **a tangible return on investment**, especially from municipalities that have higher rates, was a priority articulated by many respondents. Aside from respondents that saw the City's existing efforts as sufficient, a few respondents offered the suggestion of either **using free advertising through social media** or **distinguishing which activities were more effective** than others. A final set of some respondents advocated for the investment to go toward other projects entirely, including improving public transit, providing affordable housing and repairing roads.

#### COMPARISON OF PANEL AND WEBSITE SURVEYS

Currently, the City invests approximately \$0.50 per household annually in promotion, education and outreach. Similar cities are investing between \$4 and \$5 per household annually. Respondents to the website and panel surveys were asked to rate their support for the City increasing investment in promotion, education and outreach in line with the amounts spent by similar municipalities.



#### Figure 10

- Respondents to the website survey (22%) are less likely to support a neutral rating ("3") than respondents to the panel survey (31%).
- Respondents to the website survey are more likely to indicate support ("4" or "5"), or a lack of support ("1" or "2"), than respondents to the panel survey.



#### **ONLINE WORKSHOPS AND FOCUS GROUPS**

The City-led workshops generated several recommendations for its promotion, education and outreach activities. Some participants recommended that the City focus on **change management** and **public engagement** by making information fun and by better advertising existing videos on recycling and waste. In terms of specific audiences, a few participants suggested that the City target residents without access to the internet through mail drops and that it engage youth in schools as a way to start education from a young age.

Interestingly, promotion, education and outreach were themes **brought up in the majority of the H+K-led events**. When discussing waste avoidance, reduction and reuse, some participants suggested that residents would benefit from education over enforcement to "break bad habits." On the topic of community strategies and the Take it Back! program, several participants sought general information and wanted opportunities for participation to be better advertised. For organics, a few participants asked for more details on composting for home gardens and on-site management. At the session on facilities, parks and events, a few participants similarly supported promotion, education, and outreach, especially as an alternative to proposed measures like clear garbage bags. Finally, when discussing multi-residential properties, promotion, education, and outreach came up as key areas of action across the options of chute conversion or closure and new building development standards.

After discussing the advantages and disadvantages associated with promotion, education and outreach, other innovative ideas were suggested:

- General: Create and share a handbook of resources available locally
- *General*: Partner with schools, businesses and community organizations serving equity-deserving groups
- *General*: Use pins, bags, t-shirts, reusable bottles to raise awareness and increase visibility
- *Recycling and Collection*: Make the waste explorer printable, grouped by bin and more user- and child-friendly
- *Community Strategies:* Make it easier for those donating items to communicate with those receiving items
- *Community Strategies:* Host programming in schools and workshops teaching residents how to repair and repurpose items
- *Community Strategies*: Funnel used items toward artists to create public pieces and exhibitions
- *Multi-Residential Properties*: Have councilors and staff visit multi-residential properties more often

It is worth mentioning that, at many of the events, **some participants grappled with where to use promotion, education, and outreach in comparison to an approach that prioritizes incentivization and enforcement**. The latter approach was raised and preferred only in specific cases, such as penalties or incentives for improving sorting, penalties for property owners who are not compliant with new standards and incentives for participation in community strategies and any other new measures. Otherwise, participants were largely in favour of promotion, education, and outreach.

# 3. Moving Toward a Zero Waste Future

#### PANEL SURVEY

#### How fast the City should move

When asked about how fast the City should move toward the goal of a Zero Waste Future, on a speed scale from one to 100, respondents said that the City should be moving at a speed of 57.3. Respondents between the ages of 18-24 are more likely to suggest a higher speed (67.3) compared to other age groups. Those who identified as living in an urban area are also more likely to suggest a higher speed (63.3).

When asked if there was anything else that influenced their choice, respondents articulated various priorities associated with their preference for speed, several respondents noted how **climate change is forcing them to rethink their current priorities and goals**, emphasizing the urgency of the climate crisis and the need for cost-effective solutions to produce a realistic plan to reduce landfill waste. The majority of respondents also advised the City to adopt a **gradual approach** when implementing new recommendations. They described how changes to the current regulations require **public buy-in** and that people are more likely to resist change if they are not properly consulted. Respondents also recommended a pilot program before enforcing any new regulations to build public support and make any necessary alterations.

"We no longer have the luxury of time to slowly implement changes. Action is needed now." - Panel survey respondent

"In order to have a Zero Waste Future, it must be a gradual start with information and education for the public so that they can begin to understand the process and slowly start re-assessing our waste management systems and start to switch over the new programs as they see fit." – Panel survey respondent

#### How willing residents are to make big changes

As the City outlined its priorities to support the move toward a circular economy and a Zero-Waste Future, respondents were asked to provide feedback on **making changes to their lifestyles** to help action the City's goals. 67% of respondents said they are "very willing" or "willing" to make big changes in their waste practices in order to help reach the goal of a Zero Waste Future, whereas 5% said they are "not willing at all." Of note, respondents from the wards of Kanata South (16% - "not willing at all") and Gloucester-South Nepean (16% - "not willing") are more likely to be unwilling to change their lifestyles compared to other wards.

There were no notable regional differences between respondents who identified as suburban, urban and rural.

When asked if respondents are willing to make changes to their waste management practices in order to help meet the goals of a Zero Waste Future, several key priorities emerged. The majority of respondents were in **support of making changes to their recycling practices, if the City restructures its commitments**. Specifically, respondents noted that the public will be more inclined to work together with the City to find solutions to current challenges if the **City takes the lead in making changes to its current waste management practices.** On the other hand, several respondents were ambivalent in regard to a Zero Waste Future, noting that they already do their part when it comes to recycling. Some respondents were critical of current regulations, noting that many plastic items end up in landfills. They further noted that if the City were to make changes to its current waste management practices, the public will require more transparency on how it will be implemented and the overall cost of the program.



"Already recycle paper and plastic, but many plastic items are not actually recyclable at all in this area and end up in landfill anyways. There needs to be some transparency about what is actually recycled." – Panel survey respondent

"I need more information on how this will be done and exactly how much this will cost." – Panel survey respondent

When asked about what influenced their willingness, 68% of respondents said environmental impacts influenced their willingness, followed by 64% who said cost and 60% who said a behaviour change is required. Of note, respondents who identified as living in urban areas (26%) are less likely to be influenced by cost compared to those who identified as living in suburban areas (38%) and rural areas (41%).

Regarding **willingness to pay annually** for an improved, more innovative, and sustainable waste management system, over 85% of respondents expressed their willingness to pay more, broken down as follows:

- 27% of respondents said less than \$50
- 21% said \$50-\$99
- 18% said \$100-\$149
- 10% said \$150-\$200
- 9% said more than \$200
- 16% said none

It is worth noting that there are no key differences between demographic variables in this question.

When asked about **support for potential financing options**, 41% of respondents said they are in favour of additional fees for special services and a utility/rate-based model.<sup>16</sup> 34% said they are in favour of a flat fee model.<sup>17</sup> Of note, respondents living in urban areas are more likely to support a utility/rate-based model (25%) compared to those living in rural areas who are more likely to oppose (22%).

Thinking ahead to the future of Ottawa's solid waste, the life of the City's Trail Road Landfill is important to consider. The City asked respondents to **prioritize approaches to extend the life of the Trail Road Landfill**. 71% of respondents prioritized a focus on behaviour management programs and policies to minimize waste going to the landfill, followed by 67% who said all reasonable efforts should be made to extend the life of this important community asset. 42% prioritized using tipping fees to create an incentive to reduce waste disposal for hard to manage items and 40% said to expand the landfill facility within the current property. Finally, 24% prioritized the use of private landfills in the region where operationally beneficial. It is worth noting that there are no key differences between demographic variables in this question.

One of the final questions that was asked in the survey was about **which options the City should prioritize implementing**. 31% of respondents said all options are a priority, followed by 25% who said options that reduce the amount of waste at the lowest cost per tonne. 18% said the City should prioritize options that require residents to change their behaviours and create sustainable lifestyle habits, while 3% said the City should prioritize options that take almost no effort to implement but are the easiest to achieve and 12% said options that have the greatest ability to reduce our greenhouse

<sup>&</sup>lt;sup>16</sup> Each household pays an equal minimum fixed rate to cover the costs of waste collection but pays a variable rate for the amount of waste they generate (i.e., the more waste generated, the more that they pay).

<sup>&</sup>lt;sup>17</sup> The City offers an on-demand service for special items, and residents pay an additional fee to access those services (e.g., bulky material collection or at-home hazardous materials pick-up).



gas footprint should be prioritized. It is worth noting that there are no key differences between demographic variables in this question.

#### WEBSITE SURVEY

#### How fast the City should move

When asked how fast the City should move toward the goal of a Zero Waste Future, on a speed scale from one to 100 (n=2,318), respondents said that the City should be moving at a speed of 66.1 toward its goal of a Zero Waste Future. Respondents under the age of 35 are more likely to suggest a higher speed (77.0 for respondents aged 25-34 and 81.6 for respondents under 25) compared to older respondents. Respondents living in urban areas are also more likely to suggest a higher speed (75.8) compared to suburban (64) and rural (58.8) areas who are less likely.

Respondents articulated various priorities associated with their preference of speed. **Several top priorities emerged from respondents.** Many respondents argued that **harm to the environment**, **worry for future generations** and **concern for human health** should be driving priorities. Conversely, many respondents advocated for **avoiding tax increases**, especially amidst the skyrocketing cost of living. These positions exemplify the disparate feedback received from respondents: several called for accelerated<sup>18</sup> change because of environmental destruction and the risk of higher costs down the line, while several called for gradual<sup>19</sup> change to bring residents on board and to allow for cost/benefit analyses to be conducted.

Various secondary priorities also emerged from several respondents. Several respondents were more pointed in their feedback by suggesting that attention be paid to improving the functioning and uptake of basic avoidance, reduction, and reuse programs such as waste collection and green bins. As a part of this suggestion, some respondents emphasized the need for behaviour change through promotion, education, incentives, and penalties, including by changing the behaviour of industry, corporations and restaurants as some of the biggest waste producers. Notably, some respondents mentioned that a Zero Waste Future is unfeasible in the first place and that, if it was, they lacked trust in the City to achieve it. For a few respondents taking a different perspective, partnering with schools and community centers and establishing clearer goals and longer-term sustainability were possible courses of action.

#### How willing residents are to make big changes

On the question of willingness (n=2,841), 69% of respondents said they are "very willing" or "willing" to make big changes in their waste practices in order to help the City reach their goal of a Zero Waste Future.

Respondents under the age of 35 are more likely to be willing to make changes in their waste practices to help the City reach a Zero Waste Future (61%: 25-34; 60%: under 25) compared to respondents over 65 who are less likely (42%). Respondents living in urban areas are also more likely to make changes (59%) compared to respondents living in suburban and rural areas who are less likely (44% and 39%). Respondents residing in Somerset (60%), Rideau-Rockliffe (67%) are also more likely to make changes compared to other wards such as South Nepean (35%) and Stittsville (36%).

<sup>&</sup>lt;sup>18</sup> Accelerated means that changes for residents will occur quickly, which may cost more upfront but less in the long term.

