1.1 SUSTAINING THE PLANET

Reducing Energy Usage

At the COP28 UN Climate Change Conference in Dubai in 2023, partner countries agreed to triple renewable energy capacity and double the rate of energy efficiency improvements by 2030, with the aim of limiting global warming to 1.5 degrees Celsius. DFI is aligned with this ambition: we are committed to a 50% reduction in Scope 1 and Scope 2 emissions by 2030 and reaching net zero emissions by 2050. To achieve these goals, we are focused on employing innovative solutions to enhance energy efficiency across our operations and generate more of our own energy from renewable sources.

Wellcome is the first retailer in Hong Kong to deploy a European-made 24-tonne electric truck

Enhancing energy efficiency in daily operations

We continually review our operations to enhance sustainable development and explore the feasibility of expanding our green fleet through direct purchasing and collaboration with third-party logistics providers. Since 2023 we introduced market-first larger electric trucks in Taiwan, followed by Hong Kong and implemented various energy-saving initiatives that promote responsible energy consumption and reduce our carbon footprint.

Introducing Electric Trucks in Hong Kong and Taiwan

Taiwan's first 26-tonne electric delivery truck

IKEA Taiwan welcomed the first electric truck in our fleet. In comparison to a 10.5-tonne diesel truck, the 26-tonne electric truck will reduce carbon emissions by 18%, which is equivalent to 5.38 tonnes of carbon dioxide every year.

The vehicle was also the first 26-tonne electric truck introduced in Taiwan. This achievement was made possible through our collaboration with Swedish truck manufacturer Scania, and Taiwan Transport & Storage (TTS), a subsidiary of Taiwan Cement Corporation (TCC). The electric truck provides inventory replenishment services to stores from the new IKEA fulfilment centre.

We also collaborated with TCC Energy Storage Technology Corporation to install charging stations to support our transition to using the electric truck. Through the combined efforts of the three parties, we aim to promote zero-carbon and green logistics transportation development in Taiwan, and look forward to using more electric vehicles for inventory replenishment and home delivery services.

IKEA Taiwan partnered with Taiwan Transport & Storage to introduce the first 26-tonne electric truck

First retailer in Hong Kong to introduce a 24-tonne electric truck

As part of our plan to shift our fleet from diesel to electric vehicles, we applied for funding from the Hong Kong Government's New Energy Transport Fund in 2023. The Fund subsidises testing and encourages wider use of green innovative transport technologies for a variety of commercial applications. In February 2024, Wellcome Hong Kong became the first retailer in Hong Kong to operate a 24-tonne electric truck when it joined our fleet.

While reducing our Scope 1 emissions, it is expected that each electric truck could save over 264,000 litres of diesel fuel, equivalent to around 538 tonnes of carbon emissions over a decade which is comparable to the annual carbon absorption of around 24,710 trees. In addition to lowering our carbon footprint, the electric trucks also create less noise and have a simpler mechanical structure requiring less repair and maintenance. The advanced engineering and technology also enhance road safety and driver comfort.

Energy saving initiatives across our businesses

Our continued improvements in energy efficiency would not be possible without the support and hard work of our team members and partners. Change requires communication and throughout 2023, we continued to encourage behavioural changes across all our banners. We constantly engage with our operations team to monitor improvements through our technician network and ensure all our teams are empowered to adopt best practices. In addition, our Energy Champions, such as our store and regional managers, all have energy-saving targets and increased accountability for energy efficiency.

We hope our consistent action to monitor energy efficiency and increase energy savings will further reduce costs and minimise our environmental impact. These efforts have also resulted in recognition, including the Hong Kong Awards for Environmental Excellence - Super Gold Award, which we won for the sixth time in 2023. We are also the three times winner of the Joint Energy Saving CLP Smart Energy Award for Wellcome, 7-Eleven and Mannings.

Jon Abel, Group Facilities Management Director (middle) represents the Group to receive the Joint Energy Saving CLP Smart Energy Award

Energy efficiency upgrades and technology installation at Wellcome Hong Kong

Throughout 2023 our energy teams often worked through the night to convert LED lighting in 716 stores across Hong Kong, Singapore and Malaysia. They also installed a significant amount of technology in our existing refrigeration systems, working on more than 1,700 projects in our convenience and food stores across Hong Kong and Singapore. These improvements were made to compressors and fans within the refrigeration systems that facilitate greater adaptability when dealing with varying ambient conditions.

To optimise energy consumption and reduce energy waste, we installed electricity sub-meters to monitor the energy usage of refrigeration and air-conditioning systems in our stores in real-time. This allows team members to track consumption patterns and identify opportunities for improvements in energy saving, while also ensuring all the equipment is running at optimal levels and minimising energy waste. The sub-meters also provide visibility on exceptional events so our team can take action as needed.

We also installed motion detectors in low foot traffic areas at our stores, including back-of-house areas such as stock rooms. These detectors automatically control lighting, ensuring lights go off when there is no activity in the area, removing the need for manual intervention and helping to avoid wasting electricity. Wellcome has also installed smart air conditioning controls, utilising advanced technology that ensures the air conditioning operates at optimal levels.

