

# **The 24th MEP (Millennium Entrepreneurship Programme) Business Proposal**

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## 甲部 — 隊伍基本資料

### Part A — Basic Information

組別編號： Group No. : 004
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#### 組員資料 Details of Group Members

	中文姓名 Name in Chinese	英文姓名 Name in English
1 (Captain)	任焯霖	Yum Cheuk Lam
2	梁鈞堯	Leung Kwan Yiu
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4	蔣禮治	Tseung Lai Chi
5	曾峻一	Tsang Tsun Yat
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#### 帶隊導師資料 Details of Team Advisor

學校/機構名稱: School / Organization Name:	Wah Yan College (Kowloon) 華仁書院 (九龍)
中文姓名: Name in Chinese:	李承俊
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#### 啓蒙導師資料 Details of Mentor

中文姓名: Name in Chinese:	陳華皓
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## **Part B — Business Proposal**

### **1. Basic Information of Business**

#### **1.1 Name of Business**

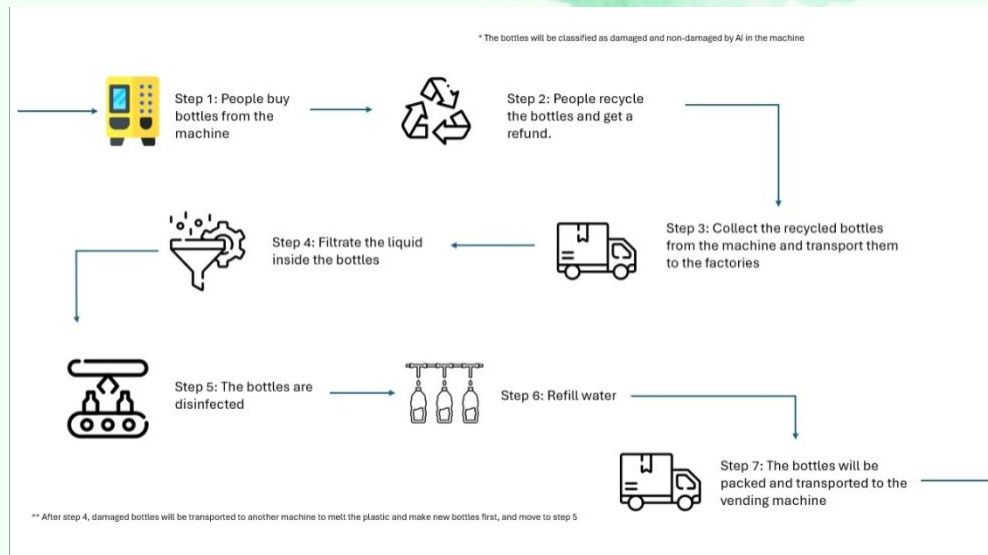
Company Name	<p>GreenWave</p> <p>The name "GreenWave " combines the concept of environmental consciousness and convenience.</p> <p>"Green" represents the idea of sustainability and eco-friendliness. It symbolizes a commitment to promoting environmentally responsible practices within the vending industry. The term "green" is commonly associated with environmental initiatives and signifies a focus on reducing ecological impact.</p> <p>“Wave” represents the nature of our company of selling beverages, by combining “Green” and “Wave” into “GreenWave”, it represents that our company is providing our services of beverages in an environmentally friendly way</p> <p>The name "GreenWave" suggests a company that prioritizes sustainability while delivering convenient and accessible services. It represents a commitment to environmentally friendly practices within the vending industry, offering customers a guilt-free and eco-conscious option for their retail needs.</p>
Product Name	<p>R.E. Bottles</p> <p>The name is derived from 4R “Reuse, Replace, Recyclable, and Reduce”</p>

#### **1.2 Type of Business**

Partnership
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#### **1.3 Executive Summary**

Our business model is centred around promoting environmental principles of reducing, reusing, replacing, and recycling. We aim to achieve this through the sale of water in a uniquely identifiable recyclable bottle, offering convenient refilling options, and implementing an intelligent bottle collection system for reuse.