<sup>&</sup>lt;sup>19</sup> Gradual means that changes for residents will occur over a longer timeframe, which may cost more over the long term but less in the short term.



When asked about what would influence their willingness (n=3404), 73% of respondents said that environmental impacts influenced their decision the most followed by 63% who said a required behaviour change and 53% who said cost.

Respondents under the age of 35 are more likely to be influenced by environmental impacts compared to those aged 45-54 (49%) and those aged 65 and over (51%). Respondents residing in urban areas are also more likely to be influenced by environmental impacts (71%) compared to those residing in suburban (52%) and rural (49%) areas. Of note, respondents who have a household income of \$20,000 or less are more likely to be influenced by environmental impacts (79%) compared to those in higher income brackets (61% of respondents with a household income of \$120,000 or more). Respondents residing in the wards of Rideau-Vanier (71%), Somerset (75%), Capital (70%), Kitchissippi (66%) and Rideau-Rockliffe (77%) are more likely to be influenced by environmental impacts compared to other wards such as Gloucester-South Nepean (37%) and Stittsville (43%) who are less likely.

Otherwise, respondents described the ways in which they are already playing their part in working toward a Zero Waste Future. Several respondents called for **businesses**, **landlords and retailers to bear greater responsibility** given that they produce more waste than residents. Some respondents were also frustrated with other residents who were perceived to be unwilling to do simple sorting or use their recycling or green bins.

On this note, several respondents argued that **current measures are cumbersome** and **did not want to be inconvenienced** by having to change their behaviour. A subset of these respondents raised difficulties associated with accessibility concerns, while another subset suggested looking to solutions like technologies as substitutes for behaviour change. Some respondents wanted to see **more change come from the City**, as they viewed existing programs as being ineffective or not managed properly. Finally, similar to the above question, a few respondents did not agree with the feasibility of a Zero Waste Future and were worried about taxes increasing.

With respect to how much residents are willing to pay annually for an improved, more innovative, and sustainable waste management system (n=2,828), **over 87% of respondents expressed their willingness to pay more, including:** 

- 16% of respondents said less than \$50
- 19% said \$50-\$99
- 17% said \$100-\$149
- 15% said \$150-\$200
- 20% said more than \$200
- 12% said none.

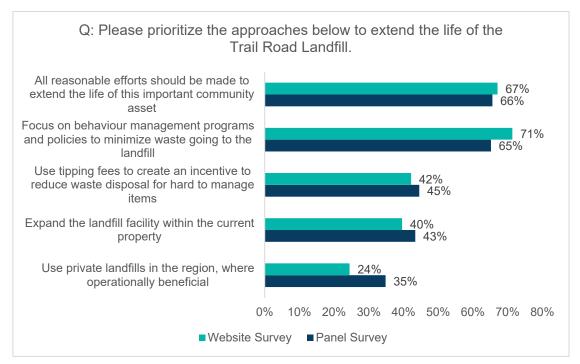
For this question, respondents aged 25-34 are more likely to be willing to pay more than \$200 (30%). Also, respondents residing in suburban areas are less likely to be willing to pay \$150 or more (14% at \$150-\$200 and 18% at more than \$200). Those who have a household income of \$120,000 or more are more likely to be willing to pay more than \$200 (29%) but less likely to be willing to pay less than \$50 annually (12%).

**Financing options** were also discussed (n=3,404) with 50% of respondents saying they are in favour of a utility/rate-based model. 47% of respondents said they are in favour of additional fees for special services and 34% said they are in favour of a flat fee model. Respondents aged under 25 are more likely to support a utility/rate-based model (31%) compared to those aged 65 and over who are less likely (15%). Further, respondents who identified as LGBTQS2+ and BIPOC are less likely to oppose this model (12% and 13%, respectively) compared to respondents who identified as having a disability who are more likely to oppose (31%). Respondents residing in urban areas are more likely to support this model (38%) compared to respondents residing in suburban areas (27%). Respondents residing in rural areas are more likely to strongly oppose additional fees for special services compared to respondents residing in urban areas (14%).



Thinking ahead to the future of Ottawa's solid waste, the life of the City's Trail Road Landfill is important to consider (n=3,404). The City asked respondents to prioritize approaches to extend the life of the Trail Road Landfill. 71% of respondents said that **the City should focus on behaviour management programs and policies** to minimize waste going to the landfill. 67% of respondents said that all reasonable efforts should be made to extend the life of this important community asset. 42% of respondents said to prioritize using tipping fees to create an incentive to reduce waste disposal for hard to manage items and 40% said to prioritize using private landfill facility with the current property. Only 24% of respondents said to prioritize using private landfills in the region, where operationally beneficial.

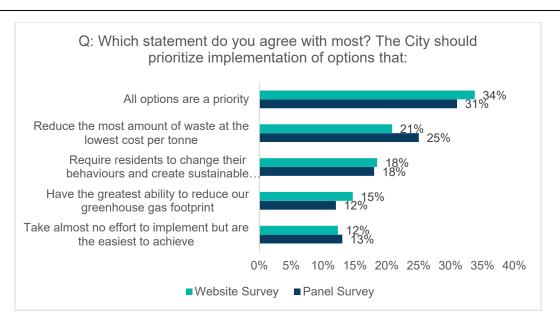
One of the final questions that was asked in the survey was about which options the City should prioritize implementing (n=2,772). 34% of respondents said **all options are a priority**, followed by 21% who said the City should prioritize options that reduce the most amount of waste at the lowest cost per tonne. 18% said options that require residents to change their behaviours and create sustainable lifestyle habits should be prioritized. 15% said options that have the greatest ability to reduce our greenhouse gas footprint and 12% said options that take almost no effort to implement but are the easiest to achieve.



#### COMPARISON OF PANEL AND WEBSITE SURVEYS

#### Figure 11

- Respondents for the panel and website surveys were closely aligned on expanding the landfill facility within the current property, using tipping fees to create an incentive to reduce waste disposal for hard to manage items and focusing on behaviour management programs and policies to minimize waste going to the landfill.
- Of note, panel survey respondents ranked using private landfills in the region, where operationally beneficial, noticeably higher (35%) than website survey respondents (24%). Website survey respondents also ranked a focus on behaviour management programs and policies to minimize waste going to the landfill noticeably higher (71%) than panel survey respondents (66%).



#### Figure 12

- Respondents to the panel and website surveys were closely aligned across their priorities for option implementation.
- "Reduce the most amount of waste at the lowest cost per tonne" was the only statement where panel survey respondents ranked higher than website survey respondents.

#### **ONLINE WORKSHOPS AND FOCUS GROUPS**

Many of the H+K-led workshops featured a polling activity where participants had an opportunity to prioritize options, indicate how important particular options were to them and mark how fast they preferred that action be taken on them. The events for which there were polls included *Taking the Lead*, *Beyond Curbside*, *Out in the Public* and *Reducing Greenhouse Gas Emissions*. For the raw results of these polls, please see Appendix C.

Across the first three workshops, the majority of participants wanted action to be taken "very soon" or "soon." The majority of **participants at all four workshops also deemed it either** "**very important**" **or** "**important**" **that the City spend resources and time** on the options presented at the workshops. Only at *Out in the Public* did some participants indicate that spending resources and time was "not very important."

A large proportion of participants (57% at *Taking the Lead* and 67% at *Beyond Curbside*) picked **community strategies** as the option that was the most important to them. At *Out in the Public*, working in **parks and public spaces** proved to be the most important option, with 50% of participants voting for it. Finally, all participants at *Reducing Greenhouse Gas Emissions* supported the City **investing in technology to generate renewable gas from food waste**. Of the participants that do not use green bins, 80% would be encouraged to better use them if they knew that renewable energy was being generated from organic waste.



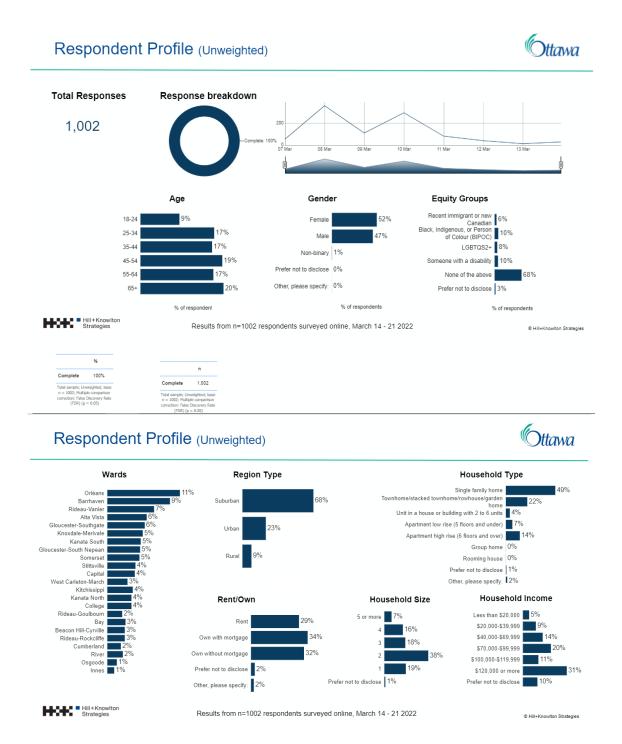
# 4. Conclusion & Next Steps

Results from the public and panel surveys, workshops and focus groups clearly demonstrate that residents have different priorities for the options that they would like the City to implement. At the same time, throughout their responses, a few key considerations and common themes emerged:

- Residents want options that are convenient to use and understand.
- The accessibility of options is a key consideration for many resident groups, including people with disabilities and seniors. This consideration was clearly expressed for reuse activities and events such as the Take it Back! program.
- There is strong support for comprehensive education and communication efforts surrounding options, but when asked if they were willing to spend more on these efforts, some survey respondents were not in favour.
- While residents are looking to the City to be an environmental leader in reaching its goal of a Zero Waste Future, they are also weary of the potential tax increases associated with implementing different options.
- The City could adopt proven and well-established technologies after weighing the costs and benefits of using them and consulting examples of implementation from other jurisdictions.

The City of Ottawa would like to thank the thousands of Ottawa residents who shared their views and concerns about the options presented in the Solid Waste Master Plan. Their input is extremely valuable and will help the City to develop its draft Waste Plan. This plan will be presented to Committee and Council in Q4 of 2023.

