Tackling the Plastic Problem

How to reduce the impact of single-use plastic bottles in commercial environments



Zip WATER



"In Australia, 375 million plastic bottles end up in landfill and waterways every year, contributing to the country's growing landfill problem and destroying marine ecosystems."

INTRODUCTION

While we have some of the highest quality tap water in the world, many Australians choose to drink water bottled in plastic. Bottled water is marketed to us as cleaner, safer and tastier than tap water, creating a perception that bottled water is overall 'better.' Convenience is another factor as to why bottled water remains the beverage of choice. Instead of having to bring their own reusable bottle, people can simply buy bottled water, stay hydrated and discard it if they are on the go.

However, the seemingly innocuous act of discarding a plastic bottle has significant impacts on the environment. Billions of items of plastic waste are polluting our oceans, lakes, and rivers, and piling up on landfills where they harm our natural ecosystems. The manufacture of plastic products is also a significant drain on natural resources, requiring giant amounts of fossil fuels to make and transport.

Our plastics problem is not a small one. In Australia, 3.5 million tonnes of plastics are used every year of which 84% is sent to landfill and only 13% is recycled.[1] One million tonnes of plastic consumption is single-use plastic.[2] Globally, the use of plastic is increasing, and is expected to double by 2040, with potentially grave consequences for our environment.[3]

Addressing the plastic problem will require multiple interventions across every industry, but designers and specifiers have a significant role to play. Complete water filtration systems with a range of water types including boiling, chilled, sparkling or ambient have been developed to respond to many of the reasons people choose to drink from plastic. By specifying water filtration systems that meet the needs of businesses and consumers, we can reduce the demand for plastic bottles and the vast amount of waste that is generated through their use.

In this whitepaper, we consider the environmental, economic and health impact of plastic water bottles and examine trends and solutions that reduce our reliance on single-use plastic bottles across various industries.



THE TRUE COST OF SINGLE-USE PLASTIC BOTTLED WATER

Environmental

It only takes a moment for a plastic bottle to enter the environment, but its environmental impacts are extensive. In Australia, 375 million plastic bottles end up in landfill and waterways every year, contributing to the country's growing landfill problem and destroying marine ecosystems.[4] Landfills can impact the places and people surrounding it by contaminating soil and water supplies, wreaking havoc on natural habitats, and contributing to air pollution and greenhouse gas emissions. If they reach water ways, discarded plastic bottles leak chemicals into the environment and can injure and kill fish, seabirds and other marine mammals.

To make matters worse, plastics can take anywhere from 20 to 500 years to decompose, which means we are accumulating harmful plastic waste at an exponential rate. The Australian government estimates that 130,000 tonnes of plastic leaks into the marine environment each year.[5] By 2050, they estimate that plastic in the oceans will outweigh fish.[6]

The production of plastic water bottles also takes its environmental toll. It takes approximately three litres of oil to produce one litre of bottled water. Most plastic bottles are made of virgin polyethylene terephthalate (PET), which is manufactured using fossil fuels and thus encourages mining of non-renewable resources.[7] The capture, conveyance and treatment of water requires a high amount of energy in the cleaning, filling, sealing, labelling and refrigerating of bottles.[8] There is also the transport energy required to deliver bottles to retailers and on to the customer. In total, the energy required in the production of bottled water is 5.6-10.2 MJ per litre. Compare this to tap water, which typically requires 0.005 MJ per litre in treatment and distribution.[9]

Human health

There is a growing body of evidence that bottled water is bad for your health. In a study published in Frontiers in Chemistry 2018, researchers found that 93% of analysed samples taken from 259 bottled waters sold in several countries contained "microplastic" synthetic polymer particles.[10] There is evidence that such plastics and the chemical pollutants that bind to them have toxic effects and are implicated in health hazards such as obesity, diabetes and heart disease, as well as cancer, reproductive problems and neural problems.[11]

Another study found that many brands of bottled water were deficient of essential minerals such as magnesium, potassium and calcium.[12] Further research found that 20% of the bottled water samples had concentrations of chlorine, fluoride, nitrate and other harmful compounds that exceeded the World Health Organisation guidelines.[13] The presence of bisphenol A (BPA) in bottled water, which has been linked to breast cancer and other health conditions, is also a concern.[14]

Economic

The economic cost of bottled water is the aspect that has the most immediate impact on consumers. In this country, we spend more than $736 million a year on bottled water, making it one of the most common and expensive single-use purchases in Australia.[15] Bottled water costs approximately $3 per litre whereas tap water is approximately $3 per 1000 litres.[16] The Victorian government notes that it would take you eight years of refilling your plastic bottle with tap water to make back the initial cost of buying one bottle of water.[17]



PHASING OUT PLASTIC BOTTLED WATER

Industry trends

Offices

With sustainability and health becoming a top concern for companies and their employees, we are seeing the elimination of single-use plastic bottles as a growing trend in office culture. Companies are reaping the benefits of making the office an eco-friendlier environment, including improved employee satisfaction as well as having a positive impact on their brand image.