Our key focus is on reducing plastic waste and encouraging sustainable practices among consumers. Our recyclable water bottle is designed to be easily identifiable, making it stand out in the marketplace and increasing the likelihood of it being properly recycled. By emphasizing the importance of recycling, we aim to reduce the environmental impact of plastic waste and contribute to a circular economy.

In addition to selling water in recyclable bottles, our business model also emphasizes the convenience of refilling. We will establish refill stations at strategic locations, allowing customers to easily replenish their bottles with fresh, filtered water. This initiative not only promotes the reuse of bottles but also reduces the reliance on single-use plastic bottles, thereby minimizing waste generation.

Implementing a bottle deposit system, where bottles are sold at a higher price with the intention of providing a refund upon their return, can serve as an effective incentive for people to recycle their bottles. This approach encourages individuals to actively participate in the recycling process and promotes a circular economy. To further enhance sustainability, we have developed an intelligent bottle collection system. Through the use of innovative technology, we will track and collect our recyclable bottles from various locations. This system will enable efficient collection and sorting, ensuring the bottles are properly cleaned, sterilized, and ready for reuse. By implementing this intelligent collection system, we aim to maximize the lifespan of our bottles and significantly reduce the need for new plastic production.

In our pursuit of environmental sustainability, we go beyond recycling bottles. We strive to be green in every aspect of our operations, whether big or small. This includes installing solar panels on our vending machines to harness renewable energy and reduce reliance on conventional sources. Additionally, we implement advanced filtration systems to treat and reuse the liquid contents of recycled bottles, promoting a circular economy and conserving resources. We are committed to considering the environmental impact of every detail, demonstrating our dedication to minimizing our ecological footprint and working towards a more sustainable future.

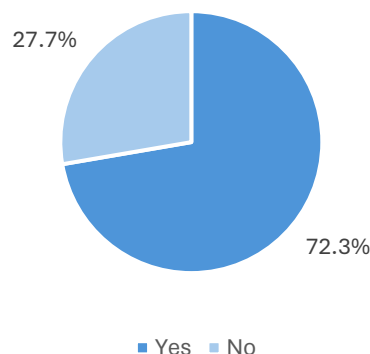
## 2. ESG & Social Impact

### 2.1 Social Needs

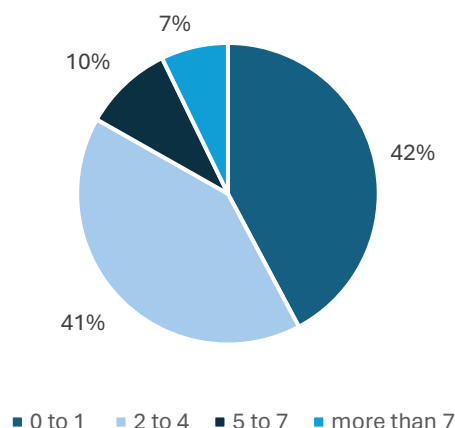
Since the rise in popularity of the use of plastic, the use of plastic bottles has significantly increased. Relatively, the number of plastic scraps has also increased day by day. At this point in time, there still aren't any proper methods to deal with the overuse of plastic bottles. According to the Environmental Protection Department, Hong Kong citizens throw away approximately 2,320 tons of plastic bottles every day, accounting for 21% of total solid waste, ranking second (the first is food waste). Plastic bottles account for 9% of the total plastic waste (202 metric tons). Judging from the weight, it does not seem like much, but if converted into a number of plastic bottles (assuming that one plastic bottle is 30 grams), the total number of plastic bottles discarded by Hong Kong citizens in a year will be 6.7 billion bottles.

