

# SINGLED-OUT: WASTE IN THE FOOD-SERVICE INDUSTRY

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# SINGLE-USE ITEMS ARE WIDELY USED IN RESTAURANT OPERATIONS...

...as they provide a range of durable, hygienic and inexpensive products. Commonly found both in back of house (among shipping and packaging waste) as well as front of house (utensils, cups, straws, take-out containers, etc.), the food-service industry has come to rely on cost-effective, single-use materials.

Despite their perceived benefits, single-use items have an incredibly short functional lifespan and are typically made from non-recyclable materials. When combined with ineffective recycling procedures, usage of these items can end up harming the natural environment[1]. With growing concerns about climate change, consumers have become increasingly interested in sustainable alternatives to the status quo. Environmentally-concerned restaurant patrons are seeking not only an excellent meal, but also to feel as if they are simultaneously doing something good for the environment[2]. The relevance of environmental concerns within the food-service industry has been evidenced by the emergence of “green restaurants”[2].

By adopting and marketing a variety of sustainability practices, some restaurants have been successful at gaining a competitive edge[1].

However, simply self-advertising as a “green” restaurant is no longer enough, consumers want to see and taste change. Recent publicity has focused consumer attention on the importance of reducing and eliminating single-use items in the food-service industry. This, alongside trends towards take-out and delivery of food, have resulted in a paradoxical demand for both reduced waste and packaging as well as increased takeout and delivery options.

As the zero-waste message builds, restaurants are faced with the challenge of keeping up with rapidly changing consumer demands in a highly competitive industry. Although this presents many challenges, the opportunities for eco-friendly alternatives are even more so available. As Canadians are spending more of their food dollar in restaurants, it is time for the food-service industry to lead by example.



## OBJECTIVE:

This paper discusses business-oriented approaches to reducing the utilization of single-use items in the food-service industry. Increasing awareness about the issue and educating on alternatives are paramount to fostering change and encouraging sustainable development.



# POLICY CHANGES: MANDATING SUSTAINABILITY IN CANADA

Single-use items used in the food-service industry are typically made from paper, plastic or polystyrene foam. The production and utilization of plastic items specifically is growing rapidly in Canada, with over half of plastic products designed to be disposed of after only one use[3]. Despite this high frequency of disposal, inadequate incentives and infrastructure to recycle plastic materials are common and pose significant end-of-life management issues. Furthermore, waste management practices vary significantly across the country causing widespread confusion among consumers, businesses and policymakers. As a result of these issues, the majority of plastics never fully break down and have subsequently begun polluting oceans and the environment, further contributing to climate change[3].

Growing concern about global marine litter, pollution and increasing consumerism has motivated international agreements on plastic waste reduction. The United Nations' 2030 Sustainable Development Goals have proposed Goal 14.1; to prevent and significantly reduce marine litter by 2025 as well as Goal 12; to ensure sustainable consumption and production patterns[4].

To contribute to these efforts, some countries have begun implementing voluntary commitments to reduce plastic waste and single-use items. For example, Canada has recently signed the Ocean Plastics Charter, which cites commitments to reduce plastic litter by improving recycling initiatives and restricting single-use products such as plastic bags and take-out containers. Some industry support has been demonstrated for the Oceans Plastic Charter, namely by chief executive of Unilever; Paul Polman. Polman has suggested that those who have not yet signed on are falling behind on a world trend led by consumers[5].

Some Canadian municipalities have gone beyond voluntary commitments to reduce waste and have introduced more severe bans. One such example is Montreal, who in early 2018 became the first major Canadian city to ban single-use plastic bags. This new bylaw bans conventional lightweight plastic shopping bags as well as all types of oxo-degradable, oxo-fragmentable, oxo-biodegradable and biodegradable bags. For companies who fail to adhere to the new bylaw, they could face fines ranging from \$400-\$4000[6].

On the other side of the country, Vancouver has demonstrated significant concern over the estimated 2.6 million plastic-lined paper cups and 2 million plastic bags thrown in the garbage every week. To address this issue, local council recently voted to ban the distribution of plastic straws, foam take-out containers and foam cups. Local council has also approved a flexible bylaw to reduce all disposable cups as well as plastic and paper shopping bags. This ban will be introduced on June 1st, 2019 and is part of Vancouver's zero-waste strategy[7].