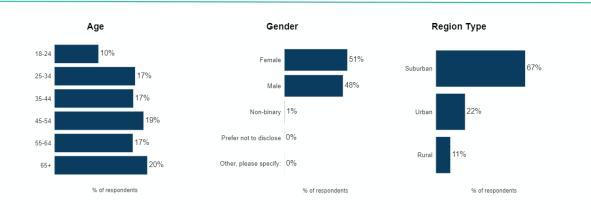
# **Appendix A: Panel Survey Results**



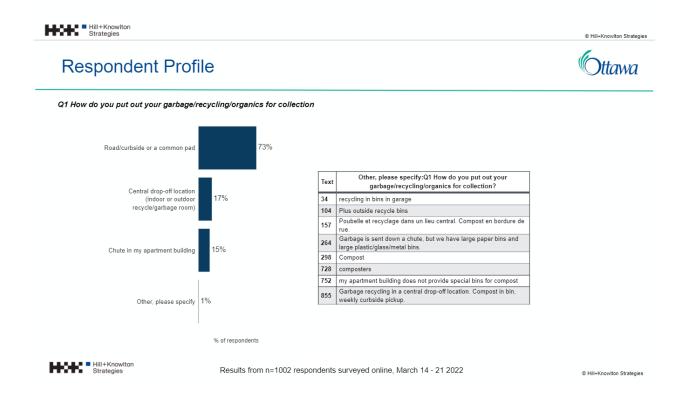


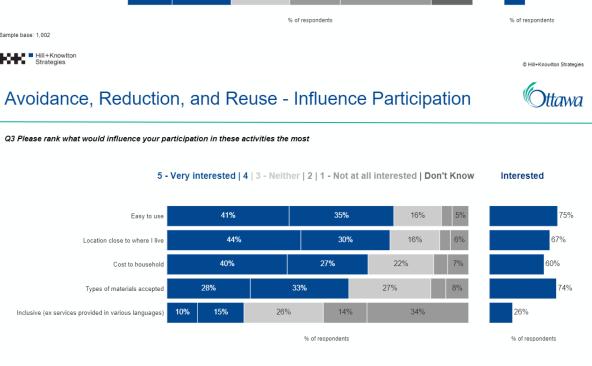
#### Respondent Profile - Weighted





The data in the remaining pages has been weighted by age, gender and region type, to reflect census figures for the City of Ottawa





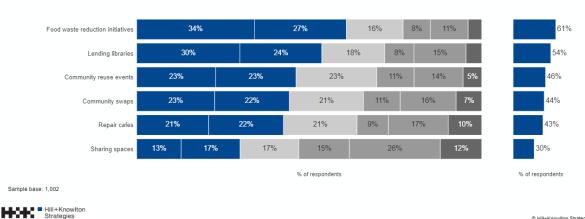
Sample base: 1,002

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#### Avoidance, Reduction, and Reuse - Activities

Q2 Please select the type of activities you would participate in:



5 - Very interested | 4 | 3 - Neither | 2 | 1 - Not at all interested | Don't Know

# 47 | © Hill+Knowlton Strategies



Ottawa

Interested

# Avoidance, Reduction, and Reuse - Participation: Anything Else Ottawa

Q4 Is there anything else that would influence you to participate in any of these activities?

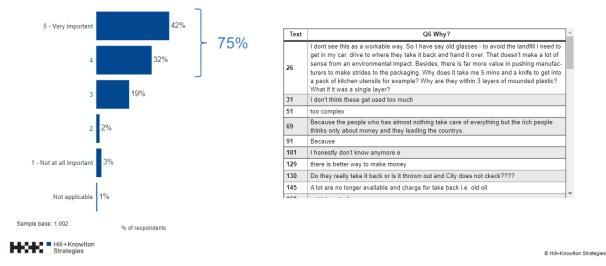
Text	Q4 Is there anything else that would influence you to participate in any of these activities?
1	Nothing
2	Penalties if I do not participate.
3	no
4	no
5	n/a
6	No
7	No
8	non
9	Not rely
10	safety for COVID
11	Cost to taxpayer
12	Drop off time availability
13	non
14	Times and dates.
15	no

#### Hill+Knowlton Strategies

#### Avoidance, Reduction, and Reuse - Take It Back!



Q5 The City's Take It Back! Program partners with over 500 retailers to take back more than 900 products that they sell. While the program includes products like electronics, furniture, used paint, and old reading glasses, it could expand to include more.



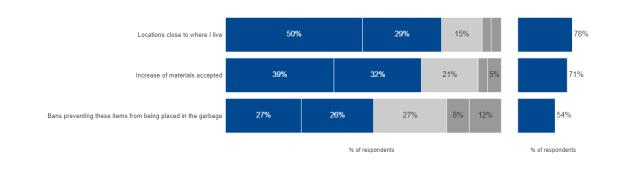


Ottawa

### Avoidance, Reduction, and Reuse - Take It Back! Ranking

Q7 Please rank what would influence your participation in the City's Take It Back! program the most

#### 5 - A lot of influence | 4 | 3 - Neither | 2 | 1 - No influence at all | Don't Know Influence



Sample base: 1,002

Hill+Knowlton Strategies

# Avoidance, Reduction, and Reuse - Take it Back!: Anything Else Ottawa

Q8 Is there anything else that would influence your participation in this program?

Text	Q8 Is there anything else that would influence your participation in this program?	-
1	No	1
2	Penalties for throwing out items that could have been reused/recycled/disposed of properly.	
3	trying to reuse and recycle as best as possible	1
4	no	
5	n/a	1
6	No	
7	No	1
8	non	
9	Good location	1
10	none	
11	Cost	1
12	hours of operation of recycler	
13	non	1
14	No	
15	no	-

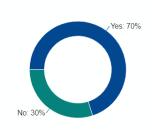
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#### Avoidance, Reduction, and Reuse - Subsidies



Q9 Do you think the City should provide subsidies, rebates, or grants to local residents, resident groups, or non-profit organizations for ideas or programs that avoid, reduce, or reuse waste in our communities?



Text	Q10 Why?	1
1	It will lead to an increase in taxes. People should just learn to reduce waste.	1
2	It should be means tested, but yes. For groups or demographics where these programs would be the most impactful, we should allocate resources into making the programs accessible.	
3	It would encourage a better community spirit	1
4	not necessary	1
5	n/a	1
6	These events/programs take a lot of effort and it would be a good incentive	1
7	No	1
8	pour insister a reduire leur cosommation moin de gaspillage	1
9	Good idea	1
10	this will encourage people to participate	1
11	Programs, maybe. Ideas, no	-

Sample base: 1,002

Hill+Knowlton Strategies

# **Recycling - Priorities**



Q11 Rank which efforts you feel the City should prioritize implementing

#### 5 - High priority | 4 | 3 - Neither | 2 | 1 - Not a priority | Don't Know Priority

Temporary neighbourhood drop-off depots for divertible materials	28%	37%	23%	7% 5%	65%	
Collection of more materials at the curb	29%	29%	27%	9%	58%	
Separate bulky waste collection and recycling	22%	33%	30%	8% 7%	55%	
Waste Diversion Program in parks and other public spaces	22%	33%	29%	10% 6%	55%	
Expanded drop-off areas for divertible materials at the Trail Waste Facility	21%	30%	32%	10% 7%	52%	
Textile waste diversion enhancement	21%	30%	33%	9% 7%	51%	
% of respondents						

% of respondents

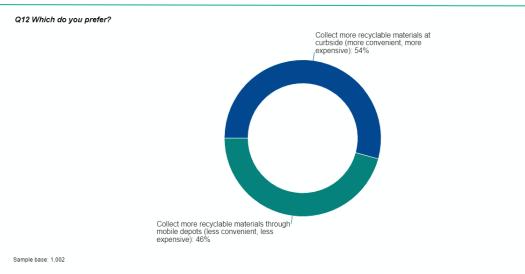
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Sample base: 1,002



# **Recycling - Preference**

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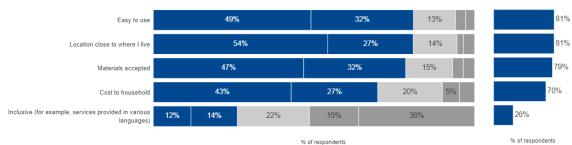
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# **Recycling - Mobile Recycling Depots**



Q13 If the City were to introduce Mobile Recycling Depots, what would influence your participation in this program the most

5 - A lot of influence | 4 | 3 - Neither | 2 | 1 - No influence at all | Don't Know Influence



% of respondents

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Sample base: 1,002

# Recycling - Mobile Recycling Depots: Anything Else

#### Q14 Is there anything else that would influence your participation in this program?

Text	Q14 Is there anything else that would influence your participation in this program?
1	no
2	Ensuring the location is safe. Setting up a depot in a dark corner of a parking lot will invite crime.
3	no
4	no
5	Non, je suis prête à recycler plus, mais je crois que beaucoup de gens ne feront pas l'effort si ce n'est pas récupéré à leur porte.
6	I don't have a vehicle so it would be difficult for me to access this program
7	No
8	non
9	Good location
10	none
11	No
12	Hours of operation
13	non
14	No
15	nothing

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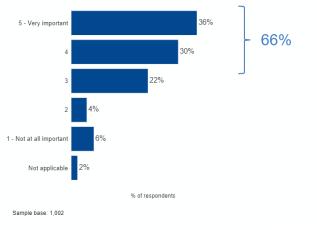


Ottawa

#### **Recycling - Public Spaces**

Q15 How much of a priority is to you that the City have a recycling and green bin program in parks and expand organics recycling to public spaces?

Text



15 cause i mostly only have dog poops to throw out in parks 25 Amène la présence de vermine Honestly it sounds expensive and a waste of time and resources. If your going to do such a program, implement a waste to energy incinerator (and not pay lip ser-vice like that program from 5-10 years ago) like all the major cities in Europe do. 26 51 of little value 65 N/A 88 Non Because the city already does an absolutely abysmal job of collecting trash and other things from the parks. And the thought of leaving organics for the infrequent collection is a nightmare. So first, the city has to show that they can do a better job of what they are supposed to be doing now before adding on. It is shocking and discouraging to see how the trash cans and recycling bins overflow and are left unattended, especially on the weekends. So step one is to do a better job of what you are supposed to be doing now. 90 91 Because

Q16 Why?

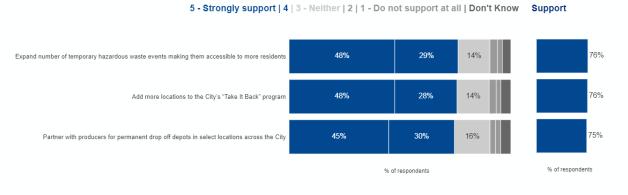
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# Hazardous Waste Recycling - Support

Q17 How much do you support each of these approaches



Sample base: 1,002

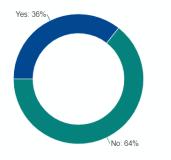
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Multi-Residential Properties - Garbage Chutes



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Q18 If garbage chutes were closed forcing residents to take their waste to the garbage or recycling room, would it encourage you to sort your waste?



Text	Q19 Why?					
4	not interested					
14	Because you would have to go downstairs anyway.					
21	I would not be willing to carry various sorts of bins down flights of stairs (there is no elevator to the building's recycling bins). I can throw out garbage down the chute and carry recyclables down the stairs. Chute for all would be ideal.					
27	je le fais deja					
34	I say yes, but already do. I live in a highrise and we have black and blue bins in the garage. But no green bin.					
38	More items could be recycled.					
47	Pas le temps d'aller porter malheureusement! Et je ne veux pas avoir a mettre tout ds la poubelle					
48	Pas certaine de comprendre la question					
52	Je les trie deja depuis un moment en plus de participer a des projets pour donner des objets dont je n'ai plus besoin mais encore en bon etat					

Sample base: 148

Hill+Knowlton Strategies

# Multi-Residential Properties - Green Bin Chutes

Q20 If garbage chutes were converted to green bin chutes, would it encourage you to use the green bin program?