716 STORES
across Hong Kong, Singapore and Malaysia converted to LED lighting

Switching to environmentally friendly equipment in 7-Eleven South China

Our 7-Eleven stores in South China have also been optimising equipment to reduce their energy consumption and environmental impact. Starting in September 2023, we have replaced traditional lighting with energy-saving LEDs and upgraded air-conditioning and refrigeration equipment in the region. More stores are now using refrigerants with lower global warming potential (GWP) values in the freezers and open chill display refrigerators. We have also been installing anti-condensation controls on open chill freezer equipment, upgrading large tabletop freezers and reducing the use of acrylic insulation panels.

Minimising the use of electrical equipment at Lucky Cambodia

Meanwhile in Cambodia, DFI Lucky supermarkets have been developing and implementing strategies to minimise energy consumption and costs since late 2022. This energy conservation initiative, encompassing air conditioning, refrigerators and front lighting, was successfully implemented in all 84 Lucky supermarkets during 2023.

To optimise air conditioner usage, we reduced the number of units in operation from eight to three or four, depending on factors such as size of store, location, outdoor temperature, and customer traffic. After analysing our refrigerator use, we reorganised display space to minimise energy consumption and costs. Additionally, we have moved items that can be stored at room temperature out of refrigerators.

As well as identifying and reducing unnecessary lighting during the night, we installed automatic timers for front of store lighting, further optimising power consumption. As a result of these initiatives, we have achieved significant cost savings of up to US$30,000 per month in Cambodia.

Generating more of our own energy

From solar panels to a ground-breaking waste-to-energy initiative, we are actively increasing the use of renewable energy sources in our operations and exploring new opportunities to minimise carbon emissions across our markets.

Solar panel installation expansion

IKEA Taiwan has expanded its use of renewable energy solutions by installing solar panels on the 5,200-square-metre rooftop of our Hsin Chuang Store. The 2,500 individual solar panels have transformed the space into a clean energy generator. The store's solar panel system is anticipated to reduce its greenhouse gas (GHG) emissions by about 4,400 tonnes of carbon dioxide annually. This installation is the latest in IKEA Taiwan's efforts to reduce its GHG emissions through the use of solar energy. We have also installed solar power generation systems at four other stores and at the new IKEA fulfilment centre that opened in 2023. To date, IKEA Taiwan has six solar panel installations generating sustainable energy and reducing carbon emissions.

Similarly, the solar panel system installed on the Wellcome Fresh Food Centre rooftop in Hong Kong in 2022, expected to continue to generate over 1 million kWh of renewable energy each year, under CLP Power's Renewable Energy Feed-in Tariff scheme.

Sixth solar panel installation completed at IKEA Taiwan's Hsin Chuang store

Keith Siu, Chief Operating Officer of Maxim's Group (second right) was honoured at the National Business Awards 2023, celebrating its "exemplary model of waste-to-energy conversion"

Hong Kong's first inter-plant waste-to-energy initiative

In a groundbreaking collaboration, Maxim's Group and Towngas have spearheaded Hong Kong's first inter-plant waste heat recovery project. This waste-to-energy venture harnesses residual heat from the Towngas Tai Po Gas Production Plant, channelling it through an 800-metre underground pipeline to Maxim's Group's adjacent food factory at Tai Po InnoPark. Here, the heat is utilised to power desiccant dehumidifiers, crucial for maintaining specific humidity levels and ensuring optimal indoor air quality control for food production.

The inception of this project involved three years of research and planning, culminating in the engineering of desiccant dehumidifiers capable of leveraging the recovered heat energy. The redesigned system aligns with Maxim's Group's stringent food safety and quality standards by mitigating moisture-related contamination and microbial proliferation on the production line. Additionally, the upgraded dehumidifiers offer significant environmental benefits, with an estimated annual reduction of 800 tonnes of carbon dioxide, equivalent to that absorbed by approximately 34,000 trees.

Both Maxim's Group and Towngas benefit from this circularity initiative, with the former gaining a sustainable source of green energy and the latter optimising the resource output from its gas production process. This collaboration underpins Maxim's Group's commitment to green operational excellence, balancing business needs with societal and environmental responsibilities. The initiative garnered acclaim at the National Business Awards 2023, presented by Hong Kong Business magazine, celebrating it as an exemplary model of waste-to-energy conversion and advocating for its broader application across industries.

1.2 SUSTAINING THE PLANET

Reducing Plastic Usage

Plastic offers numerous benefits such as extending food life, ensuring hygiene and being light, durable and inexpensive. However, these same qualities make it difficult to replace and contribute to its persistence in the environment decades after use. To achieve our goal of having 100% recyclable, reusable, or compostable primary plastic packaging for our Own Brand products by 2030, ongoing initiatives to reduce plastic usage include eliminating unnecessary packaging, switching to more environmentally friendly materials and improving plastic recycling.

Own Brand Health and Beauty products using PET plastic bottles
Mannings and Guardian

Own Brand Health and Beauty reduce plastic across more lines

Following the launch of our Own Brand Health and Beauty Plastic Reduction Strategy, our team has continued to find more ways to offer high-quality, good-value products that utilise less plastic.

