

Technical Memo 3

Demographic Trends

Niagara Region // December, 2023



Executive Summary

This technical memorandum provides an overview of waste generation and diversion trends at a national and provincial level. The information is intended to help inform the development of the Regional Municipality of Niagara's (Niagara Region) Waste Management Strategic Plan.

Key Take Aways

Canada's population continues to age as a whole, and younger generations are having fewer children and doing so later in life. These two key trends are leading to a fundamental change in the makeup of Canadians, the types of waste they generate, and services they will require.

The overall trend towards smaller households is, as a result, continuing. Increasingly, households are occupied by one or two individuals and often by singular elderly individuals. The number of pets being kept inside homes is also on the rise resulting in increasing quantities of pet waste and litter being set out at the curb.

As the population ages, it is anticipated that there will be a slow but consistent increase in the need for the provision of special needs services. These services may range from assistance with waste set outs to by-law exceptions to accommodate growing quantities of incontinence and medical waste.

Millennials (i.e., individuals born between 1981 and 1996) are set to outnumber the Baby Boomer generation (i.e., individuals born between 1946 and 1964) by 2030. They are already replacing Baby Boomers in the workplace and as the primary residents in the downtown core of many urban areas. This trend is changing the types of waste being generated at home and at work.

Millennials and successor generations place a high priority on time saving options and convenience. This mindset is leading them to spend less time engaging in routine chores like food preparation and increasingly, to automate their world. Consequently, there is an observed trend towards greater reliance on eating out and/or ordering in prepared meals. Combined with the increasing number of individuals living on their own, it is expected that the observed growth in single service packaging will continue unabated. Food waste and generation of electronic waste are also both on the rise.

Attitudes are also changing with younger generations being particularly focused on the issue of climate change and less so on recycling. Generation Z's (i.e., individuals born between 1997 and 2013) connectivity to social media has allowed them to engage in environmental activism at a level not seen in previous generations. Engaging with younger generations while still effectively communicating with the elderly will become increasingly important to municipalities.

Birett & Associates

December, 2023

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Table of Contents

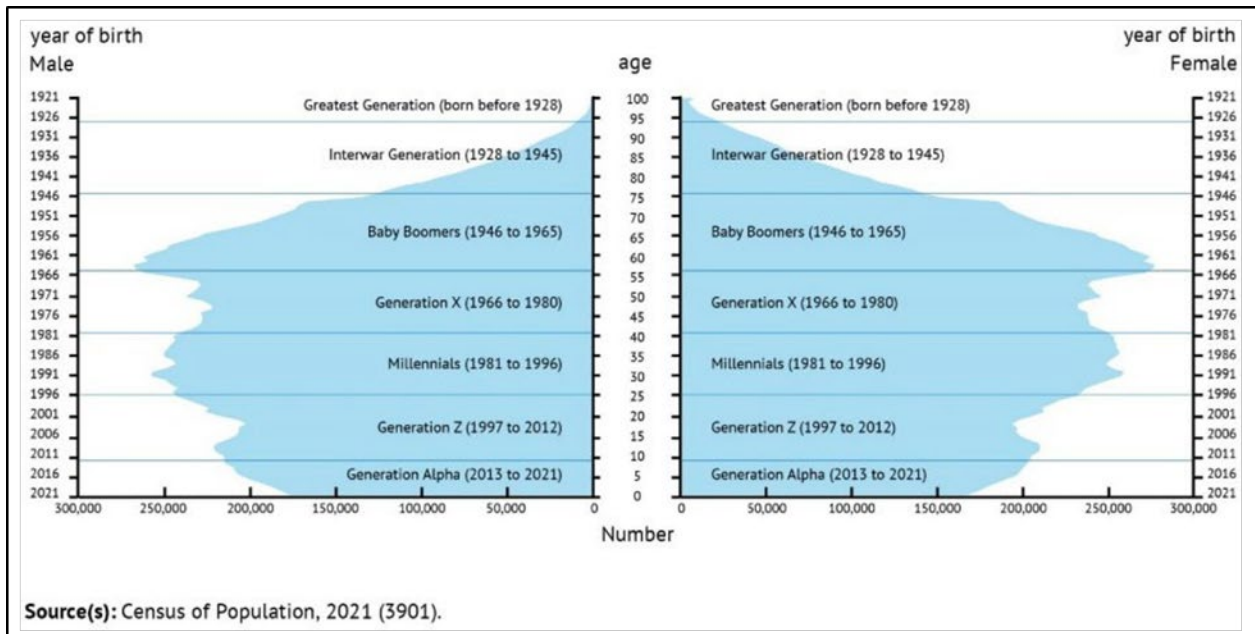
Executive Summary	i
Key Take Aways	i
Disclaimer	iii
Table of Contents	iv
1 Demographic Trends.....	1
Table 1: Canada’s Population Distribution by Generation (2021).....	1
Table 2: Projected Population Distribution by Generation	2
Table 3: Canada’s Projected Growth Rate	3
Table 4: Generational Distribution in Canadian Downtown Urban Centres	4
Table 5: Decline in Household size in Canada	4
2 Generational Trending in Food Waste and Related Packaging.....	5
Table 6: Employment Rates of Parents and Non-Parents in Canada (20-to- 49-year-olds, by sex).....	6
Table 7: Generational Food Consumption at Restaurants or Bars	7
Table 8: Time Allocation by Generation.....	8
3 Attitudinal Trends	10
Table 9: Generational Responses to Climate Change and Engagement on Social Media...	11
Table 10: Differences in Generational Action to Address Climate Change.....	12
Table 11: Categories of Household Items Transacted on Kijiji (by Percentage, 2019).....	14
Table 12: Reported Reasons for Buying and Selling Items on Kijiji (2019).....	15
Table 13: Generational Trends in Online Shopping (Q1 2023).....	16
Table 14: Generational Differences in Online Platform Usage	17
4 Waste Generation Implications.....	17
Table 15: Trend Implications	19
5 Conclusions.....	19

1 Demographic Trends

Changing demographics have always had a significant impact on the types and quantity of waste being generated in any given community. They also play an important role in the development of associated services and public policy set by various levels of government.

Canada’s population continues to age overall. As shown in Table 1, 19 per cent are now aged 65 or older, which represents a 2.1 per cent increase in the percentage of seniors over the past five years (i.e., 2016 and 2021). Put in context, by 2021 Generation Z (or Gen Z) already represented almost 18 per cent of the working age population yet the number of seniors aged 65 and older was growing at a rate of six times faster than children 0 to 14 based on the Statistics Canada 2021 census report released April 2022.¹

Table 1: Canada’s Population Distribution by Generation (2021)