Sustainable water dispensers have become standard in most modern offices. Filtered chilled, sparkling and boiling water dispensers eliminate the need for bottled water as employees can have their preferred water type instantly. Different options for drinking water offer a healthy alternative to sugary soft drinks, helping to support better health outcomes and projecting the image of a company that cares about employee wellbeing. Easy access to drinking water allows employees to stay hydrated, helping them stay focused for longer periods thus improving their productivity.

Hotels

Leading hotel and hospitality brands are leading the fight against single-use plastic pollution. Recently, over 100 tourism companies, suppliers, business associations, consultancies and certification schemes in the tourism sector signed the Global Tourism Plastics Initiative that requires all participants to develop an action plan for eliminating unnecessary single-use plastic items and transitioning to reusable alternatives by 2025.

Eliminating plastic bottled water is on the agenda with hotels removing plastic packaged water bottles from hotel rooms and replacing them with reusable bottles that can be filled up in water stations. For example, the Sheraton Mirage in Port Douglas installed fresh water refill stations providing unlimited still and sparkling water at the lift landing on all guest floors.

On a broader scale, the Hyatt Hotels Corporation is making a concerted effort to eliminate or reduce plastic pollution across the company's 875 properties in over 60 countries. Among the strategies being implemented to achieve this goal include replacing small bottles with larger bottles in many hotel rooms, installing water stations around public spaces for refilling reusable bottles, and only serving water in carafes at business meetings and corporate events.

Cafes and restaurants

Restaurants have a significant waste problem, from oversized food portions to excess packaging, and single-use plastics are a key contributing factor. While reducing a restaurant's dependence on single-use plastic can be an expensive undertaking, consumers are increasingly interested in patronising businesses that align with their beliefs on sustainability. In fact, studies show that 73% of millenials are willing to pay more for sustainable offerings.

With customers increasingly turning away from single-use plastic, the inclusion of premium filtered water at an establishment is now becoming standard. There is a growing willingness to pay for filtered water as customers become aware of the costs of providing the service. A filtered water system will help boost the operator's sustainability credentials and provides new opportunities for branding (e.g. personalised recyclable glass bottles), while shifting their water offering into a 'premium' service worth paying for. This is not to mention the potential savings from eliminating the need to purchase, transport, store, refrigerate and recycle bottles.

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SUSTAINABLE DRINKING WATER SOLUTIONS

High-capacity water systems by Zip Water

Zip Water has been creating and manufacturing Australian designed and made water systems since 1947. With unrivalled expertise in instant filtered boiling, chilled and sparkling water taps, Zip Water is known globally for being home to the world's most innovative and advanced drinking water systems.

Transforming the way people drink, Zip Water's advanced water filtration, functionality and cutting-edge technology are helping eliminate single-use plastic bottles from a range of commercial settings.

FOR COMMERCIAL OFFICES

Zip HydroTap (G5 tech – Classic Plus and Touch-free)

Powered by their latest G5 technology, Zip HydroTap's superior filtration and compact, efficient design makes it the perfect water solution for any workspace. Offering simple, intuitive controls including continuous flow to fill bottles, boiling water safety lock, Zip HydroTap also features SteriTouch® antimicrobial protection impregnated within the new touchpad on Zip HydroTap Classic Plus models for enhanced hygiene. Zip HydroTap has a large range for commercial capacity, offering solutions that are suitable for organisations of any size.

With simple, intuitive controls and available in seven ultramodern finishes, Zip HydroTap Classic Plus adds designer style to any setting. In addition to its sleek, functional design, you can customise your Classic Plus by selecting energy saving modes and usage settings with the optimised new menu. With easy to change high quality filters, a Zip HydroTap will support your sustainability ambitions and remove the need for bottled water in the workplace.

With an increased consideration around hygiene in the workplace, Zip Water also offers a contactless option to help reduce a shared touchpoint in the workplace kitchen. Zip HydroTap Touch-Free Wave provides a 100% touch-free solution to instantly dispense pure-tasting drinking water with a simple wave of a hand.

FOR HOTELS, RESTAURANTS AND CAFES

Zip HydroChill

A perfect match for any commercial setting, Zip Water's wide range of Zip HydroChill high-capacity water systems offer sustainable bottle filling solutions that promote hydration and wellbeing. Delivering up to 90, 120 or 200 litres of filtered, chilled, ambient or sparkling water per hour (depending on capacity), Zip HydroChill is the perfect solution for corporate and commercial use, where high volumes of drinking water are needed straight from the tap, such as conferences and company meetings.

Vestal by Zip

The perfect on-tap system for your cafe, restaurant, bar or venue, Vestal by Zip offers the widest commercial range of high-capacity sparkling water systems in Australia, all certified to the Australian and New Zealand WaterMark standard. Vestal systems are designed to offer choice and are available in multiple configurations: under-bench, bench-mounted or free-standing with a range of styles to suit your aesthetic and performance requirements.

Vestal Water systems provide premium water solutions to your customers at a fraction of the cost allowing you to save on glass and plastic bottle disposal costs and cut down on landfill waste and energy consumption.



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