To achieve this goal, DFI has formulated five workstreams to reduce plastic usage across our Own Brand product Health and Beauty lines:

Refuse	Removing plastic shrink wrap.
Replace	Replacing HDPE plastic with widely recycled PET plastic, or replacing virgin plastic with materials made with plant-based fibres.
Reduce	Redesigning products to use less plastic.
Reuse	Introducing refill pouches so bottles can be reused.
Recycle	Using recycled materials in place of virgin raw materials. We are also working to maximise the recyclability of all our packaging.

Within our Own Brand Health and Beauty range, we continue to look for innovative ways of reducing plastic usage in all product lines following the five workstreams, including the following examples:

Refuse

Starting with body and hand wash products, we redesigned Mannings and Guardian's Own Brand anti-bacterial and 24-hour moisturising body and hand wash bottles in 2022 and expanded to more product lines in 2023. By replacing the HDPE bottles with lighter-weight PET bottles that are more easily recyclable, we were also able to reduce the weight of plastic used by around 15%.

Replace

Mannings and Guardian stores in Hong Kong, Macau, Malaysia and Singapore launched the NUMBER el8ht Moisturising Sheet Mask made of Veocel; a plant-based material that is biodegradable and compostable.

Meanwhile, during 2023, Mannings in Hong Kong and Macau and Guardian in Singapore and Malaysia introduced anti-bacterial, multi-surface cleansing wipes made from 100% natural plant-based fibres. By replacing polyester fibres with plant fibres, we expect to avoid 58 tonnes of plastic waste per year.

Reduce

Mannings in Hong Kong and Macau has reduced the amount of plastic used in packaging across our Own Brand cotton products. The redesigned packaging was introduced to stores in late 2023, and the annual plastic reduction is forecast at 2.9 tonnes. The initiative will roll out to Guardian stores in 2024.

Reuse

In Malaysia, Guardian launched refill pouches for popular Own Brand body and hand wash products in late 2022. The refill pouches are available for up to 10 types of body and hand wash.

In 2023, Guardian stores in Singapore and Malaysia also introduced refill pouches for our Own Brand Kids Head to Toe Wash in Strawberry Yoghurt and Orange Yoghurt varieties.

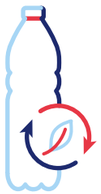
For all these hand and body wash products, the refill pouches reduce the use of plastic by almost 80% compared to the original bottles.

Recycle

Since 2022, we have used 50% recycled plastic for our Own Brand dental care accessories, which were previously 100% virgin plastic. We have also reduced the amount of plastic outer packaging on dental care accessories by 23% to 45% through design innovations such as using paper packaging where possible. By using 50% recycled plastic for accessories, and switching to paper wrapping, we saved 50 tonnes of virgin plastic throughout 2023.

Through these initiatives, we reduced annual plastic usage by

110 TONNES in 2023



Mannings and Guardian Eco-Garden offer affordable sustainable choices

Our Own Brand team introduced Mannings and Guardian Eco-Garden branded bath care, hair care, body and hand care products in Mannings and Guardian stores in Hong Kong, Macau, Malaysia and Singapore in Q4 2023. Designed to offer consumers affordable, eco-friendly health and beauty products, the Eco-Garden product line is made using 100% vegan formulas utilising over 90% natural-origin ingredients.

Adding to its sustainability credentials, the Eco-Garden range comes in packaging that utilises post-consumer recycled (PCR) plastic with 100% PCR bottles and 40% PCR tubes.

Mannings and Guardian Eco-Garden products offer are more sustainable choices

7-Eleven South China, Hong Kong, Macau & Singapore leading the way with sustainable materials

7-Eleven South China, Hong Kong, Macau and Singapore have taken significant steps towards reducing plastic usage by introducing various sustainable materials for tableware and packaging and inspiring customers to adopt more sustainable habits.

Starting in 2017, 7-Eleven South China has transitioned to using only degradable disposable bags and has introduced environmentally friendly utensils such as biodegradable beverage straws and wooden spoons. In 2022, we completely replaced plastic cups with paper cups for Slurpee drinks. We avoided using 24.9 tonnes of plastic in 2023.

7-Eleven's network of Tsat Jai Sik Dong (7-Eleven Food Stall) in Hong Kong and Macau introduced new tableware by replacing plastic with sustainable materials in September 2023. The environmentally friendly upgrades include cups for hot drinks made with FSC-certified paper, cup lids made from bagasse (sugar cane pulp), FSC-certified paper straws and bagasse cutlery.

Covering more than 330 Tsat Jai Sik Dong in Hong Kong and Macau, 7-Eleven reported more than 2 tonnes of plastic was avoided in 2023 after the adoption of serving items made from sustainable materials.