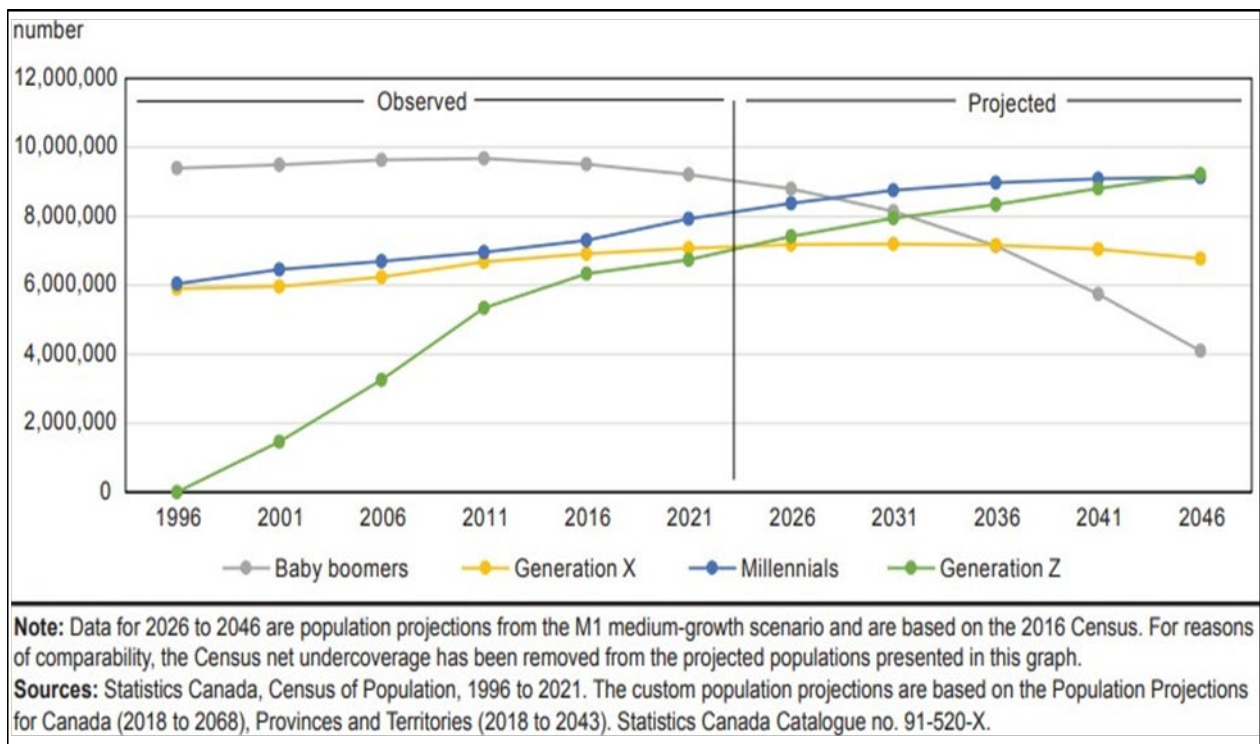
This trend is having dramatic impacts on the workplace, consumer behaviour, housing preferences and municipal services. For instance, Canada now faces record retirements from its aging labour force and Millennials will soon become the dominant workforce. In 2021, Statistics Canada reported they were already 33.2 per cent of

¹ [Statistics Canada Census of Population](https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-x/2021003/98-200-x2021003-eng.pdf) (https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-x/2021003/98-200-x2021003-eng.pdf)

Canada’s population, 29.5 per cent were Gen Xers (i.e., individuals born between 1966 and 1980), and 19.7 per cent were Baby Boomers. Millennials are also the fastest growing demographic group in the country, in part due to immigration, and are expected to become the dominant generation by 2029 according to the same report as shown in Table 2.

By comparison, Gen Z (i.e., individuals born between 1997 and 2013) is the dominant generation on a global level, representing 32 per cent of the total population, in part due to their over-representation in Africa. This over-representation is caused in part by the fact that, while Africa’s population is growing at a relatively constant rate, the population of developed countries is ‘flat lining’ or declining.

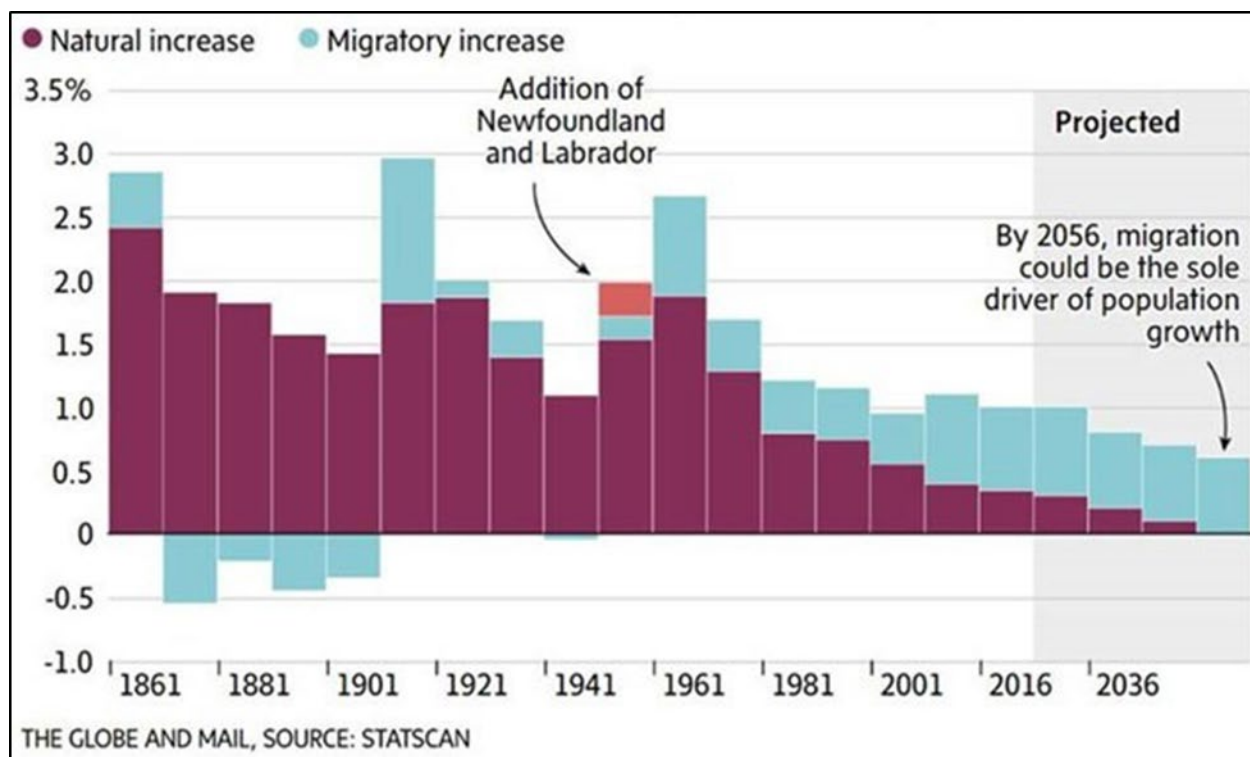
Table 2: Projected Population Distribution by Generation



Immigration is expected to become a significant factor shaping population demographics across Canada and Niagara Region in the coming years.² Table 3 highlights the projected impact of immigration on Canada’s overall growth rate.

² [When the world’s population shrinks, Canada is poised to grow and prosper](https://www.theglobeandmail.com/opinion/article-when-the-worlds-population-shrinks-canada-is-poised-to-grow-and/) (https://www.theglobeandmail.com/opinion/article-when-the-worlds-population-shrinks-canada-is-poised-to-grow-and/)

Table 3: Canada's Projected Growth Rate



Notwithstanding these broad trends, urban and rural demographics can be quite different as is seen in Niagara Region. As shown in Table 4, Millennials tend to dominate the downtown cores of many communities based on census metropolitan area (CMA) data. In the St. Catharines and Niagara area, for example, Millennials represent approximately 28 per cent of downtown residents and Baby Boomers (Boomers) represent the next largest group at roughly 25 per cent according to the Statistics Canada report. These potential differences are particularly important as municipal waste management services are developed for rural and urban areas. Recognizing that Niagara Region has a distinct mix of urban and rural populations, this point is particularly noteworthy and should be considered when developing options under the WMSP.