Text	Q21 Why?
4	would be very useful not having to go to recycling room
14	You are essentially forcing people to do so.
21	Easy
27	je n aime pas les vide ordures
34	I wouldn't support the conversion of garbage to green bin chutes, but welcome anything for a green bin.
38	I would certainly use it; as it is not available at my place now.
47	Je le fais déjà
48	Pas certaine de comprendre la question
52	Le recyclage est important, tout comme la réduction de l'utilisation du plastique. Les 2 vont ensemble pour moi
54	n/a
56	Dushdu

Sample base: 148

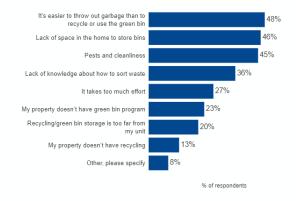




# Multi-Residential Properties - Barriers

Juan

Q22 In your opinion, what are some of the barriers for multi-residential residents when it comes to participating in recycling and green bin programs



Text	Other, please specify:Q22 In your opinion, what are some of the barriers for mu xt residential residents when it comes to participating in recycling and green bi programs?					
5	Les gens sont paresseux					
8	ils sont inconscient de l'importance d'une environnement vert					
21	Need to go down flights of stairs to get to recycling					
34	Not enough info about what plastics are recylable					
71	Smell and bugs					
78	Other units may not do it correctly which will make other units efforts go to waste					
84	People are lazy.					
85	Lack of requiring apartment buildings to do their part, zero accountability					
90	I don't live in a multi-res property but I imagine every problem outlined already exists.					
99	The fact that the green bin waste has often gone into landfill					
100	my garbage corral is cumbersome to use, cannot put garbage in/can't lift lid					
103	I have no idea					
	In my former multi-residential unit, there was no green bin recycling and large paper and					

Sample base: 1,002

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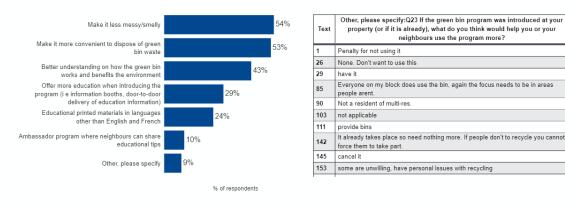
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# Multi-Residential Properties - Support

Q23: If the green bin program was introduced at your property (or if it has already been introduced), what do you think would help you or your neighbours to use the program more? Select all that apply.



Sample base: 1,002

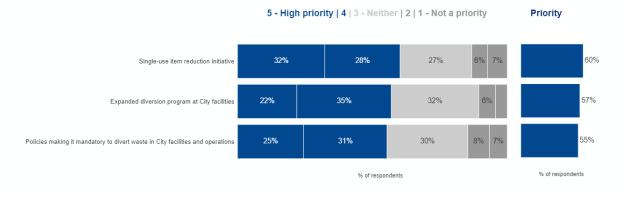
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# Waste Reduction and Recycling Strategies - Implementation



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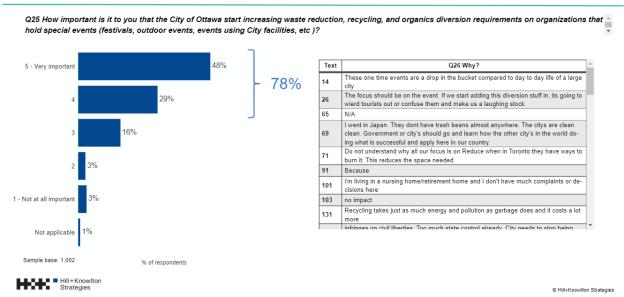
Q24 Rank which efforts you feel the City should prioritize implementation of



Sample base: 1,002

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#### Waste Reduction and Recycling Strategies - Special Events



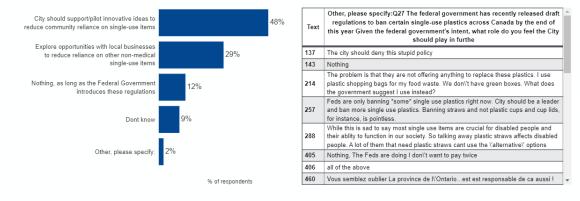
### Waste Reduction and Recycling Strategies - Single Use



^

Ottawa

Q27 The federal government has recently released draft regulations to ban certain single-use plastics across Canada by the end of this year. Given the government's intent, what role do you feel the City should play in further influencing a reduction in single-use items in the community?



Sample base: 1,002

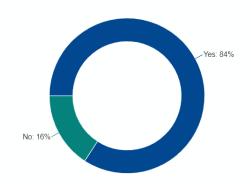
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### Energy Recovery - Renewable Gas



Q28 Do you support the City investing in technology to generate renewable gas from food waste to help achieve the City's ambitious climate goals?



Text	Q29 Why?						
1	I just support it	1					
2	The only way to advance the tech is to use it and improve it. This will help lower costs for environmentally friendly energy generation.						
3	It can help the environment.						
4	would be a cost saving measure in the long run						
5	La Ville devrait tenter d'innover dans les questions environnementales.						
6	Seems like an innovative technology that we should explore						
7	Because the environment and earth is at ridk						
8	pour mieux proteger l'environnement						
9	Good sense save on energie						
10	it is an issue that everyone should participate to resolve						
11	If it is economically advantageous						
12	Non-renewable energy sources are causing further harm to our lands						
13	pour I,environnement!						
1/	The ras is a hyproduct of waste why not harness it and use it	-					

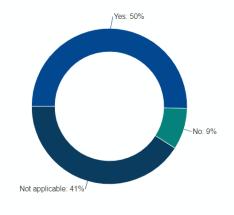
Sample base: 1,002

#### Hill+Knowlton Strategies

# Energy Recovery - Green Bin Program



Q30 If you do not currently participate in the City's green bin program, would knowing that your food waste is being used to generate renewable energy encourage you to participate in the future?



Text	Q31 If no, why not?	4
21	Not available in my building	1
56	Okay thank goodness for	1
58	no facility in my building	1
75	I am in green bin program	1
76	green bin still stinks	1
89	No idea.	1
91	Because	1
92	We have three 3 composting places.	1
99	The stench and vermin involved.	1
121	No place to store in summer	1
124	What would that mean? Does this reduce or add to greenhouse gases?	1
129	no interest	1
138	Have virtually no food waste	1
1/13	The city should collect all refuse as one and have robots separate out food waste for	١.

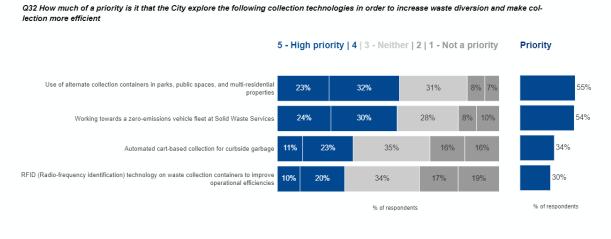
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# **Collection - Efficiency**



Ottawa



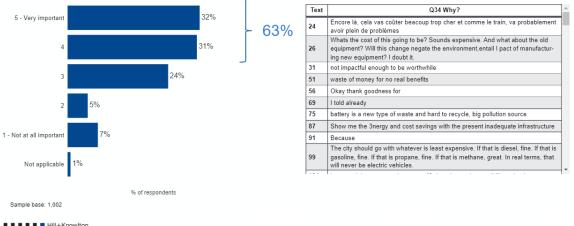
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# **Collection - Priority**

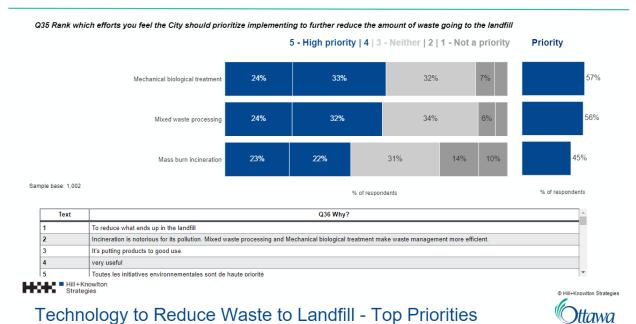


Q33 The City is considering looking at new technologies that will help us work toward zero waste emissions from the solid waste vehicle fleet. These technologies include switching collection trucks and landfill equipment to renewable natural gas and hybrid or electric vehicles. How much of a priority is it that the City explore these opportunities in order to help reach our climate change goals?

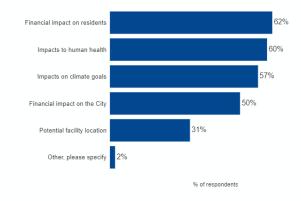


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# Technology to Reduce Waste to Landfill - Prioritize Implementing Ottawa



Q37 What considerations do you feel are the top priorities for the City when further studying these technologies



Text	Q38 Any other comments you would like to share about these types of technologies and the role they can play in the City's future waste manage- ment system?
1	no
2	Educating residents on how to separate recyclables would help make these pro- cesses more efficient. The Waste Explorer app is great, but difficult for elderly people. It is needs a more simple interface.
3	no
4	no
5	n/a
6	No
7	No
8	non
9	No
10	none
11	Don't be a guinea pig. It is usually too costly
40	Observices and the standard for another will according to the service standards and all

Sample base: 1,002

Hill+KnowIton Strategies



### Landfill - Priorities

Ottawa

Q39 Please prioritize the approaches below to extend the life of the Trail Road Landfill

All reasonable efforts should be made to extend the life of this important community asset	31	%	34%	26% 5	i%	66%
Focus on behaviour management programs and policies to minimize waste going to the landfill	3	5%	30%	24% 6%	ő 5%	65%
Use tipping fees to create an incentive to reduce waste disposal for hard to manage items	16%	28%	31%	13% 1	1%	45%
Expand the landfill facility within the current property	17%	26%	36%	14%	7%	43%
Use private landfills in the region, where operationally beneficial	11%	23%	38%	15% 12	2%	35%
			% of respondents			% of respondents

5 - Very interested | 4 | 3 - Neither | 2 | 1 - Not at all interested | Don't Know Interested

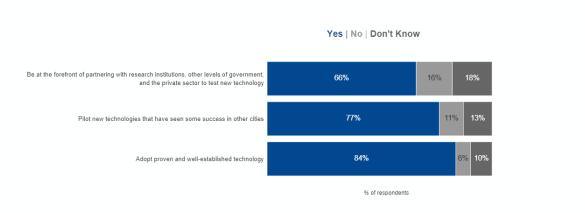
Sample base: 1,002

Hill+Knowlton Strategies

## Innovation - Ottawa Should



Q40 Do you believe the City of Ottawa should:



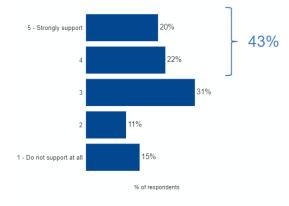
Sample base: 1,002

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#### Education and Enforcement - Investment



Q41 Currently, the City invests approximately \$0.50 per household annually in promotion, education, and outreach (excluding free advertising the City uses such as its own assets, social media, and earned media). Similar cities are investing between \$4 and \$5 per household annually. Please rate your level of support for an increase in investment to align with similar municipalities:



Text	Q42 Why?					
11	I don't think we need to spend more					
15	we pay too much already and i didnt get a raise / thanks					
18	The current system seems to be working. I would only support a small increase. Anything larger would be too expensive (and move money from something else).					
19	I would support it but not as a property tax increase. We already have a tough time mak- ing ends meet as not everyone in Ottawa works for the government and makes high salaries. Some like me are barely cetting by.					
22	We pay for too much as is					
24	Je n'ai pas confiance que la ville peux gèrer l'argent efficacement					
26	Let's use that money to build an incinerator and to offset the costs of equipment, salaries, etc. I dont want my tax dollars going to tell people why they need to do X, Y or Z					
29	Cost					
31	don't support any increase in cost					
32	I think there is enough information out there, it's better to invest in actual technologies/programs instead.					
44	anawna					

Sample base: 1,002

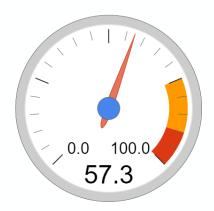
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#### How Far, How Fast, and at What Cost? - How Fast



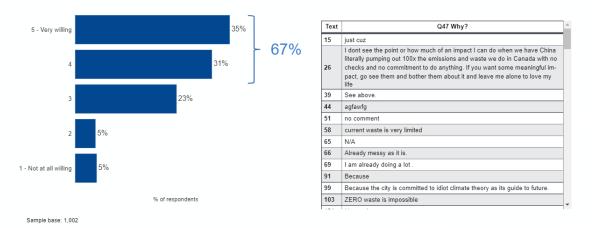
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Q43 How fast should we move towards our goal of a Zero Waste Future?