**As enthusiasm grows for both voluntary and enforced bans on single-use items, it is important for restaurants to keep one step ahead of ongoing policy changes. Failing to implement pro-active changes prior to the point of mandating change can result in heavy fines and may compromise businesses' ability to operate at all.**



# THE BUSINESS CASE FOR SINGLE-USE ITEM REDUCTION

Often referred to as the “Business Case for Sustainability”, there exists significant environmental and economic incentives for sustainable development and waste reduction. Emerging business concepts such as B-Corporation and the triple-bottom line (attributing equal importance to people, planet and profit) have proven that corporations can indeed sustain their business model while also protecting and maintaining natural resources[8]. In this case, we see economic prosperity, environmental stewardship and social responsibility combining to create a true win-win-win proposition for businesses and consumers.

Although some green initiatives may require an initial investment, many organizations reap improvements in their bottom line after implementation. Several studies have found that consumers believe restaurants should contribute to environmental protection efforts and thus are willing to pay more at green restaurants[1;3]. One study in particular found that 53.7% of respondents indicated they were willing to pay 2-6% more at restaurants with green practices in place, with an additional 33.1% indicating they would pay 8-12% more and 5.1% would pay up 20% more[2]. Additional empirical research has shown that green restaurants are more successful at attracting positive consumer attention and benefit from reduced operational costs, improved corporate image and better customer ratings. Finally, restaurants with a sustainability focus have been shown to be better able to foster long-term financial success[3].

Two areas of improvement that will be further explored in this section pertain to improved customer relations and reduced operational costs.

## IMPROVING CUSTOMER RELATIONS

As previously discussed, consumers are becoming increasingly interested in pro-environmental initiatives. More than ever before, consumers are making their dining decisions based on the operating practices of the establishment under consideration. In a study conducted by Willard in 2002, food-service establishments working on sustainability initiatives drew more favour from both potential employees and customers[9]. Millennials in particular are more likely to frequent businesses working towards sustainability goals[10]. Given the millennial generation’s tendency to eat out frequently, patron all types of restaurants and influence parents’ and friends’ purchasing decisions, they have been identified as a growing segment of the market[11]. As such, their priorities and preferences should be considered carefully.



In an already competitive industry, attracting and maintaining both customers and talented staff is critical. By demonstrating environmental leadership, restaurants can build trust and meaningful connections with community members resulting in joint prosperity[10].

## LOWER OPERATING COSTS



Potential financial gains associated with improved customer relations can be difficult to contextualize. More tangible cost-saving opportunities lie in the potential to lower restaurant operating costs through more efficient waste management practices. Waste management of single-use items in particular can be expensive and time-consuming. Products must be ordered frequently, and sorting waste can be difficult – not to mention unpleasant. If customers are left to sort their own waste, unclear signage and inconsistent recycling rules can often result in improper sorting. With additional waste removal costs added, waste management expenditures can make up a significant proportion of restaurant operating costs[12].

Given the economic burden and negative environmental repercussions of ineffective waste management, addressing these issues is recognized as an essential prerequisite for sustainable development[13]. In fact, research shows that minimizing environmentally harmful waste and participating in recycling programs are two of the most important strategies that restaurants can implement to become more sustainable[3]. The ubiquitous presence of single-use items and wide array of alternatives makes addressing this particular issue an excellent place to start.

**"To put it simply, meeting consumer demands for sustainable restaurant alternatives generates the potential to improve both businesses and the environment."**

## REDUCING SINGLE-USE ITEMS: HOW?



Waste of single-use items impacts costs in the food-service industry in three principal ways; through the loss of useful product, the cost to replace product and the cost of having waste hauled away. Single-use items can be found throughout restaurant operations both in back and front of house. Packaging waste in particular has been identified as the second largest contributor of waste in the food industry, typically contributing 34-50% of total waste generated[14]. In order to address these issues and begin reaping the financial benefits of waste minimization, the following four steps have been proposed. These action items are prioritized from greatest to lowest potential for financial and environmental benefits.