Table 4: Generational Distribution in Canadian Downtown Urban Centres

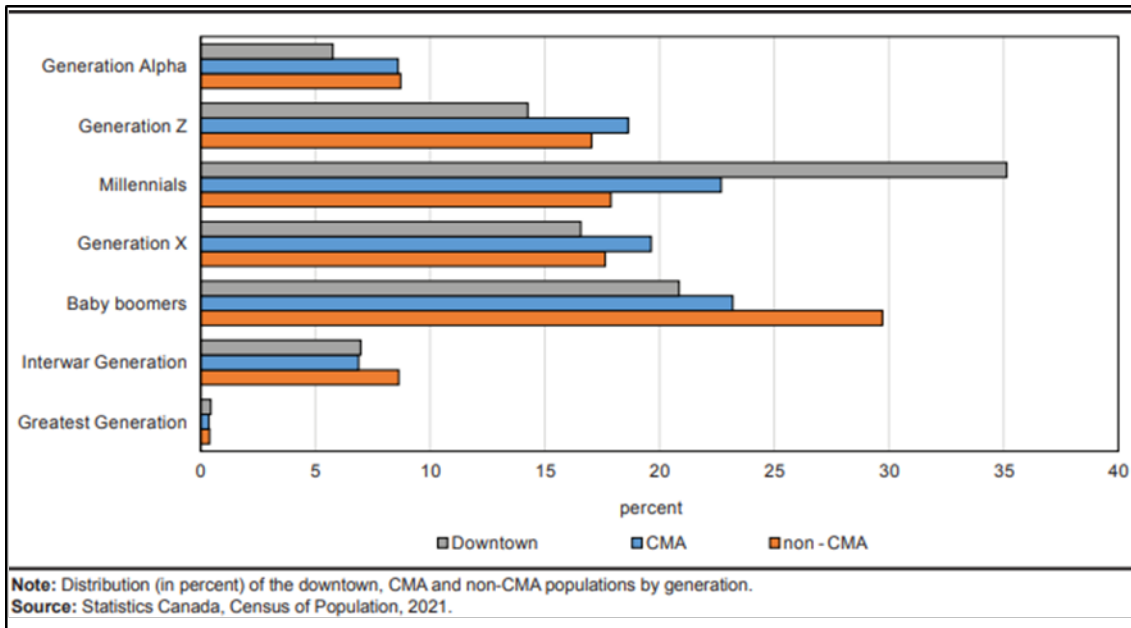
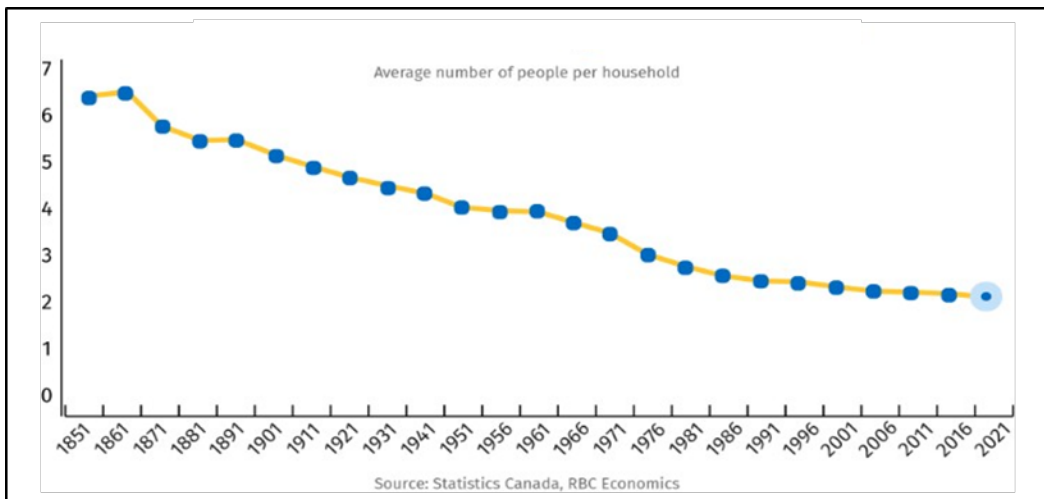


Table 5 highlights the findings of past studies which have observed a trend with family units continuing to shrink commensurate with Canada’s declining birthrate. By 2016, nearly 30 per cent of Canadians were living alone as noted in an August 17, 2022 Royal Bank of Canada (RBC) report.³

Table 5: Decline in Household size in Canada



³ [Proof Point: Demographics a powerful counterforce in Canada’s housing market correction](https://thoughtleadership.rbc.com/proof-point-demographics-a-powerful-counterforce-in-canadas-housing-market-correction/) (https://thoughtleadership.rbc.com/proof-point-demographics-a-powerful-counterforce-in-canadas-housing-market-correction/)

The report highlighted that while this trend is in part due to the aging population, a growing share of young Canadians are also opting to live alone and starting their families later in life. RBC identified that the share of young adults aged 25 to 34 living as a couple fell to 43 per cent in 2021 from 48 per cent in 2011. The mean age of mothers at the time of childbirth has also increased by three and a half years since the early 90s and they are having fewer children. Other research suggested there are also potentially related trends towards outsourcing of household chores such as landscaping and home renovations that are expected to continue. These trends are expected to result in a continued and gradual shift in waste generation from residential to commercial sources, which has the potential to shift service demand from the curb to landfill and depot operations. However, in some cases the wastes generated by contractors is left to the homeowner to manage.

2 Generational Trending in Food Waste and Related Packaging

These changes are impacting the types of waste being generated at a household level. Both Millennials and Gen Z are generations that are reported to be ‘on the move’ and while they value quality and healthy food selection, convenience is a paramount decision making factor in their lives. A full 87 per cent of Millennials rate convenience as extremely or very important to them when shopping.⁴

Given the dramatic increase in dual income parents in Canada (as noted in Table 6) over the past 50 years, this observation is hardly surprising. In a May 30, 2022, Statistics Canada publication, it was reported that the number of employed mothers increased from 40.5 per cent in 1976 to 76.5 per cent in 2021. The 36.0 per cent increase occurred alongside a number of important gender norms in Canada, which, combined, continue to drive the households towards convenience packaging and meal preparation.⁵

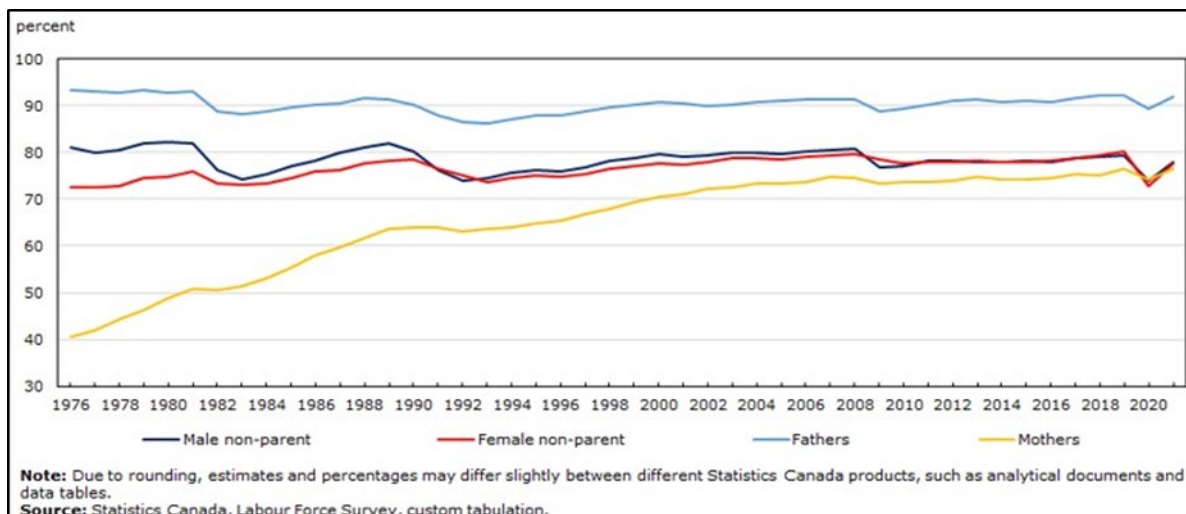
⁴ [87% of millennials say convenience is important when shopping](https://www.supermarketnews.com/news/87-millennials-say-convenience-important-when-shopping)

<https://www.supermarketnews.com/news/87-millennials-say-convenience-important-when-shopping>

⁵ [Employment rate of mothers and fathers, 1976 to 2021](https://www150.statcan.gc.ca/n1/pub/14-28-0001/2020001/article/00012-eng.htm)

<https://www150.statcan.gc.ca/n1/pub/14-28-0001/2020001/article/00012-eng.htm>

Table 6: Employment Rates of Parents and Non-Parents in Canada (20-to- 49-year-olds, by sex)



In March 2023, for instance, Statista reported that the ‘ready-to-eat’ meal segment was projected to be worth \$6.67 billion (USD) in 2023 with a growth rate of 5.66 per cent (CAGR 2023-2027). Similarly, they reported that the mobile food services market segment is forecasted to reach \$13.39 billion in the same year, a staggering growth rate of 11.02 per cent (CAGR 2023-2027).⁶ These trends will inevitably lead to more packaging waste being generated at a household level.