Concern has been growing about the single-use plastic tableware for takeaway food services in Hong Kong and Macau. According to Hong Kong Government figures, the use of plastic tableware has grown by 27% in the last decade and reached 225 tonnes of plastic per day in 2021 during the pandemic. In October 2023, the Hong Kong Government announced plans to ban disposable single-use plastics for tableware from April 2024. 7-Eleven Hong Kong's adoption of sustainable tableware demonstrates some alternatives to single-use plastic for takeaway food services, and is a valuable step towards the community's goal to reduce plastic usage.

7-Eleven Singapore prioritised its sustainability journey, particularly focusing on food and cutlery practices. As part of this effort, we revamped our burger packaging system, transitioning from a two-component packaging to a more streamlined solution with just a wrapper and sticker label. Also, we have reduced the thickness of the plastic top seal of our meal boxes by 0.15mm.

We believe in promoting an eco-friendly lifestyle from a young age. One of our key initiatives is to advocate for the use of reusable straws with our best-selling Slurpee. We encouraged all Slurpee fans, particularly young children, to adopt environmentally friendly behaviour while enjoying Slurpee. Therefore, we have introduced affordable and reusable pocket straws as a plastic straw replacement option.

Adoption of rPET Bottles for Meadows, Mannings, and 7-SELECT beverages

In line with our commitment to use more recycled materials, we changed the packaging of Meadows Mineral Water and Distilled Water bottles to 100% recycled PET (rPET) in Hong Kong in late 2023. Additionally, Meadows French Mountain Water will be available in rPET bottles in Hong Kong and Singapore in 2024.

We also plan to offer Mannings Mineral Water in Hong Kong and Macau in 100% rPET bottles in 2024. 7-Eleven Hong Kong and Macau also changed its 7-SELECT juice packaging in 2023 from virgin PET bottles to rPET bottles.

Wellcome joins retail return point take-back trial

Partnering with Drink Without Waste, we participated in the Community Plastic Beverage Bottle Recycling Programme in Tin Shui Wai. Drink Without Waste is a collaboration between the beverage industry, retailers, NGOs, recyclers and other stakeholders that seek to reduce the volume of used beverage packaging going to Hong Kong landfills. We took part in this trial programme to engage proactively in the Hong Kong Government's upcoming Producer Responsibility Scheme (PRS) for Plastic Beverage Containers and Beverage Cartons.

In October 2023, we launched the first retail return point take-back trial, inviting customers to return plastic PET, HPDE and PP bottles, at Wellcome in Tin Chak Shopping Centre.

The programme aims to test trial various approaches for collection and recovery of plastic beverage bottles across the district, with the aim of increasing the percentage of bottles recycled. As part of the ongoing PRS trial, four Wellcome stores in Tin Shui Wai installed collection points in December 2023 and promoted the programme in-store.

Wellcome partnered with Drink Without Waste for a plastic bottle recycling trial

GNC Recycling Reward Programme

In March 2023, GNC Hong Kong launched the GNC Recycling Reward Programme, which partnered with local social enterprise V Cycle to recycle GNC brand plastic bottles into new materials.

To encourage customers to recycle, we provided a HK$10 GNC discount voucher for every GNC plastic bottle returned. These bottles are then processed at V Cycle's recycling factory and turned into post-consumer recycled plastic pellets used for manufacturing new products.

As of 31 December 2023, over 3,700 plastic bottles had been returned and recycled.

We gave consumers a HK$10 voucher for every GNC plastic battle returned GNC Hong Kong

1.3 SUSTAINING THE PLANET
Reducing Waste

To reduce our environmental impact, we have initiated programmes to prevent food waste and all kinds of waste from going to landfills, and work towards meeting our targets - that is to achieve a waste diversion rate of 80% by 2030. By collaborating with NGOs and local partners and leveraging technology, we can optimise our use of natural resources, while saving the energy, water and costs involved in production and reduce greenhouse gas (GHG) emissions such as methane produced by food and other waste.

Hero collaborated with FoodCycle to promote awareness about hunger through food donation drop boxes
Hero Indonesia

Our focus on reducing all food waste

According to the Intergovernmental Panel on Climate Change (IPCC), food loss and wastage are responsible for 8 to 10% of global GHG emissions, mainly from the methane produced when food decomposes anaerobically (without oxygen) in landfills. At a time when food insecurity is rising worldwide, as a leading food retailer, we are committed to ensuring the long-term resilience of our food supply chain and raising awareness about the scale of the global hunger crises. The UN's World Food Programme reports that 238 million people in 48 countries faced high levels of acute food insecurity in 2023, a 10% increase from the previous year.

Reducing food waste can help improve food security for more people while supporting our efforts to reduce GHG emissions and slow climate change. Our primary efforts in reducing food waste involve preventing food from becoming waste at all through improved management of processes at all stages of production, supply chain and processing, as well as partnering with NGOs to redistribute still good and safe-to-eat surplus food and collaborate to finding innovative uses for recycling any remaining waste.

Donating soon-to-expire food to NGOs

Across the region, DFI has broadened the scope of our food donation initiatives to redirect surplus edible food to those in need. We collaborate with established local charities and organisations that are well-placed to distribute food to beneficiaries through various projects in our communities. Our food donation initiatives include the examples below by Hero Indonesia, Wellcome Hong Kong, and 7-Eleven Hong Kong, which donated more than 250 tonnes of non-perishable and soon-to-expire food items in 2023.