Moreover, we conducted an online survey: among the 83 respondents, 60 people (72.3%) have the habit of buying plastic bottles. The survey shows that the majority of people buy 2-4 bottles per week (41%), and about 10% of people buy 5-7 bottles per week. This indicates the excessive use of disposable plastic bottles by Hong Kong people.

Do you have the habit of buying plastic water/drinks bottles at convenience stores or on the street



How many times do you buy plastic water/ drinks bottles per week



Hong Kong mainly uses landfilling and incineration to deal with solid waste. The method of burying waste in landfills emits a large amount of methane gas while burning waste produces carbon dioxide and nitrogen oxide. Both methods generate excessive greenhouse gases, leading to global warming, which is only addressing the symptoms rather than the root cause.

Moreover, the Hong Kong Government is planning to implement solid waste charging in the city, the waste would also affect the willingness of people to purchase plastic bottles. In the coming years, solid waste will be a main issue for Hong Kong people to deal with, in which most of the Hong Kong people would like to reduce the amount of waste they produce in order to save money. At the same time, the overall cost of a drink with plastic bottles would increase and more people will be less likely to purchase them frequently.

For Hong Kong citizens, the government's implementation of the municipal waste charging scheme provides a unique opportunity to reduce additional costs and actively participate in environmental conservation. By using their own bottles and recycling them, they can effectively reduce waste generation while saving on the expenses associated with waste production.

At the same time, in today's society, there is a growing awareness and desire among individuals to be environmentally friendly. People recognize the importance of reducing their ecological footprint and contributing to a sustainable future. However, they also lead busy lives and prioritize convenience in their daily routines. This presents a unique challenge and an opportunity for businesses to provide solutions that cater to both environmental consciousness and convenience.

By understanding this dual need, our business can play a crucial role in meeting the desires of individuals who want to be environmentally friendly without sacrificing convenience. By strategically placing vending machines and water refill stations in convenient locations, we offer a hassle-free way for people to access products and services while minimizing their impact on the environment.

Through effective messaging and education, we can empower individuals to make eco-friendly choices without disrupting their daily routines. Emphasize the convenience of using refillable containers and showcase the positive impact of their choices on the environment.

## 2.2 Application of Environmental, Social, and Governance on the Service

Environmental	<p>We hope to reduce the amount of plastic bottle disposal and pollution by promoting the concept of reuse, by trying to convince customers to reuse our water bottles, and by recycling the water bottles even if the customer does end up returning them, we can reduce the overall amount of plastic bottle disposal as more people buy our bottles.</p> <p>The materials used in plastic bottles are recyclable plastics, which reduce the impact of plastic particles generated</p>
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	<p>when plastic bottles decompose in the ocean, thereby reducing the impact on the ecological environment of fish.</p> <p>Refrigerants are a major culprit of global warming. Therefore, the vending machine uses R32 as the refrigerant, which has a low global warming potential (GWP) of 675, effectively reducing the greenhouse gas emissions from the machine. The filling amount and power consumption is also very low, reducing air pollution.</p> <p>We will recycle the plastic bottles used by customers by cleaning them and then refilling them with beverages for sale. Through recycling efforts, we can reduce the number of plastic bottles being disposed every day.</p> <p>Also, our service enables customers to reduce the use of plastics that are difficult to decompose and reduces environmental pollution caused by plastics. At the same time, by refunding part of the money for recycling plastic bottles, it attracts customers to recycle plastic bottles at recycling points.</p> <p>Transporting goods can be done using hydrogen-powered vehicles or hybrid vehicles, which not only reduce energy consumption but also emit fewer greenhouse gases.</p> <p>Office design will prioritise ventilation and natural lighting to reduce the excessive use of lighting and air conditioning, which leads to excessive energy consumption.</p>
Social	<p>People irresponsibly disposing plastic and especially plastic bottles is a problem that has persisted for quite some time, with most of them finding their way to the sea , creating mountains of garbage, impacting the ecosystem, water quality, and living environment. Improper waste management by the government has led to pollution of land, air, and water, affecting the health of citizens and damaging the cityscape.</p> <p>Furthermore, the common practice in Hong Kong of using disposable items and the habit of throwing plastic bottles in the trash instead of finding recycling bins significantly increases the burden on landfills. The government is currently powerless in addressing the issue of reducing landfill waste and its saturation problem, while the rapidly changing society has made purchasing plastic bottles more convenient, further overwhelming the landfills.</p> <p>The excessively convenient lifestyle in Hong Kong has indirectly caused people to gradually lose their</p>