# Reduce

## Replace

## Upgrade

## Recycle

**1. Reduce: Identify and eliminate unnecessary single-use products. Reducing waste generation can mitigate many basic operating costs.**

First and foremost, the importance of unnecessary items like non-edible garnishes and decorations (i.e. doilies, frilled toothpicks and stir sticks) should be assessed[13]. If deemed unnecessary, they can be readily eliminated.

**2. Replace: For any necessary plastic items that will remain within the restaurant, replace them with versions that are reusable.**

If an item is identified as being required for business operations (i.e. straws or cups), these items should be replaced with durable, reusable items made from ceramic, metal or glass that maintain functionality but are reusable. These items should only be offered at the customer's request, rather than as an automatic. Prolonging the functional lifespan of products can result in both time and money savings as operators are able to decrease single-use item ordering frequency.

**3. Upgrade: For any remaining single-use items that cannot be eliminated (due to hygiene or safety concerns), seek alternatives made from recycled materials.**

Products made from recycled materials are becoming more widely available. Using recycled material reduces the need to extract new raw materials, thus limiting the environmental impacts of production[13]. Examples of items made from recycled materials include paper towels, napkins, paper cups and take-out containers. Additionally, bio-based items made from tree fiber or crop material are available in the form of take-out clam shells and starch-based cutlery.

Ecologo certified products are one example of packaging items designed to have a reduced environmental impact. These certifications are voluntary, life-cycle based environmental certifications assigned to products that have undergone testing to ensure compliance with stringent environmental performance standards[15]. Packaging or take-out products with the Ecologo certification provide promising alternatives to conventional single-use items that cannot be eliminated. As the issue of single-use item waste generation continues to draw consumer and industry attention, a greater number of sustainable packaging alternatives are likely to emerge. An exciting example of this is Starbucks and McDonalds' recent partnership to create a to-go coffee cup that is both fully recyclable and compostable. Although current to-go cups look like paper, they are thinly lined with plastic in order to prevent leaking. This combination of materials makes them very difficult to recycle and cups are instead disposed of in the garbage stream. Calling it a "moon shot" for sustainability, Starbucks and McDonalds' goal is to build a cup with a plant based biodegradable liner that will facilitate end-of-life management. They also plan to invest in ways to improve municipal recycling and composting processes demonstrating a novel, holistic approach to this contemporary problem[16].

**4. Recycle: Ensure appropriate waste disposal methods are in place for remaining single-use products.**

When single-use items cannot be eliminated, repurposing, recycling or composting them – rather than simply disposing of them in the general waste stream – is critical. Any remaining single-use items used in operations should be light-weight and flexible in order to facilitate breakdown[13]. When selecting these recyclable or compostable items, it is important to consider local recycling laws and sorting facilities.

# GETTING STARTED



## ASSESS

Strategies for sustainable development can be extremely diverse. Although a unique plan is required to meet the particular needs of each establishment, experts agree that it is important to first become aware of both the volume and sources of waste[17]. This can be done by tracking the production of waste and determining its sources. Are there obvious perpetrators of waste? In many cases, this first step can identify opportunities for waste reduction and cost-savings that had previously gone unnoticed.

## STRATEGIZE

Next, opportunities for reducing, reusing or recycling waste should be developed. Engaging both shareholders and stakeholders in this discussion allows the needs of all involved to be considered. Alongside any strategies developed, staff training programs should also be discussed. Without sufficient employee engagement and training, any changes implemented will not be sustainable, if achieved at all, which can result in further wasted resources. By discussing new roles, responsibilities and expected benefits of change with staff, initiatives will have an improved success rate[13].

## IMPLEMENT

Once a plan has been formed, staff are trained and any necessary initial investment has been approved, it is time to begin. At this point, it is important for operators to remember to avoid spreading themselves too thin. Although admirable, aiming for drastic change can quickly become overwhelming. Instead, expectations should be kept realistic as the journey to sustainability requires patience and perseverance.

## COMMUNICATE

Educating customers on newly implemented eco-friendly practices is perhaps the most critical step to ensure program success[3]. Although customers are more likely to seek out and pay more at restaurants with green practices in place, they will not be motivated to do so unless they are made aware of these initiatives. It is therefore important for restaurants to communicate about the associated environmental benefits of newly implemented initiatives, particularly highlighting the practices perceived to be most important to the customer. Marketers should also provide regular, positive feedback telling customers they are making a difference[1]. For example, Starbucks communicates its green practices through counter card displays, company website and information on coffee cups. In doing so, they are better able to build strong customer loyalty, at least partially based on their green practices[2]. Finally, highly motivated restaurants might also initiate sustainability-focused activities in the community. Beyond getting the word out, this can improve community perception and identify restaurants as being sustainability champions[2].