### How Far, How Fast, and at What Cost? - Changes

Q46 How willing are you to make big changes in your waste practices in order to help our community meet our goal of a Zero Waste Future?

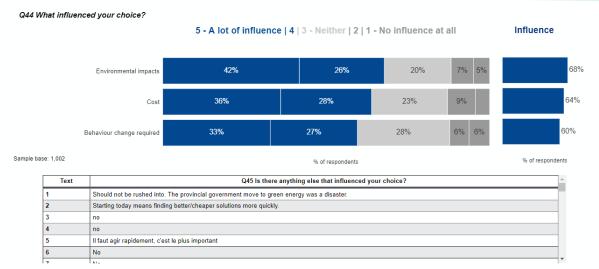


Hill+KnowIton Strategies

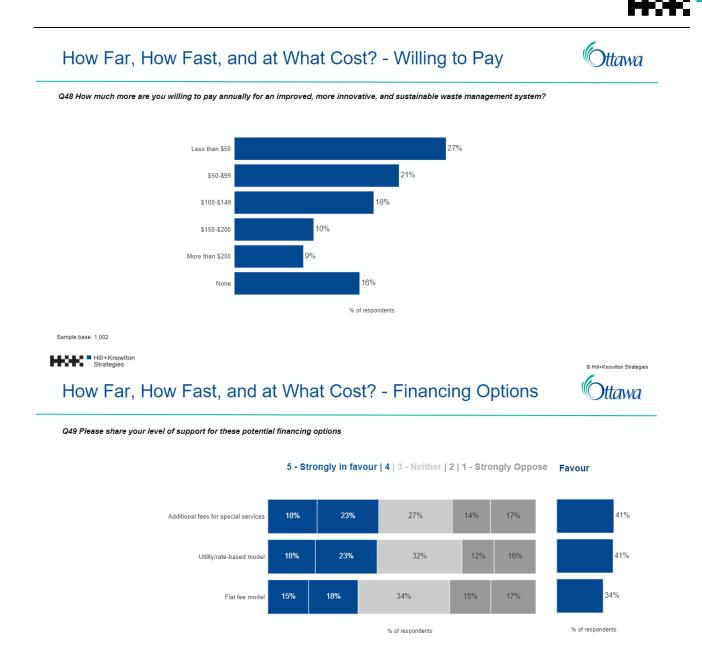
#### How Far, How Fast, and at What Cost? - Influence

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 Ottawa

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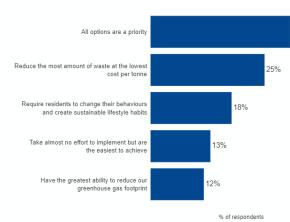


Sample base: 1,002

Hill+Knowlton Strategies

### How Far, How Fast, and at What Cost? - Priorities

Q50 Which statement do you agree with most? The City should prioritize implementation of options that:



Sample base: 1,002

Hill+Knowlton Strategies

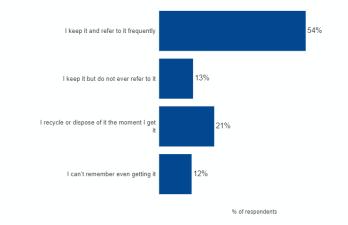
# Collection Calendar - Paper Copy

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Ottawa

31%

Q51 What do you do with your paper copy?



Sample base: 733

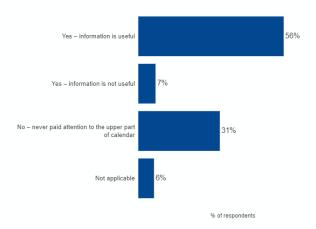
Hill+Knowlton Strategies



# Collection Calendar - Educational Section



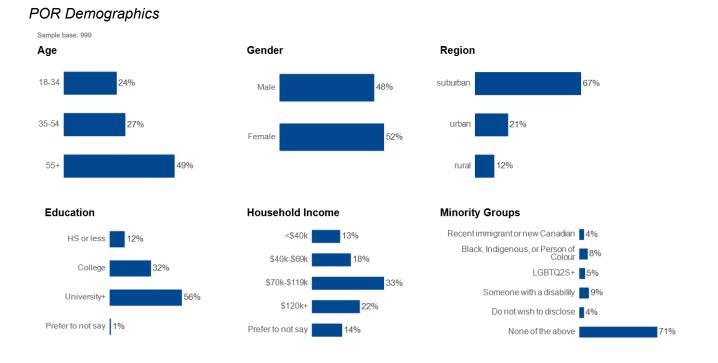
Q52 The upper part of the calendar contains educational information about various waste related topics. Have you ever paid attention to the educational section?



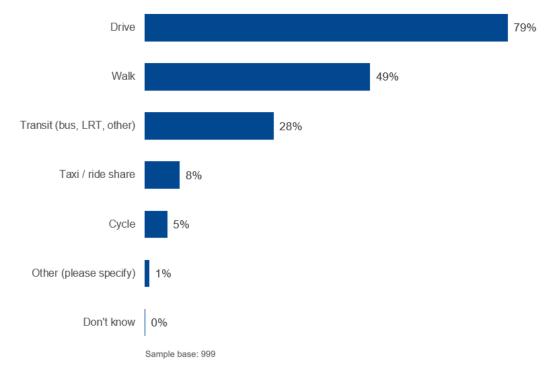
Sample base: 733







#### Moving around the City during winter



Q1 How do you usually move around the City during the winter? Please select all that apply

Satisfaction with winter maintenance in Ottawa - overall



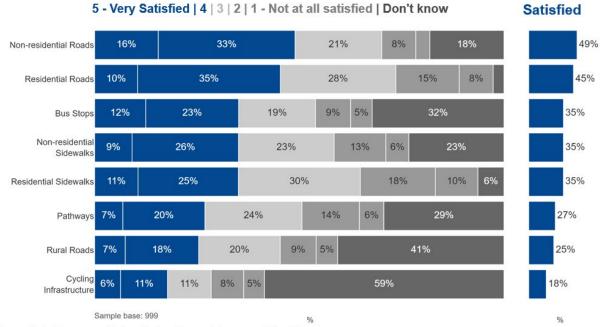
#### 5 - Very Satisfied | 4 | 3 | 2 | 1 - Not at all satisfied | Don't know



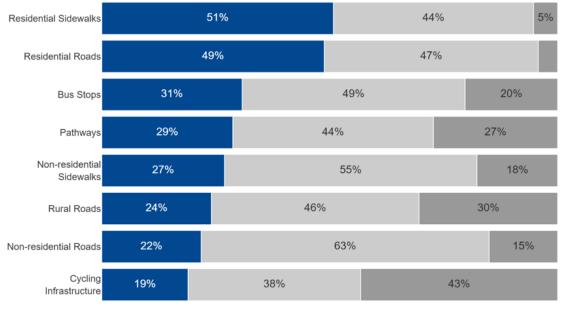
Sample base: 999

Q2 In general, how satisfied are you with winter maintenance in Ottawa?

#### Satisfaction with winter maintenance in Ottawa - specific



Q3 And, how satisfied are you with the City's winter maintenance of the following

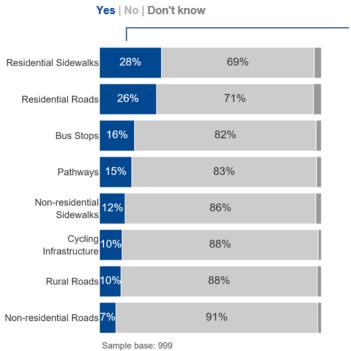


#### Increase | Maintain | Don't know

Sample base: 999

Q4 For each of the following, do you feel the city should maintain the current level of winter maintenance standards or increase winter maintenance standards

#### Paying more each year for increased maintenance standards



Of those willing to pay more ...

Less than \$5 | \$5-10 | \$11-15 | More than \$15 | Don't know

18%	42%	1	17%		9%
16%	42%	18	18%		7%
25%	40%		16%	8%	11%
26%	43%		139	% 12%	6 7%
18%	50%		16	% 8%	8%
22%	29%	18%	1	19%	11%
15%	47%		15%	15%	8%
25%	44%		1	9%	10%

Sample base: 999 No % includes those who did not feel maintenance standards should be increased, in Q4)

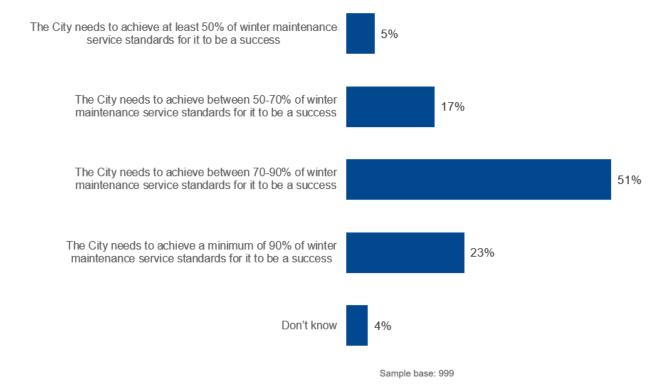
(Asked of those who felt maintenance standards should increase in Q4)

Q5 Would you be willing to pay more for increased winter maintenance standards for ....