	<p>environmental awareness. Convenience is considered more important than environmental protection for Hong Kong people. Many individuals give up on environmental conservation because they find it inconvenient. Therefore, in order to promote environmental protection in Hong Kong, a balance must be found between convenience and sustainability to increase people's motivation to participate in environmentally friendly practices.</p> <p>In our plan, instead of using disposable plastic bottles, we tend to build a renting system for the sales of the water bottle. With the disposal of returned the bottle after use, we aimed to increase the willingness of the people in Hong Kong to purchase water bottles in that way and decrease the chance of seeing the bottle thrown into the bin. We will also set up return stations on the streets. Our hope is to make drinking and recycling more convenient and increase their chances of returning bottles</p> <p>In addition to the previously mentioned policies, the business proposal also includes strategies to address community impact and employment opportunities.</p> <p>To minimize disruptions to daily life and ensure smooth traffic flow, the proposal emphasizes the importance of avoiding shipping goods during peak hours. By scheduling transportation activities strategically, the business aims to prevent congestion and minimize the impact on people commuting to work and school. This approach demonstrates a commitment to being a responsible corporate citizen and actively considering the well-being of the community.</p> <p>Furthermore, the establishment of the company itself presents opportunities for job creation and economic growth within the community. The business proposal outlines plans to recruit managers, cleaners, truck drivers, and other personnel when setting up operations. By providing employment opportunities, the company contributes to the local economy, stimulates job growth, and enhances the livelihoods of individuals within the community. This commitment to hiring locally not only benefits individuals but also fosters a sense of community engagement and support.</p>
Governance	<p>The company tries to schedule the collection of water bottles in the middle of the night to avoid changing them during busy periods or when more people are using the water bottles to prevent affecting too many people and their user experience. Regarding the collection of water bottles, the company also tries to collect them at a fixed time period to facilitate regular service customers.</p>

	<p>In terms of logistics, the company will review the uneven distribution of areas in a timely manner and make adjustments to the frequency of collecting water bottles in different areas to save costs and reduce energy waste from excessive logistics. Also, for the workers and the drivers, we would shorten their working</p> <p>Employees are encouraged to practice environmental protection in their daily lives; the company also regularly organises environmental protection activities, such as cleaning up garbage on the beach.</p>
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### 2.3 Practices of Environmental, Social, and Governance in the corporate