Hero Indonesia

Indonesia faces a significant food waste problem. Not only is it the world's second-largest disposer of food waste, but Indonesia also has food security issues and some of its population lack adequate nutrition. As part of its "Hero For Life" #HeroForPeople humanitarian campaign, Hero Indonesia has increased its efforts to address food waste and raise awareness through several initiatives that address this issue in different ways.

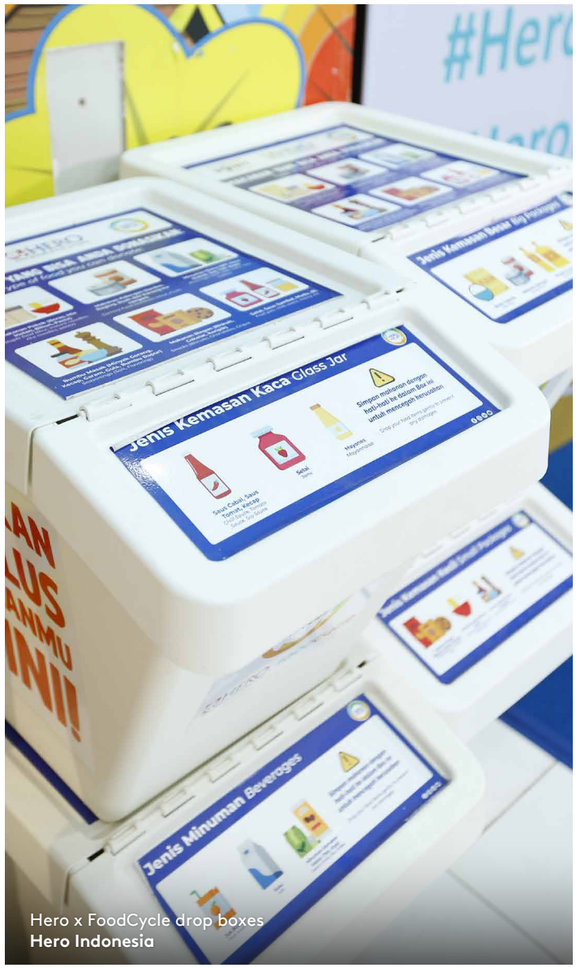
Partnered with National Food Agency to launch the Hero Food Rescue campaign
Hero Indonesia

Rescuing food before expiry dates

Starting in September 2022, Hero partnered with FoodCycle Indonesia an NGO that focuses on food loss and food waste, to start rescuing food that is close to expiry in Hero stores. To extend the network of beneficiaries, Hero also partnered with Indonesia's National Food Agency (NFA) to remove food items from its stores that could otherwise become food waste, at least four weeks before expiry dates. These items include unopened dry and packaged food, which is then distributed to those in need. Meanwhile, 'Hero Food Rescue' identifies food at least two weeks before reaching expiration dates for distribution through NFA food banks to orphanages and nursing homes.

The campaign kicked off with a lively event featuring an NFA food truck where a chef cooked excess fresh food from Hero supermarkets to share with local communities. Since the programme launched in September 2022 until April 2023, Hero has rescued 1,958 kg of food, which NFA and NGOs redistributed directly to those in need.

We organised the creative dish challenge with children in Hero 51 Sharelebration event
Hero Indonesia



Hero x FoodCycle drop boxes
Hero Indonesia

Food donation drop boxes raise awareness about hunger

To encourage more people to reduce food waste, Hero stores in Jakarta, Bandung, Surabaya, and Makassar also partnered with FoodCycle Indonesia to make it easier for customers to donate excess food and reduce hunger. Customers can donate unopened dry and packaged food items at donation drop box points at Hero Supermarkets. FoodCycle Indonesia then collects, sorts and distributes the donations. From the initial six participating supermarkets in July 2022, 13 stores had joined the programme after one year, and donated 349.8 kg of food to care homes for children close to those stores. Both campaigns have made a promising start and demonstrated some of the many ways we can all contribute to preventing food waste.


Donating food and items to be sent off to those in need
Hero Indonesia

Wellcome, Hong Kong

In 2022, Wellcome Hong Kong initiated a programme to donate dry goods and fresh produce nearing the end of its shelf life to NGOs. Our stores work with several charities including Foodlink and Feeding HK that collect safe-to-eat surplus food and deliver it to organisations such as senior centres, crisis shelters, central kitchens, after-school programmes and food banks helping people in need. We donated 108 tonnes of food from January to December 2023 to Foodlink and close to 36 tonnes to Feeding HK.

Wellcome donated dry goods and fresh produce nearing the end of its shelf-life to NGOs
Wellcome Hong Kong

7-Eleven Hong Kong

Also in Hong Kong, 68 participating 7-Eleven stores work with Foodlink to donate various soon-to-expire products to multiple NGOs and their beneficiaries every month. Additionally, around 146 stores donate still-fresh bread and baked goods to NGOs such as Breadline that help distribute surplus bakery items to people in need.