Sample base: 67 to 279

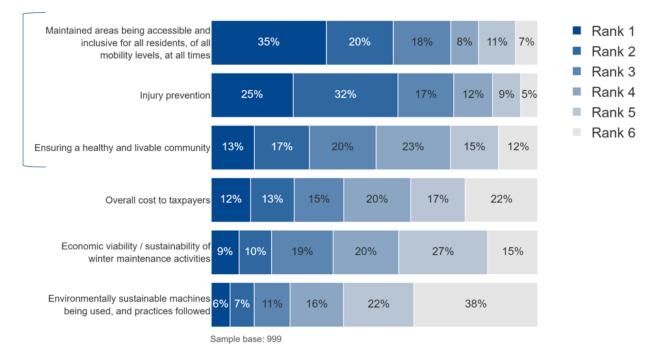
Q6 How much would you be willing to pay more, per year, for increased winter maintenance standards for... (Asked of those who said they were willing to pay more in Q5)

Results from n=999 respondents surveyed online, Dec 16-19, 2020.



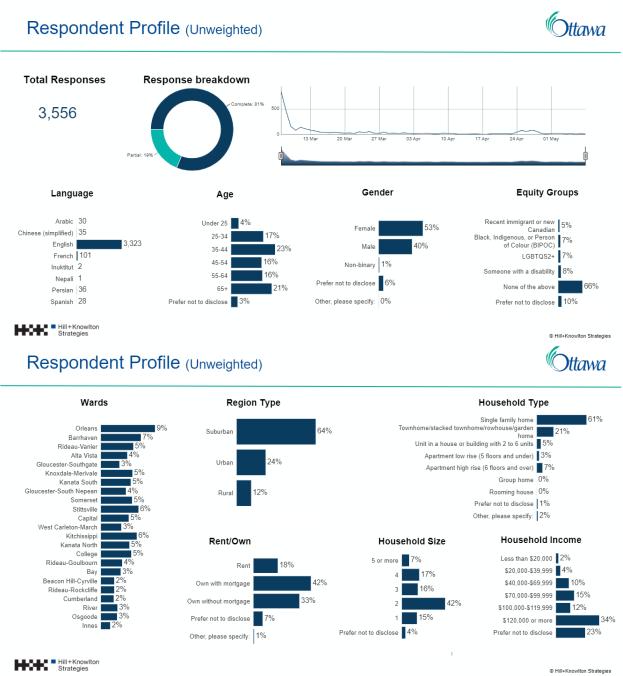
Q7 From your point of view, what per cent (%) of these standards need to be met for it to be successful?

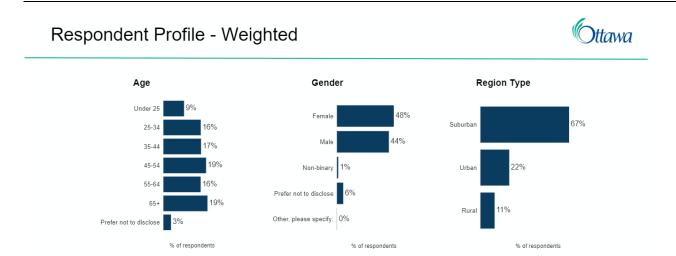
#### Defining successful maintenance standards



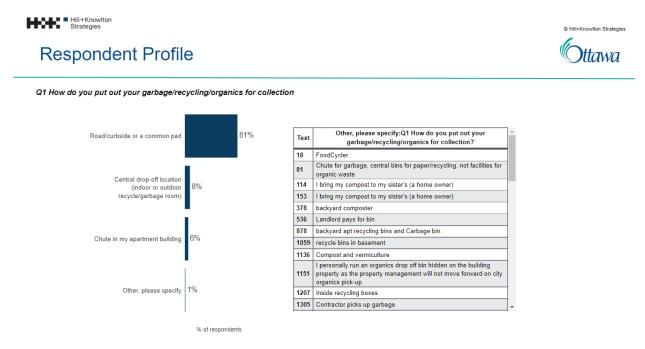
Q3b From your point of view, how would you rank each of the following considerations when the City reviews the winter maintenance auality standards? Results from n=999 respondents surveyed online. Dec 16-19. 2020.

# Appendix B: Engage Ottawa Survey Results





The data in the remaining pages has been weighted by age, gender and region type, to reflect census figures for the City of Ottawa

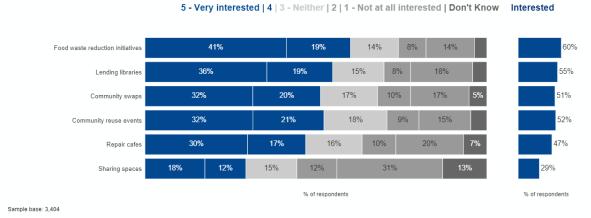




### Avoidance, Reduction, and Reuse - Activities



Q2 Please select the type of activities you would participate in:

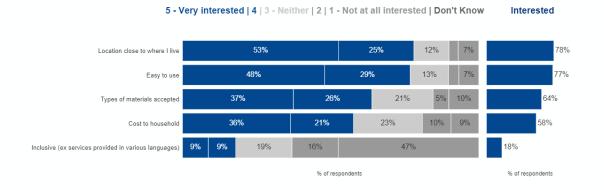


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#### Avoidance, Reduction, and Reuse - Influence Participation



Q3 Please rank what would influence your participation in these activities the most



Sample base: 3,404

Hill+Knowlton Strategies



# Avoidance, Reduction, and Reuse - Participation: Anything Else Ottawa

Q4 Is there anything else that would influence you to participate in any of these activities?

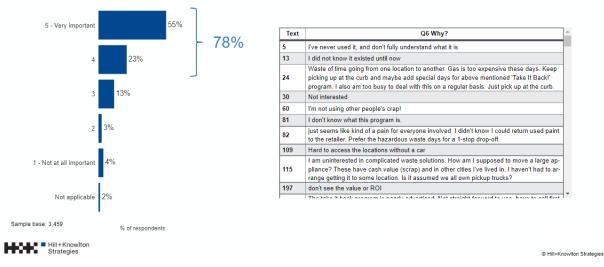
Text	Q4 Is there anything else that would influence you to participate in any of these activities?					
1						
2						
3						
4						
5						
6						
7						
8						
9	Availability - the closer to 24/7 the better					
10						
11						
12						
13						
14	Easy to use, ie parking, hours					
15						

#### Hill+Knowlton Strategies

#### Avoidance, Reduction, and Reuse - Take It Back!



Q5 The City's Take It Back! Program partners with over 500 retailers to take back more than 900 products that they sell. While the program includes products like electronics, furniture, used paint, and old reading glasses, it could expand to include more.





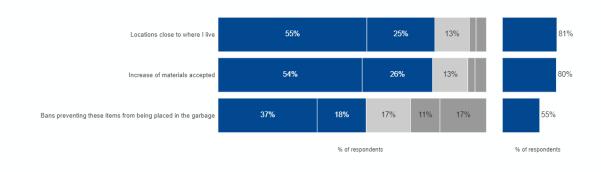
Ottawa

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# Avoidance, Reduction, and Reuse - Take It Back! Ranking

Q7 Please rank what would influence your participation in the City's Take It Back! program the most





Sample base: 3,404

Hill+Knowlton Strategies

Avoidance, Reduction, and Reuse - Take it Back!: Anything Else Ottawa

Q8 Is there anything else that would influence your participation in this program?

Text	Q8 Is there anything else that would influence your participation in this program?						
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12	Don't make everything need a carl It is beyond frustrating that so many Ottawa services are not accessible to me because I don't drive. I own a house, I have a fairly high income but I cannot drive. So I have no way to participate in Ottawa programs and services that are set up only for people who have access to a car.						
13							
14	Not for me but if there is a ban from putting items in the garbage it must be easy for people who have limited means (time, transportation, inclination) to						

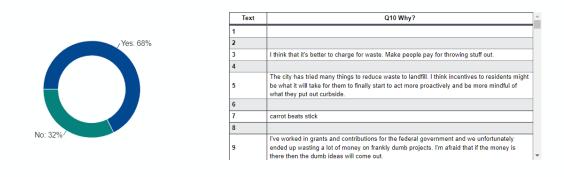
Hill+Knowlton Strategies



#### Avoidance, Reduction, and Reuse - Subsidies



Q9 Do you think the City should provide subsidies, rebates, or grants to local residents, resident groups, or non-profit organizations for ideas or programs that avoid, reduce, or reuse waste in our communities?



Sample base: 3,301

Hill+Knowlton Strategies

## **Recycling - Priorities**



Q11 Rank which efforts you feel the City should prioritize implementing

5 - High priority | 4 | 3 - Neither | 2 | 1 - Not a priority | Don't Know Priority

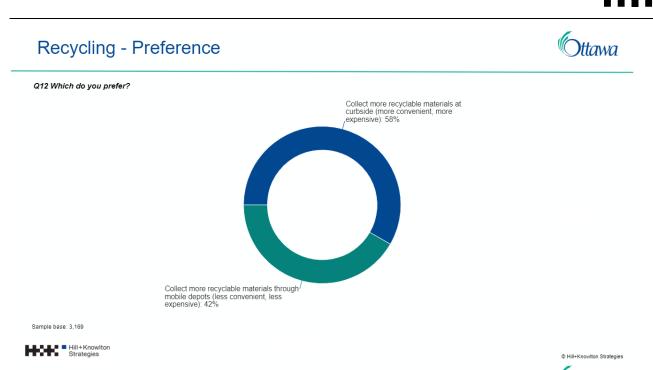
						_	
Temporary neighbourhood drop-off depots for divertible materials	43%			29%	16%	6%	73%
Collection of more materials at the curb	38%		22%	20%	10%	10%	60%
Waste Diversion Program in parks and other public spaces	32%		27%	22%	109	% 9%	58%
Textile waste diversion enhancement	30%		28%	23%	9%	11%	58%
Separate bulky waste collection and recycling	26%	27	/%	25%	10%	12%	53%
Expanded drop-off areas for divertible materials at the Trail Waste Facility	22%	22%		28%	13%	14%	45%

% of respondents

% of respondents

Sample base: 3,404

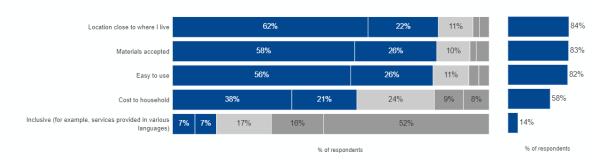
Hill+Knowlton Strategies



# Recycling - Mobile Recycling Depots

Q13 If the City were to introduce Mobile Recycling Depots, what would influence your participation in this program the most

5 - A lot of influence | 4 | 3 - Neither | 2 | 1 - No influence at all | Don't Know Influence



Sample base: 3,404

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# Recycling - Mobile Recycling Depots: Anything Else

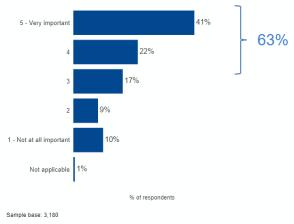
Q14 Is there anything else that would influence your participation in this program?

Text	Q14 Is there anything else that would influence your participation in this program?
1	
2	
3	They need to be accessible to people downtown without cars. Most of the 'mobile' depots that the city makes target people with cars who live in suburbs.
4	So much stuff is being repurposed through KIJIJI and Facebook Marketplace. Promote this more. Stuff that would otherwise go the Trail is finding a new home and you might get a few \$\$ too!!
5	
6	
7	There is a problem in multi tenant buildings with recycling and composting. A minority of users don't do it correctly and this causes smells, garbage, equipment problems, and extra work for staff. Often, the landlord or condo board will not try recycling or composting due to these problems. If there were convenient public collection sites then those who want to do enhanced recycling or composting could participate without having to get the build ing management on board.
8	
9	
10	
11	
10	

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# Recycling - Public Spaces

Q15 How much of a priority is to you that the City have a recycling and green bin program in parks and expand organics recycling to public spaces?