Environmental	<p>1) Our business proposal places a strong emphasis on environmental responsibility within the corporate structure. It includes comprehensive policies for proper waste management, ensuring that the company takes a proactive approach to minimize waste generation and promote recycling and composting. By implementing waste reduction strategies and responsible disposal practices, the business aims to minimize its environmental footprint and contribute to the circular economy. These policies are designed to align with relevant regulations and industry best practices, demonstrating the company's commitment to sustainable waste management</p> <p>2) Energy and resource efficiency are also key areas of focus outlined in the environmental policies of the business proposal. The company acknowledges the importance of maximizing energy and resource efficiency to minimize its environmental footprint. The proposal includes measures to improve energy efficiency, such as the adoption of energy-efficient lighting systems, equipment upgrades, and the implementation of water conservation practices. Additionally, the company explores opportunities for renewable energy adoption, such as solar panels or wind turbines, to reduce reliance on fossil fuels and promote clean energy alternatives. By prioritizing energy and resource efficiency, the business aims to minimize its environmental impact and contribute to a more sustainable future.</p> <p>3) Carbon footprint reduction is a significant goal highlighted in the environmental policies of the business proposal. The company sets ambitious targets to decrease greenhouse gas emissions through various strategies. It actively monitors and reports on its progress towards</p>
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	<p>achieving these targets, promoting transparency and accountability in its environmental efforts. The proposal includes initiatives such as energy conservation, renewable energy utilization, and carbon offset programs to mitigate the company's carbon footprint. By focusing on carbon footprint reduction, the business demonstrates its commitment to combat climate change and contribute to global sustainability goals.</p>
Social	<p>In addition to its environmental commitments, our business proposal recognizes the importance of addressing social aspects within the corporate structure. It includes policies aimed at fostering equal employment opportunities, promoting diversity and inclusion, and prioritizing employee well-being and work-life balance.</p> <p>1)Our business proposal outlines a strong commitment to equal employment, ensuring that all individuals, regardless of their gender, race, ethnicity, age, or any other characteristic, have equal access to employment opportunities and fair treatment. The company actively seeks to eliminate discrimination and bias in all aspects of its operations, from recruitment and hiring practices to promotion and career development. By promoting equal employment, the business aims to create a diverse and inclusive workforce that benefits from a wide range of perspectives and experiences.</p> <p>2)Diversity and inclusion are key pillars of the corporate culture outlined in the proposal. The company recognizes that fostering a diverse and inclusive environment leads to innovation, creativity, and better problem-solving. It actively promotes the representation of diverse backgrounds, experiences, and perspectives at all levels of the organization. The proposal includes initiatives to attract, retain, and develop talent from diverse backgrounds, as well as programs to raise awareness and educate employees about the value of diversity and inclusion.</p> <p>3)Employee well-being and work-life balance are also prioritized in the business proposal. The company acknowledges that a healthy and balanced workforce is crucial for productivity, job satisfaction, and overall employee happiness. The proposal includes policies and practices that support employee well-being, such as flexible work arrangements, wellness programs, and access to resources for physical and mental health. The company recognizes the importance of work-life balance and strives to create a supportive work environment that allows employees to effectively manage their personal and professional commitments.</p>

Governance	<p>1) Transparency and disclosure are also one of the key principles integrated into the business proposal. We acknowledge the importance of sharing relevant data to demonstrate its commitment to sustainability and environmental responsibility. This includes disclosing information such as carbon footprint data, waste management practices, and recycling rates. By providing this information to stakeholders, including customers and the general public, the business aims to foster trust and accountability. Transparent reporting enables stakeholders to make informed decisions and understand the environmental impact of the business's operations.</p> <p>2) To maintain integrity and fairness, we emphasize the importance of avoiding conflicts of interest. Clear policies and guidelines are established to ensure that business decisions are made in the best interest of the environment and society. These policies may include measures to prevent employees from engaging in activities that compromise the company's commitment to sustainability. By upholding ethical standards and prioritizing the greater good, the business aims to build trust and credibility with stakeholders.</p> <p>3) In addition, regular auditing and monitoring processes are integral to the business proposal. By conducting internal and external audits, the company can assess the effectiveness of its sustainability practices, waste management systems, and compliance with relevant regulations. External audits provide independent verification of the company's environmental performance and help identify areas for improvement. This commitment to auditing ensures that the business is accountable for its actions and constantly strives to enhance its environmental impact.</p> <p>4) Our business proposal places a strong emphasis on the safety and well-being of drivers, collectors, and factory staff. It recognizes the importance of creating a work environment that prioritizes employee safety and implements comprehensive safety protocols. Through regular training programs and assessments, the proposal ensures that all employees are equipped with the necessary knowledge and skills to handle materials, operate equipment safely, and prevent accidents and injuries. By fostering a culture of safety, the business aims to protect its workforce and promote a positive work environment.</p>
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## **2.4 How can the business address the above social needs and generate positive social impacts.**

In the project, we hope the number of ' of plastic bottles can be reduced, such that fewer bottles will be landfilled, burnt in incinerators, or even direct released into the ocean, decreasing the adverse impact of the pollution problem on our beautiful land view and sea view, the habitat of different animals and plants. People may feel happier when they can smell cleaner air or see a cleaner bay. As Hong Kong citizens, no one wants to see our city being polluted this seriously. By reducing plastic waste, it also helps enhance the social image of the city, which might attract more tourists coming to our city.