From January to December 2023, 7-Eleven Hong Kong donated around 146,000 pieces of non-perishable and soon-to-expire food items, preventing 108.9 tonnes of food from going to landfills.

WFFC production upgrade: New packaging format extends shelf life

We have upgraded production at the Wellcome Fresh Food Centre (WFFC) in Hong Kong by introducing skin packaging and modified atmosphere packaging (MAP) to extend the shelf life of meat, avoid leakage and reduce waste. This new format of packaging can improve store operation efficiency and cleanliness and also save over HK$1.1 million in shrinkage costs.

The MAP format typically improves shelf life by at least 30% compared to overwrap packaging. Quality and physical protection are more stable and reliable throughout display, storage and transportation so products' peak condition periods are extended. MAP allows our customers and operations to better manage unstable environments such as taking produce home or delivery services.

Recognition as an Eco-Supermarket in Macau

In Macau, San Miu has been honoured by the Macau Environmental Protection Bureau with the gold medal for four consecutive years in its Eco-Supermarket recognition plan. Meanwhile, three San Miu stores participated in the local government's food waste recycling pilot programme and successfully achieved waste reduction, recycling, and energy conservation goals in 2023. In addition, San Miu participated in several green initiatives such as encouraging recycling of red packets during Chinese New Year and mooncake boxes at the Mid-Autumn Festival.

San Miu has been awarded the gold medal for four consecutive years in the Macau Environmental Protection Bureau
San Miu Macau

Repurposing food waste into energy, enzymes and food

Turning food waste into energy

Since 2022, as part of the Environmental Protection Department's (EPD) food waste collection programme, several Wellcome supermarkets have started diverting food waste to OPark1, a facility that converts food waste into biogas. This renewable energy source is used to generate electricity that can be used at the facility or exported to the grid, while the remaining residue from the process is converted into compost suitable for horticultural or agricultural purposes.

As of December 2023, we have implemented food waste separation and recycling processes at 53 Wellcome stores, resulting in the diversion of over 600 tonnes of food waste to OPark1 as of December 2023.

Additionally, since WFFC joined the EPD's Pilot Scheme on food waste collection we have successfully diverted about 96% of food waste generated at the centre.

We joined Environmental Protection Department's food waste collection programme to divert food waste
Wellcome Hong Kong

Maxim's Group recycling food waste for regenerative farming

Maxim's Group in Hong Kong collaborates with Hung Yat Farm to reduce waste and promote sustainable practices and the circular economy within the food industry, through the WeGen farming project. The farm, located in the Yuen Long district, embraces regenerative agriculture, adhering to principles that promote ecological balance and nutrient recycling, with the goal of cultivating safe and high-quality vegetables.

At the core of this initiative, Hung Yat Farm repurposes pre-consumed food waste from Maxim's Group facilities, converting it into enzymes. These organic compounds are derived from food waste such as coffee grounds, mango peels, eggshells and salmon bones, offering a green alternative to traditional pesticides and fertilisers. The farm's commitment to crop rotation not only enhances soil quality and carbon sequestration but also protects biodiversity.

This symbiotic relationship forms a closed-loop system where Maxim's Group procures fresh produce from the farm for use in their restaurants. In 2023, the project successfully transformed 7 tonnes of food waste into soil-improving enzymes, which in turn supported the cultivation of 5.1 tonnes of produce, spanning 17 different vegetable varieties.

To further this cause, we have disseminated the progress and benefits of our initiative, aiming to inspire and educate through "A Practical Guidebook to a Circular Economy: Collaborating with Value Chain Partners for a Resilient Business", a publication by the HKU Centre For Civil Society and Governance in 2023.

Hung Yat Farm repurposes pre-consumed food waste from Maxim's Group facilities, converting it into enzymes
Maxim's Hong Kong

The sustainable closed-loop system received the Best Social Responsibility award with a Highly Satisfactory rating from La Tofi School
Hero Indonesia

Black Soldier Fly bioconversion of food waste

In a pioneering initiative in Indonesia, Hero has partnered with Biomagg Indonesia and Hero FoodCycle Farm to implement a sustainable solution that uses Black Soldier Fly (BSF) technology to convert food waste into valuable animal feed and fertiliser. Compared to other industrial food waste management methods, the BSF bioconversion process requires less time and produces less waste. The high-protein animal feed it generates is also more sustainable, less expensive than traditional feeds like soy, and is suitable for fish, poultry and livestock.

Fresh food waste is collected from Hero Supermarkets and the Distribution Centre and transported to the Biomagg Larvae Innovation Centre. The decomposition process is fairly swift; after 10-14 days, the BSF larvae are then harvested for animal feed and the process also generates organic fertiliser as a byproduct. In the first year of operations, between January and December 2023, our BSF organic waste management solution recycled 12.9 tonnes of food waste.

To further reduce our carbon footprint from transportation and foster a sustainable circular economy, Hero became the first retailer in Indonesia to establish a BSF bioconversion site near a store to create a closed-loop waste management solution. In a ground-breaking partnership with FoodCycle Indonesia, Hero implemented the HERO FoodCycle Farm programme, which involves the use of BSF technology to process the food waste from the Hero stores into animal feed and organic fertiliser.