Millennials are also widely reported to eat on the run with some reports suggesting they eat 80 per cent of their meals at non-traditional times.⁷ In February 2016, The New York Times reported that 40 per cent of Millennials stopped eating cereal simply “because they dreaded the prospect of the dirty bowl left behind”.⁸ Analysts at Sanford C. Bernstein & Co (Bernstein) noted that cereal maker Kellogg saw its sales drop 14 per cent from 2013 through 2017 as younger consumers turned to more convenient options like yogurt and prepared breakfast sandwiches.⁹ Millennials born closer to 1996 are also widely reported to be most likely to replace meals with snacking very

⁶ [Online Food Delivery - Canada](https://www.statista.com/outlook/dmo/online-food-delivery/canada#:~:text=Revenueper cent20inper cent20theper cent20Onlineper cent20Food,USper cent2420.34bnper cent20byper cent202027) (https://www.statista.com/outlook/dmo/online-food-delivery/canada#:~:text=Revenueper cent20inper cent20theper cent20Onlineper cent20Food,USper cent2420.34bnper cent20byper cent202027)

⁷ [Millennial Food Statistics And Trends in 2024](https://blog.gitnux.com/millennial-food-statistics/per cent20)
 https://blog.gitnux.com/millennial-food-statistics/per cent20

⁸ [Cereal, A Taste of Nostalgia](https://www.nytimes.com/2016/02/24/dining/breakfast-cereal.html) (https://www.nytimes.com/2016/02/24/dining/breakfast-cereal.html)

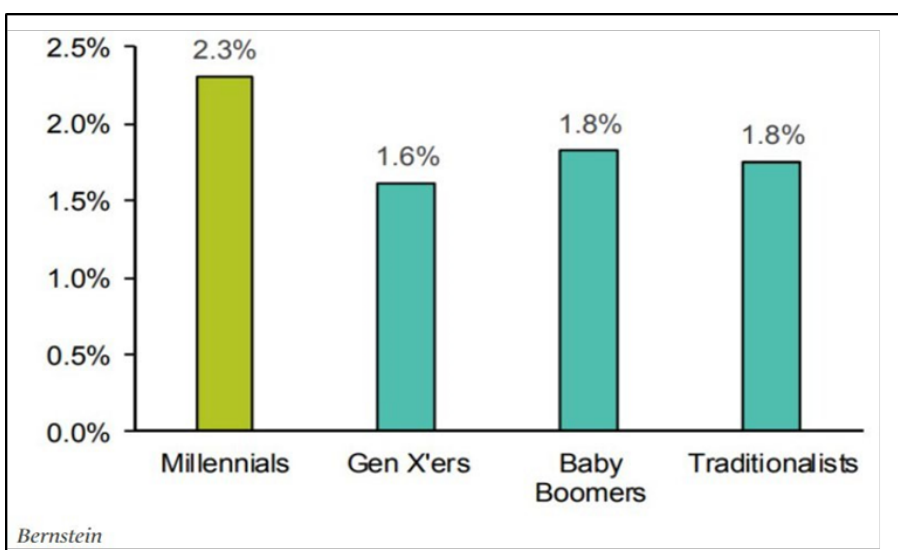
⁹ [Millennials' eating habits are wildly different from their parents' — and the food industry has to face urgent consequences](https://finance.yahoo.com/news/millennials-apos-eating-habits-wildly-190249400.html?fr=sycsrp_catchall) (https://finance.yahoo.com/news/millennials-apos-eating-habits-wildly-190249400.html?fr=sycsrp_catchall)

often or often compared with older generations (26 per cent vs. 9.5 per cent of Boomers).¹⁰

One unique aspect of Millennials is that they are perceived as being experiential diners and enjoy hosting events even though they are less likely to prepare meals from scratch. They more than any other generation have driven the growth of the meal kit delivery services now worth over \$1.5 billion per year in Canada and currently is used by an estimated 8.4 per cent of Canadians.^{11,12}

An October 2016 article from Forbes reported that Millennials spend as much as 44 per cent of their food budget on eating out at restaurants according to the Food Institute's analysis of the United States Department of Agriculture's food expenditure data from 2014.¹³ The Bernstein report made similar observations as illustrated in Table 7.

Table 7: Generational Food Consumption at Restaurants or Bars¹⁴



¹⁰ [Notable Millennial Food Trends: What Do They Like To Eat?](https://dfaingredients.com/trends/millennial-food-trends/)

(<https://dfaingredients.com/trends/millennial-food-trends/>)

¹¹ [Meal Kit Delivery - Canada](https://www.statista.com/outlook/dmo/online-food-delivery/grocery-delivery/meal-kit-delivery/canada) (<https://www.statista.com/outlook/dmo/online-food-delivery/grocery-delivery/meal-kit-delivery/canada>)

¹² [Have Canadians lost their appetite for meal-kit services? \(Survey\)](https://canadiangrocer.com/have-canadians-lost-their-appetite-meal-kit-services-survey)

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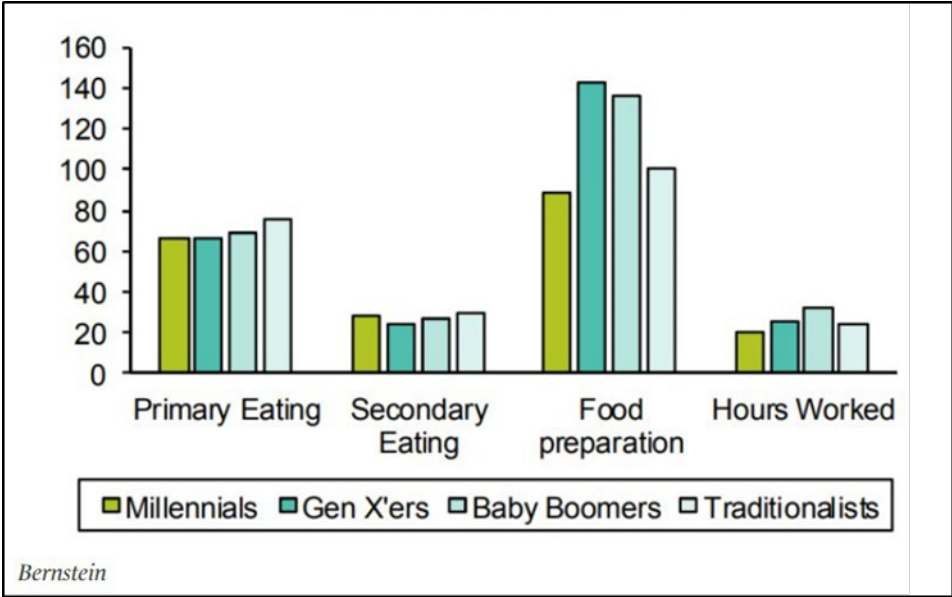
¹³ [Marketing Foods to Millennials](https://www.forbes.com/sites/alexandratalty/2016/10/17/millennials-spend-44-per-cent-of-food-dollars-on-eating-out-says-food-institute/?sh=6888da8f3ff6)

(<https://www.forbes.com/sites/alexandratalty/2016/10/17/millennials-spend-44-per-cent-of-food-dollars-on-eating-out-says-food-institute/?sh=6888da8f3ff6>)

¹⁴ Sanford C. Bernstein & Co <https://www.inc.com/business-insider/millennials-food-industry-preferences-eating-out-restaurant-prepared-meals-catering.html>

Bernstein, like many other researchers, also noted that Millennials are also considerably less likely to spend time preparing meals than previous generations as shown in their analysis in Table 8. Similarly, researchers noted a general trend by Millennials and subsequent generations to save time by outsourcing or automating activities such as home cleaning, landscaping and home renovations.