Text	Q16 Why?
4	very expensive and badly contaminated.
60	How many people walk around Public Space with organics to throw awaystupid question!
75	Is this even a problem? I thought that the largest problems are in Multi residential buildings and by commercial businesses. Shouldnt you start with the biggest problems first?
82	I get it that people are lazy. But the bins in parks are unsightly and create addi- tional upkeep tasks. Perhaps unrealistic, but I'd also like to encourage people to bring their items home to recycle or compost when feasible to save on costs and reduce the need for these public bins (example: you brought your own reusable container for lunch, and bring your orange peel home in it).
93	It's not a place where I dispose of much of my waste. If I'm having a snack at the park, yes it's nice to be able to compost my banana peel and yes it does set an example in showing park users that composting is a priority.
95	Parmi les autres programmes suggérer, celui des parcs n'est pas le programme qui va détourner le plus de matériel, je crois.
	1. I personally do not think that people would go out of their way to bring organic / recycling to a park. 2. I believe that it would attract more rodents / wildlife and if

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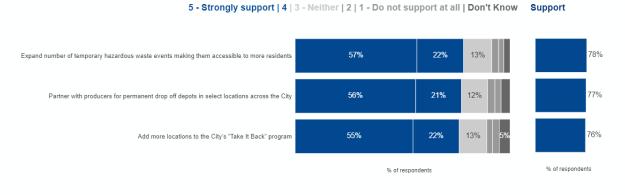




# Hazardous Waste Recycling - Support



Q17 How much do you support each of these approaches



Sample base: 3,404

Hill+Knowlton Strategies

#### Multi-Residential Properties - Garbage Chutes



Q18 If garbage chutes were closed forcing residents to take their waste to the garbage or recycling room, would it encourage you to sort your waste?



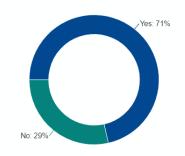
Q19 Why?	1
I already sort my waste.	1
I already sort my waste, but there's no green bin program so I just have to toss ev- erything in the garbage.	
Do not understand this question. There has to be garbage chutes as often seniors and disabled in these buildings. So taking garbage down is not a good option in a multiuse (apt/condo) building	
Really tired of government dictating how I live.	1
Because I don't have a green bin option in my building so the point is moot	1
More trips mean I'm less likely to sort. Currently garbage goes down the chute and then I make 1 trip for recycling.	1
s	1
Je ne vois pas la raison pourquoi le local devrait être fermé. Dans l'immeuble où j'habite, il y a des bacs à recyclage sur chacun des 7 étages et de gros bacs au sous-sol pour les gros cartons ou des déchets encombrants.	
	I already sort my waste. I already sort my waste, but there's no green bin program so I just have to toss ev- erything in the garbage. Do not understand this question. There has to be garbage chutes as often seniors and disabled in these buildings. So taking garbage down is not a good option in a multiuse (apt/condo) building Really tired of government dictating how I live. Because I don't have a green bin option in my building so the point is moot More trips mean I'm less likely to sort. Currently garbage goes down the chute and then I make 1 trip for recycling. S Je ne vois pas la raison pourquoi le local devrait être fermé. Dans l'immeuble où Jhabite, il y a des bacs à recyclage sur chacun des 7 étages et de gros bacs au

Sample base: 181

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# Multi-Residential Properties - Green Bin Chutes

Q20 If garbage chutes were converted to green bin chutes, would it encourage you to use the green bin program?



Text	Q21 Why?					
18	No - this is a terrible idea and would just lead to contamination. People in apartments can't even currently sort their waste. Consider allowing drop-off places for organics where residents can opti-n. Consider technology solutions like Food/cycler also.					
22	There is currently no green bin program at my building so everything goes into the garbage.					
48	This sounds totally unrealistic I.e. bugs, odor, messy.					
80	I don't need encouragement, I need the option to be available to me at all. Rental build- ings should be required to provide green bin services!					
81	Green bin is, frankly, gross. Being able to easily dispose of organic waste daily would make up for the loss of the garbage chute, since most of the grossness of garbage is from organics anyway.					
88	dsa					
101	Je doute toutefois que ce soit efficace, car les gens vont jeter pêle-mêle déchets et pro- duits compostables.					
	This would mean that I do not have to rely on knowing a home owner to compost, which					

Sample base: 176



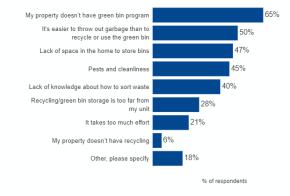


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Multi-Residential Properties - Barriers

Q22 In your opinion, what are some of the barriers for multi-residential residents when it comes to participating in recycling and green bin programs



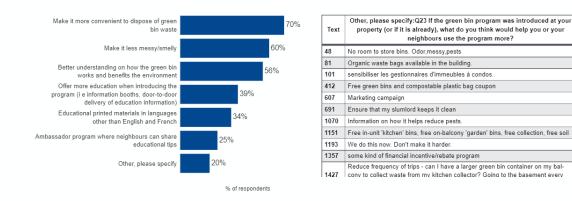
Text	Other, please specify:Q22 In your opinion, what are some of the barriers for multi-residential residents when it comes to participating in recycling and green bin programs?			
101	coût pour les propriétaires de condos			
114	Lack of incentive to compost. Their could be incentives from the building owner for reducing garbage costs.			
153	lack of knowledge about food waste - redeuding your food waste, and how to compost.			
329	Our residents use the recycling units regularly. They are always full.			
348	COVID risk in common areas			
516	Ottawa gets very hot in the summer and while I use green bins, the bees and odor make it extremely unpleasant			
596	Lack of knowledge on other tenants' parts			
607	lack of awareness of green initiatives			
691	my property management team doesn't both managing the bins very well			

Sample base: 188

Hill+Knowlton Strategies

#### Multi-Residential Properties - Support

Q23: If the green bin program was introduced at your property (or if it has already been introduced), what do you think would help you or your neighbours to use the program more? Select all that apply.



Samp	le bas	se: 188

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### Waste Reduction and Recycling Strategies - Implementation



Ottawa

Q24 Rank which efforts you feel the City should prioritize implementation of



Sample base: 3,404

Hill+Knowlton Strategies

#### Waste Reduction and Recycling Strategies - Special Events

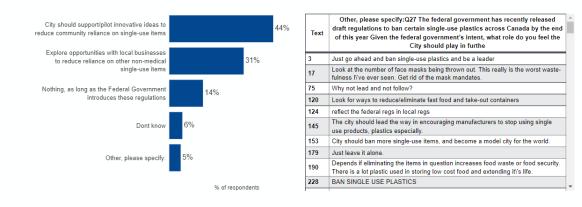
Q25 How important is it to you that the City of Ottawa start increasing waste reduction, recycling, and organics diversion requirements on organizations that hold special events (festivals, outdoor events, events using City facilities, etc )? 60% Text Q26 Why? 5 - Very important I thought the City's mandate was residential waste? These events are something 4 80% else. Ask the Province for Regulation Why is this a problem. If the city doesnt divert waste and recycle, then we are all in 20% 75 trouble. The city has to lead by example. 115 I am uncertain this is a major source. If events use city facilities, city should supply waste and recycling receptacles and 174 bill the cost for collection to the permit holder 197 no value 276 i do not attend special events so don't care about this initiative 282 small potatoes 355 the time and money wasted on this should go to better use The more restrictions and barriers events have to endure, the less willing they will be to set up such events. Instead of increasing the requirements, how about rewarding the increased implementation. Get more flies with honey 367 1 - Not at all important 566 Tax relief is more important. Sound fiscal management is important. You cannot mandate what people use at a city facility. You are going to ban some-Not applicable Sample base: 3,060 % of respondents Hill+Knowlton Strategies © Hill+Knowlton Strategies

#### Waste Reduction and Recycling Strategies - Single Use



^

Q27 The federal government has recently released draft regulations to ban certain single-use plastics across Canada by the end of this year. Given the government's intent, what role do you feel the City should play in further influencing a reduction in single-use items in the community?



Sample base: 3,060

Hill+Knowlton

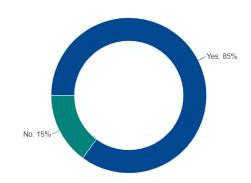




# Energy Recovery - Renewable Gas



Q28 Do you support the City investing in technology to generate renewable gas from food waste to help achieve the City's ambitious climate goals?



Text	Q29 Why?						
1							
2							
3	We need to reduce the amount of fossil fuels we get out of the ground, and make most efficient use of waste products						
4	I'd like to see a business case first. I support investing in the research at this point.						
5	I think the City's waste goals should start simple to get residents on board before we start to dive into the more complex, expensive initiatives. Educate people on waste diversion and the state of the Trail Waste landfill, make changes at the curb to encourage further diversion. Once we start to see positive trends, then start to explore more innovative change.						
6							
7							
8							
9	I think it's a good idea. However I also think the City should own the facilities in or- der to both control them and benefit from the gas generation.						
10	Depends on the cost						

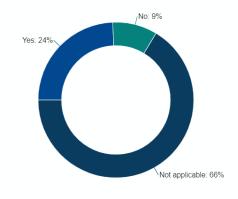
Sample base: 3,013

Hill+KnowIton

# Energy Recovery - Green Bin Program



Q30 If you do not currently participate in the City's green bin program, would knowing that your food waste is being used to generate renewable energy encourage you to participate in the future?