The programme begins with the separation of food waste at the stores followed by processing at the temporary waste disposal site next to the store. The proximity also reduces the carbon footprint and transport costs associated with the process. After the BSF larvae decompose the food waste, the resultant animal feed and organic fertiliser are sold or given to local fish farms and vegetable farmers. To complete the circular economy loop, Hero started selling fish and vegetables from the participating farms at two Hero stores in early December with plans to expand to more stores in 2024.

Between June and December 2023, the HERO x FoodCycle Farm programme recycled 4.6 tonnes of food waste from the first pilot store, helping to reduce carbon emissions by 11.5 tonnes demonstrating the effectiveness and potential for this integrated circular approach to waste management.

Our commitment to environmental stewardship and the creation of a sustainable, closed-loop system was recognised with the Best Social Responsibility award with a Highly Satisfactory rating from La Tofi School of Social Responsibility. We will continue to seek solutions to manage as much food waste as possible and are proud to be part of groundbreaking innovations that help address these challenges, by strengthening the circular economy through technology and local partnerships.

Upcycling surplus bread and coffee grounds into beer

Maxim's Group has innovated in food waste reduction by partnering with Breer, a food upcycling startup. This collaboration gave rise to BOB, short for "Bottle of Bread", a craft beer that innovatively substitutes barley with surplus bread from Maxim's facilities. The debut of Original BOB beer in 2022, which incorporates 25g of surplus bread per bottle, was met with acclaim from both consumers and craft beer aficionados.

In 2023, the collaboration took a creative leap with the introduction of Coffee BOB, a stout beer with a rich palate, crafted with a bend of 4g of coffee grounds and 15g of surplus bread and crusts per bottle.

Available in over 100 Maxim's Group restaurants and outlets throughout Hong Kong, BOB has not only been a commercial success but also served as a catalyst for raising awareness about sustainability and food research and development. The brand has inspired culinary innovations, such as the BOB Cake by Arome Bakery, and has prompted internal food pairing contests.

Both Coffee BOB and Original BOB have been decorated with awards, securing Gold in the Asia Beer Challenge and Bronze in the World Beer Awards for 2023, while Original BOB also received Bronze at the Hong Kong International Beer Awards.

Innovating in food waste reduction by partnering with Breer, a food upcycling startup **Maxim's Hong Kong**

Minimising waste of other materials

IKEA Taiwan joins circular "Textile to Textile" Project

IKEA Taiwan aims to be a circular economy enterprise by 2030. Recognising the challenge presented by the global generation of 92 million tonnes of textile waste annually, projected to escalate to 130 million tonnes by 2030, and 80% of the waste was not recycled or reused. IKEA joined Taiwan's "Textile to Textile" Project to explore new solutions to extend the life of textiles.

IKEA Taiwan collaborates with local partners, Far Eastern New Century (formerly Far Eastern Textile) and textile manufacturer and research and development firm Yicheng Hsing to promote the circular economy of textiles in Taiwan. The project involves three key steps: waste collection and sorting, shredding and extrusion into recycled fibres, weaving, dyeing and manufacturing new products.

IKEA provides about one tonne of textiles not suitable for sale such as display items and customer returns that would previously have been discarded. After waste collection, Far Eastern New Century applies its "TOPGREEN®rTEX" recycling technology to process discarded polyester products, by shredding the textiles, melting them into granules, drawing fibres, and false twisting to yield recycled fibres. Yicheng Hsing helps coordinate the various stakeholders and navigate manufacturing technology challenges such as weaving and dyeing the recycled materials to produce innovative new fibre and products.

Additionally, the IKEA Taiwan marketing team has introduced a point-based activity at stores, encouraging customers to earn and redeem points for tote bags crafted from the "Textile to Textile" Project's recycled fabrics. This initiative promotes the concept of environmental protection and mindful purchases.

Recycling Zone converts waste into useful materials

IKEA Kota Baru Parahyangan (KBP) joined forces with social enterprise Duitin to create a new kind of Recycling Zone at the store in West Java. Duitin specialises in digital services such as apps that make sorting, collecting and managing waste easier for businesses. It is also part of the first cohort of the Instellar and IKEA Social Entrepreneurship Indonesia Accelerator (I-SEA) programme that aims to accelerate the quality of social enterprises in Indonesia.

At the IKEA KBP Recycling Zone, customers collect digital reward points for bringing various types of recyclable waste including plastic bottles, paper, aluminium cans and used disposable baby diapers. Duitin coordinates collecting the waste for recycling, processing and converting it into useful materials or items.

From launch in June 2023 to December 2023, over 7,000 kg of recyclables have been collected, which included over 3,000 kg of cardboard, 1,000 kg of plastic, and 700 kg of baby diapers.