Table 8: Time Allocation by Generation¹⁵



This observation is consistent with data from a broad range of researchers highlighting the growing dependency on prepared meals from online and food delivery services.

While this trend spans all generations, Millennials are 50 per cent more likely than any other age group to regularly use online grocery services and overall are the most likely generation to favour online shopping in general (48 per cent), followed by Gen X (46 per cent).¹⁶

Despite their reliance on prepared foods, Millennials are also much more concerned about the quality of their food. In a survey undertaken by YouGov, 80 per cent of Millennials consider food quality to be a top factor in making purchases and 68 per cent indicated a willingness to spend more for high quality food. Nearly 70 per cent

¹⁵ [How Millennials are Changing the Food Industry](https://www.inc.com/business-insider/millennials-food-industry-preferences-eating-out-restaurant-prepared-meals-catering.html) (https://www.inc.com/business-insider/millennials-food-industry-preferences-eating-out-restaurant-prepared-meals-catering.html)

¹⁶ [87% of millennials say convenience is important when shopping](https://www.supermarketnews.com/news/87-millennials-say-convenience-important-when-shopping) (https://www.supermarketnews.com/news/87-millennials-say-convenience-important-when-shopping)

said they read labels more carefully and considered transparency in food sourcing to be important.

While Millennials are particularly focused on their health, they are reported to be the mostly likely group to throw away leftover food (i.e., 25 per cent of those surveyed) with Gen Z at 20 per cent followed by Boomers at 18 per cent according to the study undertaken by UK retailer Currys in July 2022.¹⁷ To put into perspective, the UK produced around 9.5 million tonnes of food waste in 2018, or the equivalent of 143 kilograms per person, according to the Office for National Statistics (ONS). According to the Commission for Environmental Cooperation, every Canadian, on average in 2018, tossed away 170 kilograms of food a year.¹⁸

Some studies have also noted that Millennials are not as good at recycling as previous generations, including a tendency to only recycle when convenient and engage in ‘wish-cycling’ (i.e., the practice of setting items out for recycling without knowing if they are actually accepted in the local recycling program in the hope they will be recycled).¹⁹ A recent survey has also shown a growing preference for deposit return systems for diversion of beverage containers.²⁰ In some respects, these observations are consistent with Millennials overall prioritization of convenience. However, it is surprising that some studies found only 12 per cent of Millennials check to confirm whether their local recycling program accepts a given material despite readily available internet sources and purpose-built cell phone apps.²¹ Gen Z is also reported

¹⁷ [Study: Millennials Waste More Food than any Other Generation.](https://www.circularonline.co.uk/tag/currys/)

<https://www.circularonline.co.uk/tag/currys/>

¹⁸ [A review of household behaviour in relation to food waste, recycling, energy use and air travel](https://www.ons.gov.uk/economy/environmentalaccounts/articles/areviewofhouseholdbehaviourinrelationtofoodwasterecyclingenergyuseandairtravel/2021-11-01#%3A%7E%3Atext%3DThe%20UK%20produced%20around%209.5%2Cfor%20National%20Statistics%20(ONS))

([https://www.ons.gov.uk/economy/environmentalaccounts/articles/areviewofhouseholdbehaviourinrelationtofoodwasterecyclingenergyuseandairtravel/2021-11-01#%3A%7E%3Atext%3DThe%20UK%20produced%20around%209.5%2Cfor%20National%20Statistics%20\(ONS\)](https://www.ons.gov.uk/economy/environmentalaccounts/articles/areviewofhouseholdbehaviourinrelationtofoodwasterecyclingenergyuseandairtravel/2021-11-01#%3A%7E%3Atext%3DThe%20UK%20produced%20around%209.5%2Cfor%20National%20Statistics%20(ONS)))

¹⁹ [Canada wastes 873 pounds of food per person a year, making us one of the biggest wasters on the planet](https://financialpost.com/commodities/agriculture/report-finds-canadians-waste-a-lot-of-food-calls-for-action-2) (<https://financialpost.com/commodities/agriculture/report-finds-canadians-waste-a-lot-of-food-calls-for-action-2>)

²⁰ [New Poll Shows Ontarians Want a Deposit System for Non-alcoholic Drink Containers, Similar to the Beer Store Program](https://environmentaldefence.ca/2023/05/08/ontarians-want-deposit-system-all-beverage/)

(<https://environmentaldefence.ca/2023/05/08/ontarians-want-deposit-system-all-beverage/>)

²¹ [Vancouver millennials not great recyclers, study finds](https://www.cbc.ca/news/canada/british-columbia/vancouver-recycling-mmbc-1.3780022)

(<https://www.cbc.ca/news/canada/british-columbia/vancouver-recycling-mmbc-1.3780022>)

to be less concerned about food waste compared with preceding generations suggesting an overall trend in changing attitudes.²² These findings would suggest that school based educational efforts have not necessarily been effective in driving better environmental outcomes with these generations.

Overall, if these observations are correct and the associated trends continue, it is expected that households will continue to generate more food waste per capita and significantly more associated packaging waste. These observations are supported by waste composition studies undertaken by the Continuous Improvement Fund (CIF) which also show a clear and growing reliance on single serve, ready-made and frozen meals. While packaging waste is now the responsibility of associated producers (as outlined in Technical Memo 1: Federal and Provincial Policy and Legislative Review) to manage, municipalities will still need to monitor disposal trends to see if producer programs are effectively diverting this waste stream.

3 Attitudinal Trends

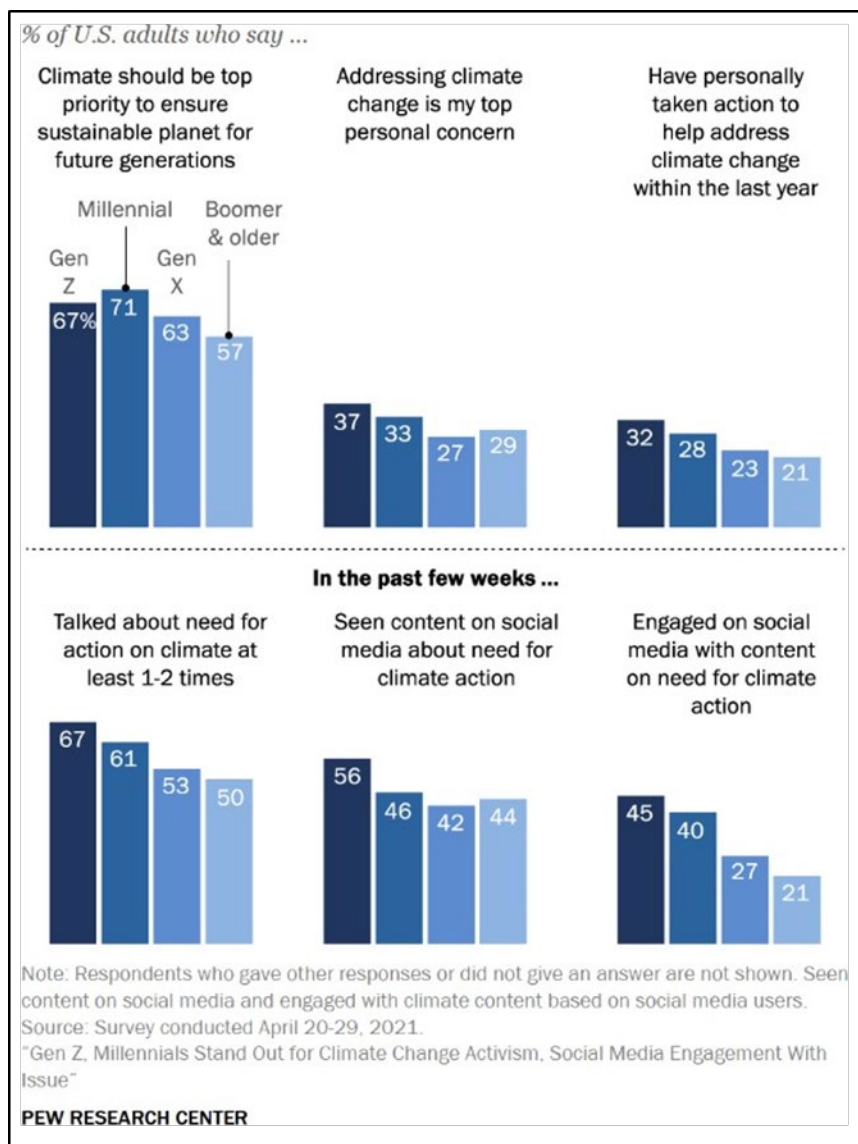
Gen Z is recognizably unique from other generations because of, amongst other things, their degree of environmental awareness and political activism. Thirty-two per cent of Gen Z and 28 per cent of Millennials reported having taken at least one of four actions (i.e., donating money, contacting an elected official, volunteering or attending a rally) as shown in Table 9 to help address climate change over the past year in a survey undertaken by Pew Research Center in April of 2021.²³ By comparison, Gen X (23 per cent), Boomers and older adults (21 per cent) were reportedly less active but more likely to participate in traditional forms of political engagement such as voting.