**By highlighting what restaurants have been able to achieve in terms of environment-focused attributes on company websites and through marketing initiatives, consumers can more effectively be kept in the loop[1;3].**

# SUCCESSFUL EXAMPLES

## A&W

Canada's fastest-growing burger chain has made many advances towards reducing and eliminating their single-use waste generation. Customers can enjoy their beverage in a frosted mug, their fries in a reusable metal basket and their burger on a ceramic plate. By introducing reusable alternatives, A&W is able to save 23.7 million soda paper cups, 23 million paper bags, 11.5 coffee paper cups, 4.5 million paper plates and 9 million forks and knives from going to landfill every year. For customers ordering take-out, and therefore unable to enjoy these reusable items, 90% of A&W packaging is either recyclable or compostable[11]. More recently, A&W became the first major fast food restaurant chain in North America to ban plastic straws. As a result, they are able to prevent 82 million plastic straws from reaching landfills every year.

Tyler Pronyk, Director of Distribution, Equipment and Packaging for A&W explained that by reducing waste within their restaurants they were able to simultaneously elevate the dining experience for customers. It seems people enjoy eating their food on ceramic plates with real cutlery – a notion also exemplified in seniors' retirement homes[20]. Furthermore, these waste reduction initiatives are very well received by A&W customers and employees who say they are proud to be working for or supporting a brand making pro-environmental decisions.

For restaurants looking to follow A&W's example, Pronyk suggests the following:

**"Start small, start today. It is a journey so it will never be over...and listen to your staff and consumers."**

## BAKEYS EDIBLE CUTLERY

Narayana Peesapaty created Bakeys Edible Cutlery to help reduce the 40 million plastic utensils disposed of every year in the United States. Their line of edible cutlery is made from millet, rice and wheat flour[18]. With a shelf-life of three years, but the ability to decompose within 4-5 days (should the user choose not to eat their utensil), this creative alternative to plastic cutlery is certainly an idea worth "chewing on".

## TORONTO YORKDALE MALL FOOD COURT

Toronto's popular Yorkdale Mall has recently introduced reusable plates and cutlery in their food court. The food court now washes approximately 75,000 dishes and 53,000 pieces of cutlery every week. As a result of these changes, garbage generation has dropped from 120 to 3 bags produced per day. In order to ensure proper sorting of remaining non-reusable materials, garbage cans have been eliminated and properly trained food court staff sort materials instead[19].

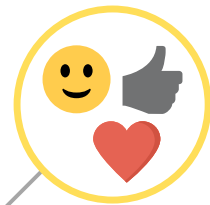


## UNIVERSITY OF GUELPH'S HOSPITALITY SERVICES

Widely recognized as a Canadian leader for sustainability initiatives, in 2018 the University of Guelph's Hospitality Services banned plastic straws and bags at most campus restaurants and shops. This change is predicted to divert approximately 175,000 straws and 155,000 bags from landfills[21]. Hospitality Services is also working to address the environmental repercussions of a caffeinated student body. As an incentive for sustainability, customers who bring in their own reusable mug (no matter the size) are only charged the price of a small. Staff and students can also take advantage of the "I am Reusable" program where in exchange for a one-time \$5 investment, they can enjoy their food in a reusable takeout container with stainless steel cutlery. Once the container is returned – to be washed by staff and then reused – a card is given that can again be exchanged for a container their following visit. For customers not participating in this eco-friendly program, remaining paper plates are Canadian-made and compostable, single-use cutlery is bio-degradable and all paper napkins are Ecologo certified.

### Conclusion

The potential for a financial return and the mitigation of environmental issues, all while meeting consumer demands, necessitates both a shift in thinking and action when it comes to single-use items in the food-service industry. By considering the steps and suggestions included in this paper, reducing single-use items in restaurants can truly yield benefits for all. Although change does not happen overnight, there is no time like the present to begin the shift towards sustainability;  
**one single-use item at a time.**



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