From June to December 2023, over

7,000 kg

of recyclables have been collected

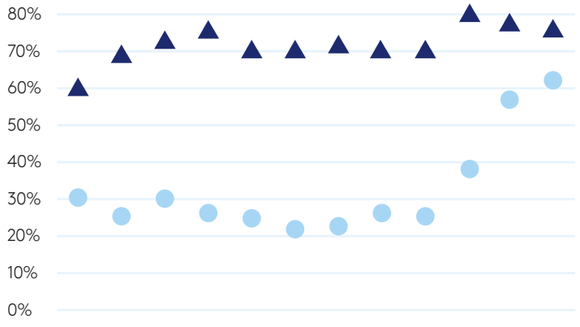
WFFC's success in diverting waste

In Hong Kong, WFFC has significantly increased the amount of waste it diverts from landfill. The WFFC's waste diversion rate rose from 32% in 2022 to over 72% in 2023, which saved around 1,200 tonnes of waste from going to landfills over 12 months.

This achievement by the WFFC team involved collaborating with NGOs that pick up and reuse our pallets and recycle polystyrene boxes and are working with our suppliers to reduce the use of polystyrene. We now return 80% of temperature data loggers to local suppliers for reuse and have partnered with the Environmental Protection Department to develop other local upcycling possibilities for these traditionally single-use items.

On the operations side, we started partnerships with local NGOs, including the Salvation Army, the Hong Kong Jockey Club's 'Look For Green' Mobile Recycling Programme and Kwun Tong Recycling Station, to effectively manage the disposal of unwanted stationery and appliances from the WFFC office, ensuring they are recycled or reused appropriately.

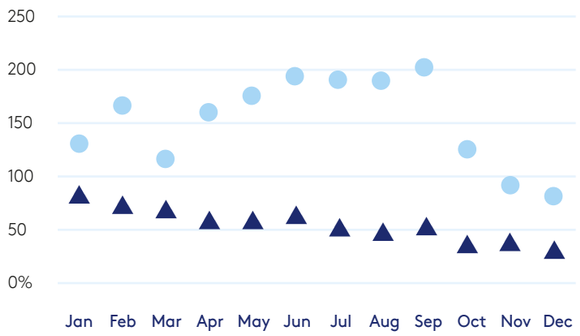
WFFC Waste Diversion Rate



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Y2022	34%	28%	34%	29%	27%	25%	26%	29%	26%	39%	57%	61%
Y2023	60%	69%	74%	76%	70%	70%	72%	70%	70%	80%	79%	78%

Y2022 Y2023

WFFC Waste Weight (Tonne)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Y2022	132	160	113	154	164	194	192	191	201	125	92	77
Y2023	78	69	60	55	55	59	53	49	54	42	44	38

Y2022 Y2023

1.4 SUSTAINING THE PLANET
Eliminating Harmful Refrigerants

Science Based Targets initiative (SBTi) validation for our near-term Scope 1 and Scope 2 reduction targets for carbon and other greenhouse gas (GHG) emissions is an important step towards achieving net-zero emissions by 2050. Traditional refrigerants account for significant emissions across our retail businesses, therefore, to achieve our targets we are investing in pioneering new technologies such as water loop refrigeration technology and using refrigerants with a lower global warming potential (GWP) wherever possible.

Our engineer replacing a refrigerant system
Hong Kong

SBTi validation for Group targets

DFI has passed an important milestone on our sustainability journey. In 2023, we became one of the first retailers in Asia to have GHG emission reduction targets validated by the Science Based Targets initiative (SBTi), a global body that defines and promotes best practices in emission reductions and net-zero targets, in line with climate science.

Our SBTi-validated GHG emission reduction targets include committing to reduce absolute Scope 1 and Scope 2 emissions by 50% by 2030, from a 2021 base year. We are also committed to reducing absolute Scope 3 GHG emissions, covering purchased goods and services, fuel- and energy-related activities, and waste generated in operations and as a result of our investments.

DFI is one of the

1st ASIAN RETAILERS

to receive validation from the SBTi

Converting refrigerators to use lower GWP refrigerants

We have also been working closely with refrigeration industry leaders to find ways to reduce the use of high GWP refrigerants for stores that are not suitable for installing water loop technology. In 2023, we have converted 11 stores to lower GWP refrigerants across Hong Kong and Singapore's food business.

Pioneering water loop refrigeration system lowers emissions

As part of our commitment to reducing harmful GHG emissions, we have invested in developing and installing water loop refrigeration technology, which has increased the efficiency of our refrigeration systems, reduced our GHG emissions and reduced energy usage.

Following the successful roll out of water loop refrigeration systems in our first Wellcome store in Hong Kong in 2022, we installed water loop refrigeration systems in nine more stores in 2023, with more to follow in 2024.

We also set up the DFI Refrigeration System Research and Development Centre in Chung Hom Kok in collaboration with our facilities management partner, City FM. This dedicated research centre enables further engineering experiments and training for engineers to expand their knowledge of water loop technology in Hong Kong. Additionally, we have initiated meetings with stakeholders such as the Hong Kong Environment and Ecology Bureau, the Business Environment Council and banks, to demonstrate the water loop system and its applications in order to encourage more businesses and institutions to consider its adoption.

We have invested in water loop refrigeration technology to enhance efficiency, decrease GHG emissions, and reduce energy consumption
Hong Kong