²² [Diets, Food Prices, Stress and the Power of Gen Z](https://www.globenewswire.com/en/news-release/2022/05/18/2446198/0/en/Diets-Food-Prices-Stress-and-the-Power-of-Gen-Z.html)

(<https://www.globenewswire.com/en/news-release/2022/05/18/2446198/0/en/Diets-Food-Prices-Stress-and-the-Power-of-Gen-Z.html>)

²³ [Gen Z, Millennials Stand Out for Climate Change Activism, Social Media Engagement With Issue](https://www.pewresearch.org/science/2021/05/26/gen-z-millennials-stand-out-for-climate-change-activism-social-media-engagement-with-issue/) (<https://www.pewresearch.org/science/2021/05/26/gen-z-millennials-stand-out-for-climate-change-activism-social-media-engagement-with-issue/>)

Table 9: Generational Responses to Climate Change and Engagement on Social Media



Gen Z is arguably the most tech-savvy generation in history. According to Common Sense Media, 71 per cent received a smart phone by the age of 12 and by 14, the percentage increases to 91 per cent giving them unparalleled exposure to social media and generational influencers on a variety of topics.²⁴ Gen Z shoppers are, for example, 30 per cent more likely than other generations to consider self-checkout a key

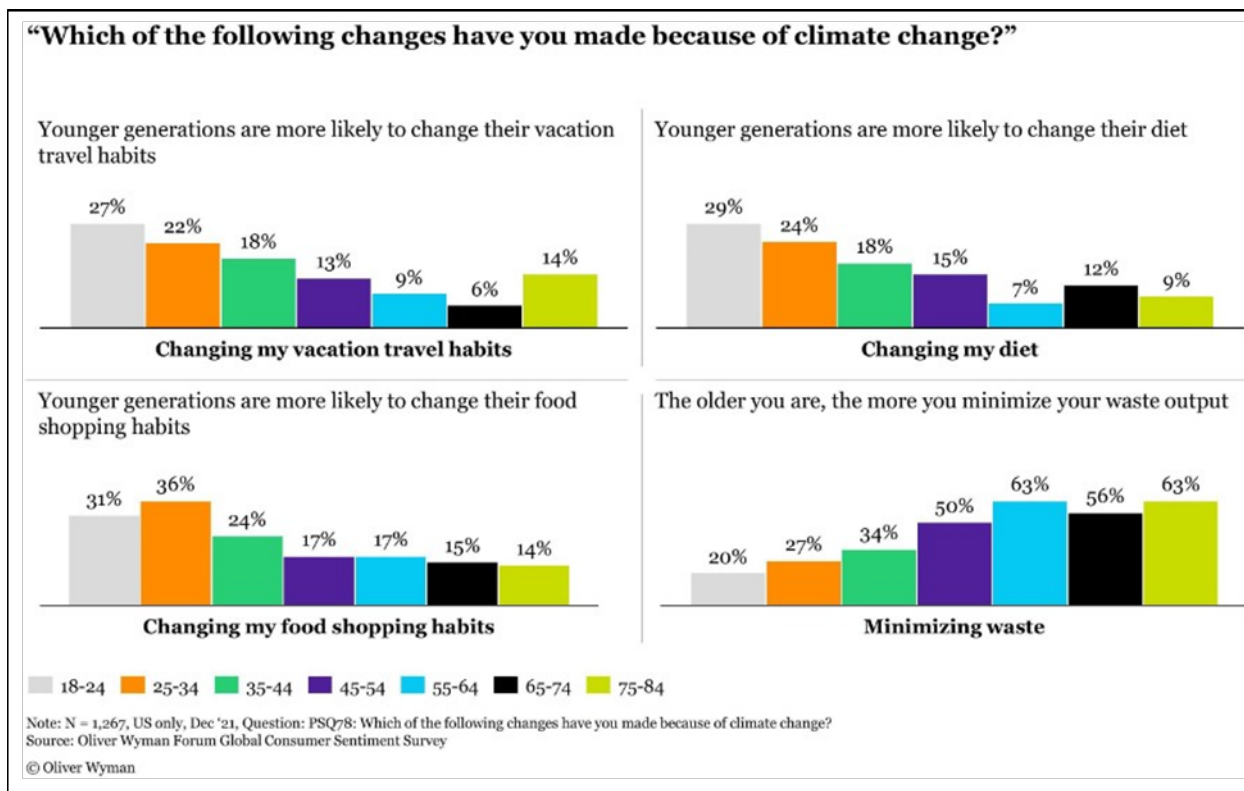
²⁴ [Media Use by Teens and Tweens](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf?utm_source=substack&utm_medium=email)

(https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf?utm_source=substack&utm_medium=email)

component of convenience.²⁵

The views of Gen Z and Millennials are also distinct from those of older adults over issues such as the use of fossil fuels. Pew Research Center reported that majorities of Gen Z (56 per cent) and Millennials (57 per cent) favored phasing out new gasoline cars and trucks by the year 2035. Majorities of Gen X (53 per cent) and Boomers and older generations (59 per cent), by comparison, opposed the idea and preferred a policy of using a mix of fossil fuels and renewables. Gen Z and Millennials also report taking a broader range of lifestyle related actions to address climate change as shown in Table 10. By comparison, older generations reported waste minimization as the most common change they had taken to address the issue.²⁶

Table 10: Differences in Generational Action to Address Climate Change



²⁵ [87% of millennials say convenience is important when shopping](https://www.supermarketnews.com/news/87-millennials-say-convenience-important-when-shopping)
(<https://www.supermarketnews.com/news/87-millennials-say-convenience-important-when-shopping>)

²⁶ [How to help Gen Z turn climate anxiety into action](https://www.weforum.org/agenda/2022/11/generation-z-climate-change/)
<https://www.weforum.org/agenda/2022/11/generation-z-climate-change/>

Despite their vocal support for efforts to address climate change, Gen Z's actions are often inconsistent with their self-proclaimed values. Ninety-five per cent of Gen Zs reported being willing to pay more for sustainable products, compared with about a third of the overall population according to research undertaken by Oliver Wyman Forum (OWF).²⁷ Yet the author notes that when it comes to purchasing clothing, Gen Z overwhelmingly prioritizes price and comfort. They concluded that while cost is a factor, constant pressure of social media and availability of easy online shopping keeps Gen Z loyal to fast fashion, which they described as cheap, super-trendy clothing, despite their climate concerns. The study found that more than half of Gen Zs say they purchase clothing at least monthly. Fewer than half of respondents reported wearing an outfit for more than two seasons, and almost a quarter wear different clothes each time they post on social media.