Text	Q31 If no, why not?				
10	Would make little or no difference				
64	Smell and lock of proper collection.				
120	Its not a factor in Green Bin Participation. Its a good idea for other reasons.				
187	It's too smelly and messy to keep in my yard.				
237	Should not need this kind of incentive.				
267	All garbage should be incinerated				
268	I'm going to do what I'm going to do, there's really no way to change that.				
282	Raccoons and maggots in compost bin. Yuck.				
291	Green bins attract animals				
309	It stinks and is simply gross!				
330	don't have significant amount of food waste.				
333	All the other issues with this program would still remain.				
336	To expensive. Should be used with other garbage				
345	The bin stinks, nowhere to keep it.	-			
	1				

Sample base: 2,962

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### **Collection - Efficiency**

lection more efficient

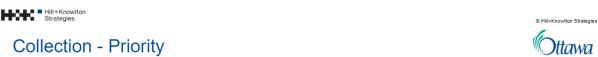


Ottawa

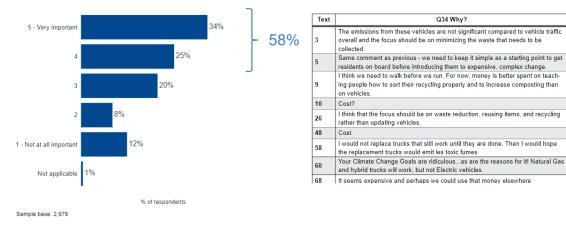
- High priorit	y   4   3 - Neitl	her   2   1 -	Not a priority	Priority
29%	27%	26%	8% 11%	56%
27%	25%	22%	10% 15%	52%
9% 15%	30%	16%	30%	24%
9% 14%	29%	16%	32%	23%
	% of res	pondents		% of respondents
	29% 27% 9% 15%	29%     27%       27%     25%       9%     15%     30%       9%     14%     29%	29%         27%         26%           27%         25%         22%           9%         15%         30%         16%	27%         27%         20%         6%         11%           27%         25%         22%         10%         15%           9%         15%         30%         16%         30%           9%         14%         29%         16%         32%

Q32 How much of a priority is it that the City explore the following collection technologies in order to increase waste diversion and make col-

Sample base: 3,404

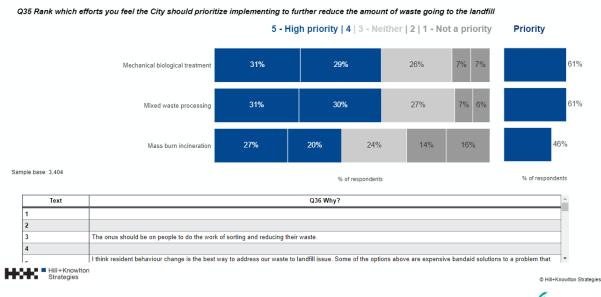


Q33 The City is considering looking at new technologies that will help us work toward zero waste emissions from the solid waste vehicle fleet. These technologies include switching collection trucks and landfill equipment to renewable natural gas and hybrid or electric vehicles. How much of a priority is it that the City explore these opportunities in order to help reach our climate change goals?



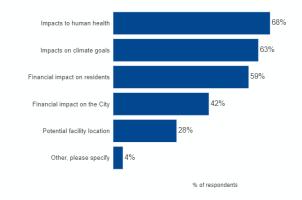


# Technology to Reduce Waste to Landfill - Prioritize Implementing Ottawa



# Technology to Reduce Waste to Landfill - Top Priorities

Q37 What considerations do you feel are the top priorities for the City when further studying these technologies



Text	Q38 Any other comments you would like to share about these types of technologies and the role they can play in the City's future waste manage- ment system?			
14	Sorry, I don't feel like I have enough of an understanding of these technologies provide useful informed comments.			
24	Come to this conclusion please. People are lazy. They will not sort perfectly and others will not sort at all. Just do it yourselves or hire companies to sort the garbage. One type of bin at the curb, collect everything and sort it yourselves. Enough with the threats of fines or maximum sorting. Pick up everything and sort yourselves. This way, you know the garbage is sorted correctly.			
31	Technologies need to be bulletproof if adopted.			
46	Embauchez donc une équipe d'experts si ce n'est déjà fait et partagez les résultats de leurs études et leurs recommendations ainsi que les impacts et en- suite on pourra donner notre avis de résident.			
57	Arrêter l'enfouissement des déchets qui est une pratique désuète et irrespons- able et adopter une vision de pollueurs payeur.			
58	Although I hope we are able to develop new technologies to help the current ecological disaster, I no longer trust the information we are receiving.			
60	By incineration of garbage you can create smaller local sites so garbage doesn't			

Sample base: 3,001

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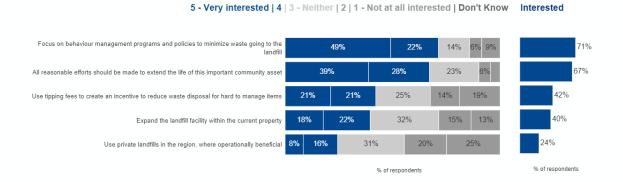
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#### Landfill - Priorities

# Ottawa

Q39 Please prioritize the approaches below to extend the life of the Trail Road Landfill



Sample base: 3,404

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# Innovation - Ottawa Should

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Q40 Do you believe the City of Ottawa should:

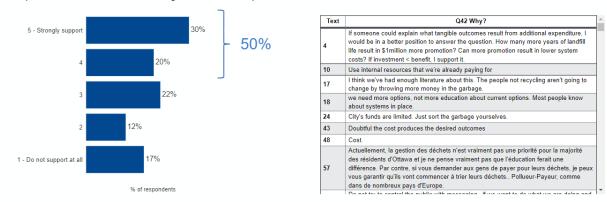
	Yes   No   Don't Know		
Be at the forefront of partnering with research institutions, other levels of government, and the private sector to test new technology	61%	23% <b>16%</b>	
Pilot new technologies that have seen some success in other cities	76%	13% <b>11%</b>	
Adopt proven and well-established technology	90%	7%	
	% of responder	nts	

Sample base: 3,404

#### Education and Enforcement - Investment



Q41 Currently, the City invests approximately \$0.50 per household annually in promotion, education, and outreach (excluding free advertising the City uses such as its own assets, social media, and earned media). Similar cities are investing between \$4 and \$5 per household annually. Please rate your level of support for an increase in investment to align with similar municipalities:



Sample base: 2,892

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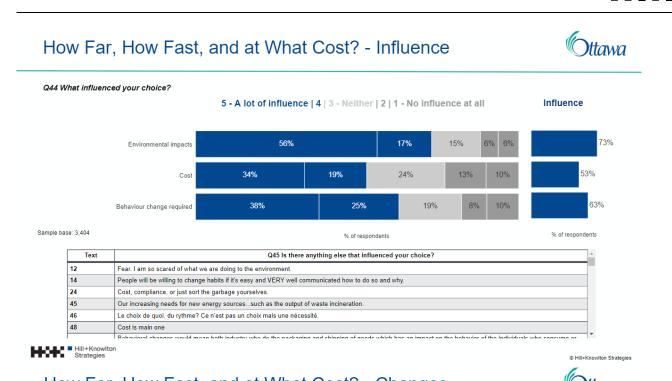
#### How Far, How Fast, and at What Cost? - How Fast



Q43 How fast should we move towards our goal of a Zero Waste Future?

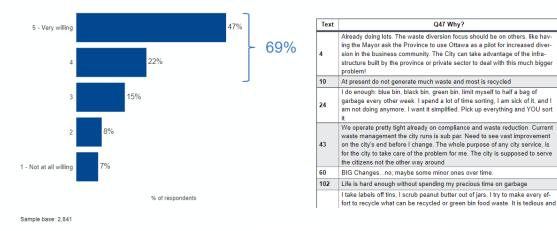


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# How Far, How Fast, and at What Cost? - Changes

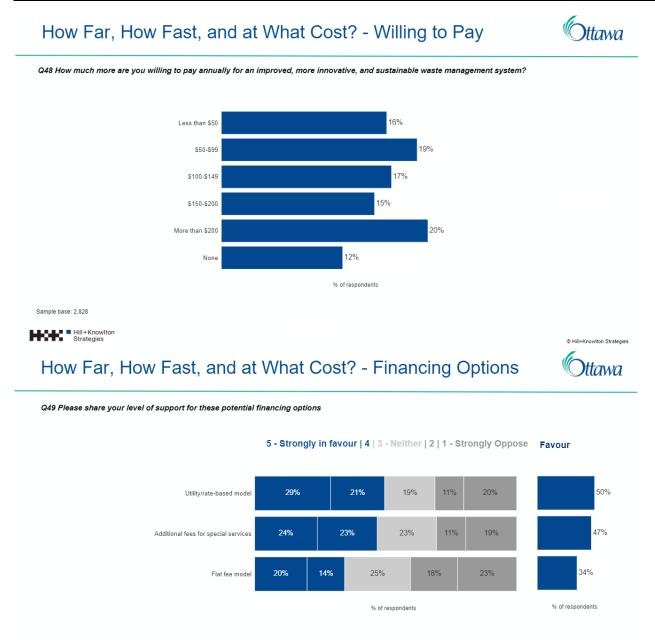
Q46 How willing are you to make big changes in your waste practices in order to help our community meet our goal of a Zero Waste Future?



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Sample base: 3,404

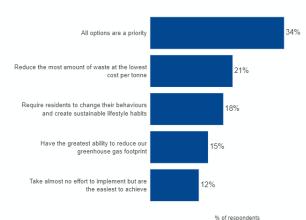
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# How Far, How Fast, and at What Cost? - Priorities

Q50 Which statement do you agree with most? The City should prioritize implementation of options that:



Sample base: 2,772

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# **Appendix C: Workshop Poll Results**

*Taking the Lead:* Community strategies, subsidies, grants and rebates, Take it Back!, circular economy, waste minimization and diversion at special events

- Of these options, which is most important to you? (7 poll participants)
  - Community strategies = 57%
  - Developing a circular economy = 14%
  - $\circ$  Subsidies, rebates and grants = 14%
  - Take it Back! program = 14%
- How quickly do you think we should be taking action? (5 poll participants)
  - Very soon = 80%
  - Soon = 20%
  - Not very soon = 0%
  - Not at all = 0%
- How important is it that the City spend resources and time on these options? Do you think this should be a priority? (6 poll participants)
  - Very important = 83%
  - Important = 17%
  - Not very important = 0%
  - Not at all = 0%

*Beyond Curbside*: Community strategies, Take it Back!, temporary drop-off programs, textile waste diversion programs, Food Waste Reduction Strategy, on-site organics management

- Of these options, which is most important to you? (12 poll participants)
  - Sharing, repairing, reusing and community strategies = 67%
  - Take it Back program and temporary drop off programs = 17%
  - Food waste and on-site organics = 17%
- How quickly do you think we should be taking action? (12 poll participants)
  - Very soon = 92%
  - Soon = 8%
  - Not very soon = 0%
  - Not at all = 0%
- How important is it that the City spend resources and time on these options? (12 poll participants)
  - $\circ$  Very important = 83%
  - Important = 17%
  - Not very important = 0%
  - Not at all = 0%

Out in the Public: City facilities, parks, events, public spaces

- Of these options, which is the most important to you? (4 poll participants)
  - $\circ$  City facilities = 25%
  - Parks and public spaces = 50%
  - Events = 25%
  - How quickly do you think we should be taking action? (4 poll participants)
    - $\circ$  Very soon = 75%
    - Soon = 25%

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- Not very soon = 0%
- Not at all = 0%
- How important is it that the City spend resources and time on these options? (4 poll participants)
  - Very important = 75%
  - Important = 0%
  - $\circ$  Not very important = 25%



• Not at all = 0%

*Reducing Greenhouse Gas Emissions :* Anaerobic digestion, co-digestion and co-location, Zero Waste Fleet

- Do you support the City investing in technology to generate renewable gas from food waste to help achieve its ambitious climate goals? (7 poll participants)
  - Yes = 100%
  - No = 0%
  - $\circ$  Don't know/Need more information = 0%
- If you do not currently participate in the City's green bin program, would knowing that your food waste is being used to generate renewable energy encourage you to participate in the future? (7 poll participants)
  - Yes = 80%
  - No = 20%
  - $\circ$  Don't know/Need more information = 0%
- How much of a priority is it to you that the City explore these opportunities in order to help reach its climate goals? (7 poll participants)
  - $\circ$  Very important = 60%
  - $\circ$  Important = 40%
  - Not important = 0%
  - Not at all important = 0%
  - $\circ$  Don't know/need more information = 0%