Very recently in Hong Kong, the government introduced the Municipal Waste Charging Scheme which is planned to begin on 1 August. It is a good opportunity for the company to sell our bottles so customers can reuse them and not generate waste that will increase the cost they will have to pay because of the scheme.

Besides, if customers want to buy bottled drinks instead of bringing their own water bottles because of convenience, they can buy our bottles with a lower price as by recycling our bottle, a certain amount of money will be refunded, which makes it so that they actually end up spending less money to buy the drink when they recycle the bottle after drinking. They do not have to bring the bottles back home either, which is more convenient and saves more money for them.

### 3. Details of Business

#### 3.1 Introduction of Product / Service

We are excited to introduce a revolutionary product and service aimed at promoting sustainability and reducing plastic waste. Our water bottles, made with recyclable plastic, will be available at convenience stores and vending machines across the city. But that's not all – we're also implementing a comprehensive collection service to ensure the bottles are recycled and reused effectively.

##### Convenient Collection Points:

While there aren't precise data on the exact number of vending machines in Hong Kong, we can observe a growing trend of e-payment methods and the busy lifestyle of its residents. In light of these factors, we can confidently conclude that convenience plays a significant role in the daily lives of people in Hong Kong. With a fast-paced and bustling environment, having access to easily accessible and convenient services is highly valued by the population. Vending machines, with their ability to provide quick and on-the-go products, perfectly align with the needs and preferences of Hong Kong residents. As such, integrating vending machines into the urban landscape of Hong Kong can cater to the demand for convenience and offer a seamless experience for individuals seeking quick and hassle-free access to various goods and services.

Collection points will be set across the city in the form of custom collection machines made by our company in places such as MTR stations and sports grounds. Despite the fact that a lot of sports grounds have a tuck shop with a wide variety of options for drinks, their prices are a lot higher than the normal price while our collection, machines also sell water and energy drinks in different flavors in our PP water bottle at a relatively lower price.

##### New-Age Vending Machine:



Height:200cm\* Length:180cm\* Width:120cm

\* \* Pictures are for reference only

Apart from the traditional vending machine, our cutting-edge vending machine, is a revolution in convenience and sustainability. This state-of-the-art machine features a solar panel on the roof, harnessing clean and renewable energy to power its operations. With its sleek design and large advertising screens on the sides, it captivates attention and enhances customer engagement. The LED display screen provides clear and dynamic product information, enticing users to make their selections. Inside, an advanced AI system ensures seamless functionality, enabling efficient inventory management and personalized user experiences. This vending machine represents the perfect blend of eco-consciousness, modern aesthetics, and intelligent technology, offering a truly innovative solution for on-the-go convenience.

### Water Filling machine



Height:180cm\* Length:80cm\* Width: 120cm

\* \* Pictures are for reference only

In addition to our vending machine services, we are excited to introduce a water refill machine initiative. To promote sustainability and reduce plastic waste, we will strategically place water refill machines next to select vending machines. These refill machines will provide a convenient and affordable option for people to refill their water bottles at a minimal cost. By encouraging the use of refillable bottles, we aim to reduce the consumption of single-use plastic bottles and promote responsible water consumption practices among the community. This initiative aligns with our commitment to environmental stewardship and offers a practical solution for individuals to stay hydrated while minimizing their environmental impact.