Even more significant is the apparent, and continued, disconnect between verbal support for principles such as sustainability and demonstrated action by Gen Zs to invest in sustainable practices. One study found that “65 per cent of consumers said they want to buy from sustainable brands, but only about 26 per cent actually made such purchases”.²⁸ While professionals in the waste management industry would be quick to point out that there has always been a significant gap between people’s professed attitudes and actual action, this continued disconnect seems somewhat surprising with Gen Zs given how vocal they are about climate change and sustainability. Consumers of all ages say they would buy more sustainable products if the prices were lower according to the OWF surveys. This fact is particularly true for younger adults. More than a third of Gen Zs say sustainable products are simply too expensive according to OWF. Gen Z viewpoints also differ from Millennials on other environmentally related issues. They are, for instance, less likely to believe that their personal food choices have at least a moderate impact on the environment (50 per cent vs. 67 per cent, respectively), and are now the biggest users of meal delivery kit services.²⁹ They are also less likely to be worried about food waste, though the

²⁷ [How to Help Gen Z Turn Climate Anxiety Into Action](https://www.oliverwymanforum.com/global-consumer-sentiment/2022/nov/how-to-help-gen-z-turn-climate-anxiety-into-action.html)

<https://www.oliverwymanforum.com/global-consumer-sentiment/2022/nov/how-to-help-gen-z-turn-climate-anxiety-into-action.html>

²⁸ [Brand Purpose in Divided Times: Four Strategies for Brand Leadership | Report](#)

(Bemporad, R. (2017) Brand Purpose in Divided Times: Four strategies for brand leadership. BBMG/GlobeScan Study)

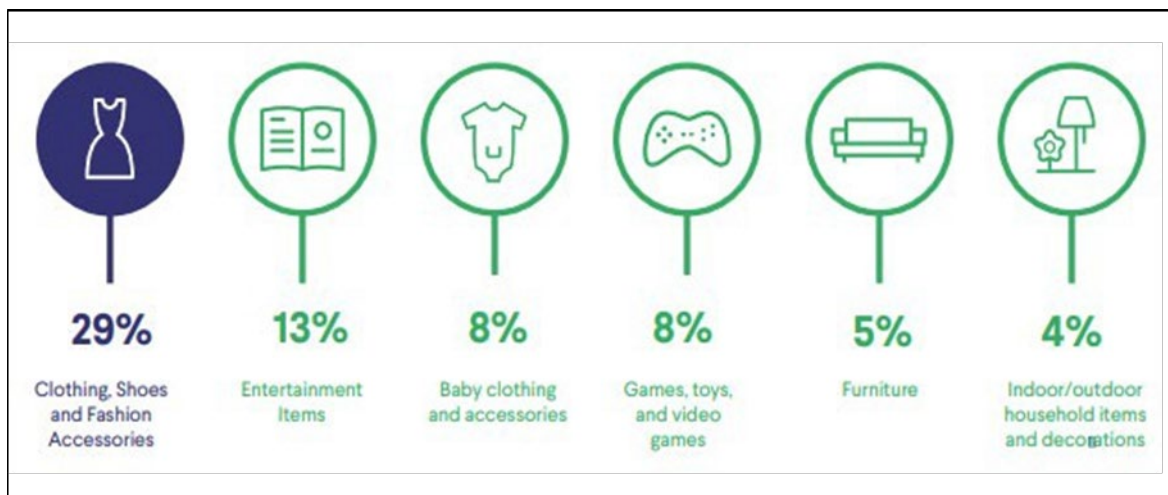
²⁹ [Have Canadians lost their appetite for meal-kit services? \(Survey\)](https://canadiangrocer.com/have-canadians-lost-their-appetite-meal-kit-services-survey)

<https://canadiangrocer.com/have-canadians-lost-their-appetite-meal-kit-services-survey>

majority in both groups express some level of concern (61 per cent vs. 69 per cent).³⁰

Despite these apparent contradictions in attitudes and behaviour, the OWF noted that Gen Z is far more likely to purchase used garments than other generations. More than 70 per cent of Gen Z respondents said they purchase some second-hand clothing, while the majority of those older than 25 purchase only new clothing. This trend has been previously reported by other researchers studying Millennials who also demonstrated a much greater willingness to buy and sell used goods than previous generations. In 2019, Kijiji published its fifth Annual Second-Hand Economy Index.³¹ The report highlighted that the second-hand economy already represented 1.23 per cent of Canada’s gross domestic product (GDP) in 2018 and noted that clothing continues to be the dominant item transacted as shown in Table 11.

Table 11: Categories of Household Items Transacted on Kijiji (by Percentage, 2019)



Again, the report noted that young Canadians were more active in the second-hand economy (i.e., 88 per cent of those under the age of 45 compared with 82 per cent overall). Additionally, those 18 to 24 years old traded or rent over four times as many items as those 65 years of age or older. The report also noted that motivation was shifting. Kijiji’s platform users reported a six per cent increase in altruistic reasons for participating, an average 4.5 per cent increase in ecological motivation and four per

³⁰ [Diets, Food Prices, Stress and the Power of Gen Z](https://www.globenewswire.com/en/news-release/2022/05/18/2446198/0/en/Diets-Food-Prices-Stress-and-the-Power-of-Gen-Z.html)
(<https://www.globenewswire.com/en/news-release/2022/05/18/2446198/0/en/Diets-Food-Prices-Stress-and-the-Power-of-Gen-Z.html>)

³¹ [Changing Values in Canada’s Economy](https://www.kijiji.ca/kijijicentral/app/uploads/2019/10/Kijiji-Index-Report-2019_EN_final_pages-2_compressed.pdf)
(https://www.kijiji.ca/kijijicentral/app/uploads/2019/10/Kijiji-Index-Report-2019_EN_final_pages-2_compressed.pdf)

cent decrease in economics motivation as shown in Table 12.

Table 12: Reported Reasons for Buying and Selling Items on Kijiji (2019)

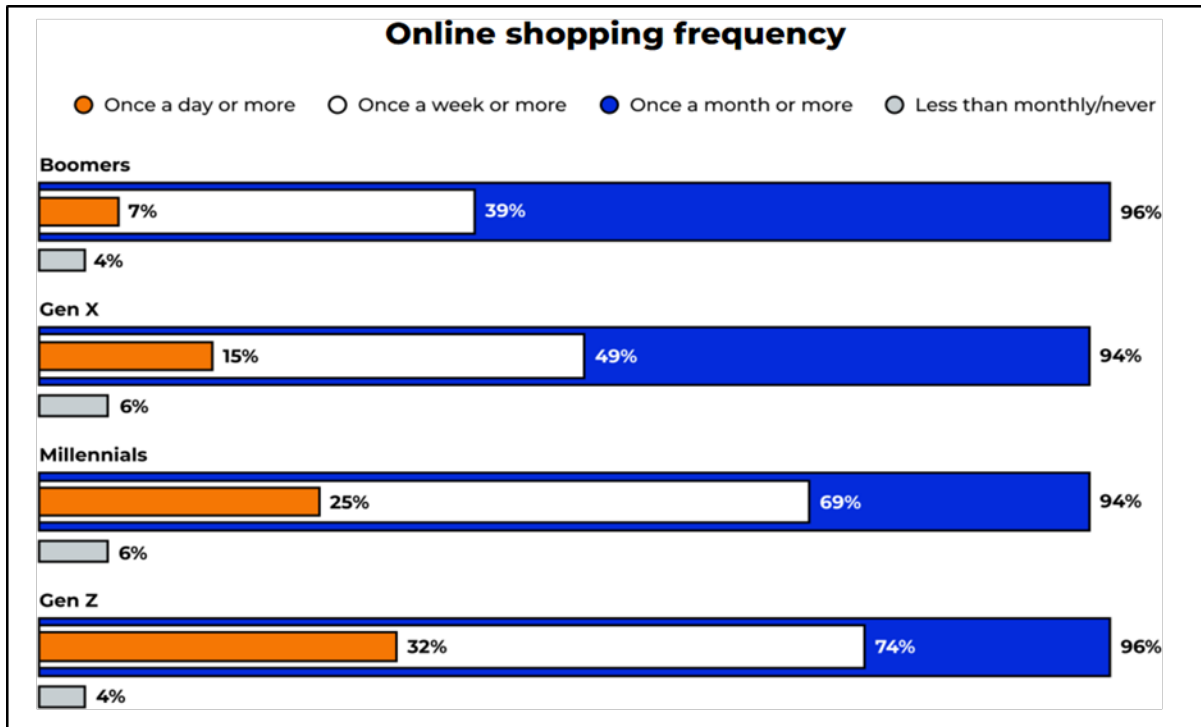


These observations highlight the growing dependency on the internet and social media as a primary tool for consumers to obtain information and purchase goods and services. In a January 2023 consumer trend report published by Hubspot, 46 per cent of Gen X and 24 per cent of Boomers have discovered a new product on social media in the past three months representing a 10 per cent and 41 per cent increase since May of the previous year.³²

Additionally, 23 per cent of Gen X (up 28 per cent from May 2022) and six per cent of Boomers (up 50 per cent from May 2022) bought a product on social media in the past three months. This generational disparity is readily apparent when considering online shopping habits as shown in Table 13.

³² [The State of Consumer Trends in 2023 \[Data from 600+ Consumers](https://blog.hubspot.com/marketing/state-of-consumer-trends-report)
(<https://blog.hubspot.com/marketing/state-of-consumer-trends-report>)

Table 13: Generational Trends in Online Shopping (Q1 2023)

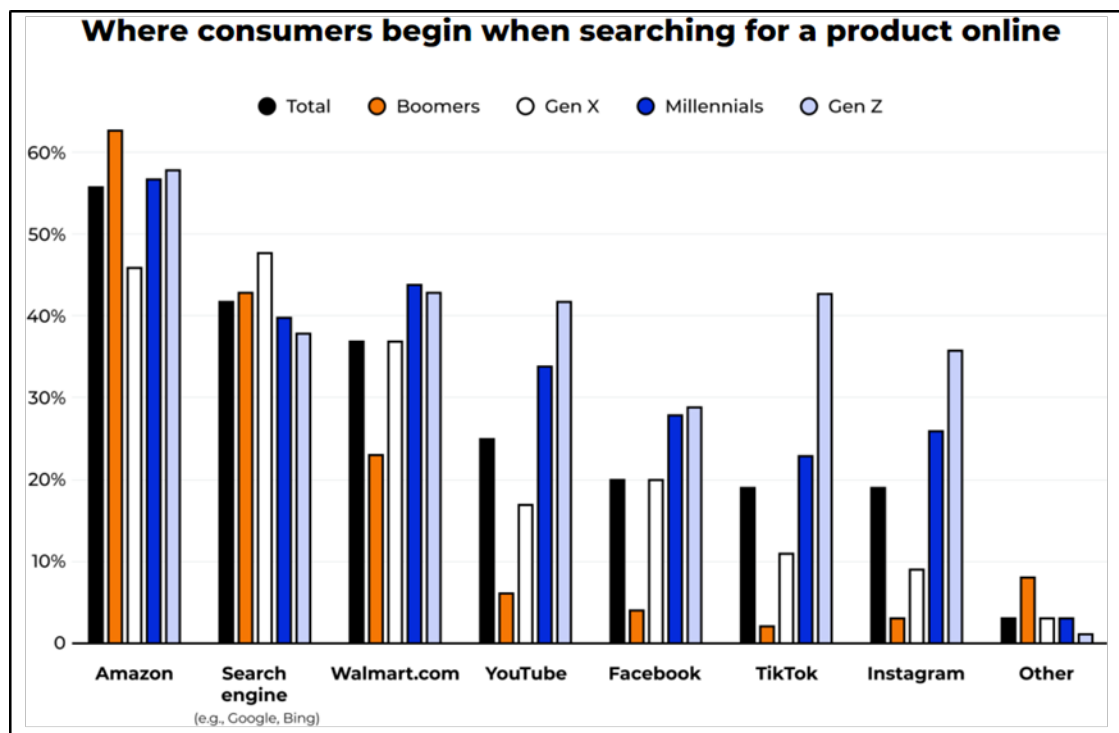


Source: Jungle Scout³³

There are also notable differences in both the sources of information used by the various generations, as noted in Table 14, with platforms like TikTok and Instagram featuring heavily in the lives of Gen Z consumers. These trends are particularly important for governments to consider when developing information and services for their local residents.

³³ [Quarterly Changes in Consumer Behavior](https://www.junglescout.com/consumer-trends/) (https://www.junglescout.com/consumer-trends/)

Table 14: Generational Differences in Online Platform Usage



Source: Jungle Scout³⁴

4 Waste Generation Implications

More than at any time in the past, convenience is increasingly driving consumer decision making. Today’s consumers are actively seeking lifestyle solutions that can reduce time spent on daily tasks in order to free up more time for personal enjoyment. Families are having fewer children both because of concern for the future as well as avoidance of the burden associated with child rearing. Increasing numbers of individuals are living alone or with a partner and growing numbers of pets. Consumers are moving away from labour intensive activities such as food preparation and are outsourcing or automating activities such as home cleaning, landscaping and home renovations at an ever increasing pace. These trends are driving fundamental change in the types of products and services being developed for consumers.

The advent of labour saving household devices such as robotic vacuums, automated watering systems and smart devices have become a common aspect of the average household. Similarly, the growing trend to replace ovens with small volume and fast

³⁴ [Quarterly Changes in Consumer Behavior](https://www.junglescout.com/consumer-trends/) (https://www.junglescout.com/consumer-trends/)

cooking devices such as air fryers and microwaves highlights the reality that many households are cooking for individuals and/or prioritizing speed in meal preparation. These changes are leading to record growth in the consumption of ready to eat meals and meal delivery services, which in turn have the potential to generate significant quantities of related packaging waste. Attitudes amongst younger generation towards food and leftovers storage suggest food waste will become a growing problem in future years. Similarly, Moore's Law of Change suggests the increasingly rapid rate of evolution of technology will only increase the speed at which household products will become obsolete leading to increased disposal of consumer electronics and other otherwise durable goods. The ready availability of cheap, disposable, and new or trendy products and clothing is also expected to lead to record levels of consumption and the inevitable disposable of these materials at ever-increasing rates. Trends in outsourcing of household chores such as landscaping are also expected to continue. These trends will result in a continued and gradual shift in apparent waste generation from residential to commercial sources with associated impacts on curbside collection and depot operations usage, dependent on if contractors take the waste or leave it behind.

These trends have the potential to be mitigated at some level by positive trends such as operational efficiencies gained in centralizing food preparation of ready to eat meals. Similarly, the growing trend amongst younger generations to buy and sell second-hand items and rent rather than own durable goods, e.g., sports and leisure equipment, may also reduce the impact on the environment. While Gen Z has been particularly vocal about the need for change to address climate change and environmental sustainability, it remains to be seen whether their concerns can translate into personal and significant action. History would suggest that it is more likely that institutions such as municipal government will increasingly have to shoulder the burden of addressing these issues. Table 15 summaries some of the potential implications of these trends.

Table 15: Trend Implications

Social	Environmental	Financial
Aging Population ((Over the next 25 years (by 2046), the population aged 85 and older could triple to almost 2.5 million people.))	Increasing medical/continence waste entering environment	Special needs services (set out), increasing costs to manage growing medical/continence waste
Canadian population shrinking, immigration increasing	Decrease in wastes generated overall as population decreases	Fewer working adults to pay for aging population, higher costs for waste management, increased costs for promotion and education of waste programs for growing newcomers
Smaller households, few children overall	Decrease in wastes generated, change in wastes – more electronic waste and textiles	Increased cost for collection/management
Number of pets in home increasing	Increase in wastes generated	Increased cost for collection/management
Convenience eating for millennials	Increasing food packaging (single serve, takeout) and organics generation	Increased cost for collection/management

5 Conclusions

Municipalities are therefore encouraged to continue monitoring these trends by undertaking ongoing and regular curbside waste composition studies to ensure their programs are adequately addressing resident’s needs. Niagara Region, in particular, has a unique mix of urban and rural communities. Careful consideration of potential differences in services needs should be considered through public consultation in developing and evaluating options for the WMSP.