### Incentives for Responsible Actions:

We believe in rewarding responsible behavior, which is why we have incorporated a unique incentive program. When customers purchase our water bottles, they will

notice a slightly higher price than the average market price. However, once they finish their drink and return the bottle to one of our designated collection points, a portion of the selling price will be returned to them. This financial incentive not only encourages recycling but also rewards individuals for their contribution to a sustainable future.

#### Ensuring Hygiene and Safety:

To ensure safety and hygiene in our recycling process, we propose the implementation of an AI system designed to identify and classify recycled bottles based on their condition. This AI system will utilize advanced image recognition algorithms to analyse visual data and accurately determine whether a recycled bottle is damaged or undamaged. By automatically categorizing the bottles into two distinct categories, we can effectively separate bottles that meet quality standards from those that may pose safety risks or compromise hygiene. This proactive approach will enable us to mitigate any potential hazards and ensure that only bottles in good condition proceed further in the recycling process.

Upon entering the factory, the damaged bottles identified by our AI system will be subjected to a melting process, where they will be transformed into new bottles through the application of controlled heat. This process ensures that the damaged bottles are effectively recycled and repurposed, eliminating any potential safety concerns and reducing waste in our operations.

On the other hand, the non-damaged bottles will undergo a thorough disinfection process before they are refilled. We prioritize hygiene by subjecting these bottles to multiple disinfection procedures, using approved sanitizing agents and advanced cleaning technologies. This rigorous disinfection process guarantees that the bottles are free from any contaminants or harmful microorganisms, ensuring the highest standards of safety and hygiene for our customers.

#### Closing the Loop:

Once the bottles have been cleaned and sterilized, they are ready to be refilled and sold again. This closed-loop system allows us to create a sustainable cycle, significantly reducing the need for new plastic production. By embracing this circular economy approach, we minimize waste, conserve resources, and lower carbon emissions, contributing to a healthier planet for future generations.

### **3.2 Characteristics of Product / Service**

#### One-Stop service

One of the key characteristics of our business is our comprehensive one-stop service, which encompasses the entire lifecycle of the products we handle. Our service

offering includes sales, recycling, remanufacturing, reusing, and sales once again, creating a closed-loop system that maximizes resource efficiency and sustainability.

Our one-stop service is a key aspect of our business, encompassing sales, recycling, remanufacturing, reusing, and reselling. We offer high-quality products for sale while promoting recycling practices to minimize waste. Through innovative remanufacturing techniques, we transform recycled materials into new products, extending their lifespan. Additionally, we prioritize the reuse of products, refurbishing and making them available again. By completing the cycle, we offer remanufactured and refurbished products for sale, promoting affordability and sustainability. Our comprehensive approach maximizes resource efficiency and contributes to a circular economy.

#### Recyclable plastics:

Our bottles are made of Type 5 plastics, polypropylene (PP), it can withstand up to 100°C to 140°C which is more resistant to high temperatures than PET which is very common in plastic bottles in the water bottle industry. It is also highly resistant to corrosion and chemical leaking and has high tensile strength which makes it more versatile than others such as PET. Moreover, the PP water bottle is also easy to recycle which makes it very eco-friendly.

#### Comparison with other bottle materials

	Type 5 plastic (selected)	Bioplastic	Borosilicate Glasses
Average Cost	HKD 5.22/ kg	HKD 35.19/kg	HKD 14.27/kg
Resistance to high temperature	~100°C to 140°C	Depends on the components	~400°C to 500°C
Recyclable	YES	YES	YES

After considering the cost , resistance to high temperature and the recyclability, we decided to use type 5 plastic as our bottle material.

#### Flexibility:

The customer can choose to keep their bottle with a slightly higher price comparing to a normal single-used bottle or return the bottle and receive a portion of the selling price. This gives the customers two choices which is to use a cheap price to buy a water bottle for long term use or a single-used bottle. If the customers decide to return the water bottle, the bottle will be cleaned and sterilised thoroughly, therefore no worries about hygienic problems are needed.

#### Not only recycle bottle

We propose a sustainable solution to make our outdoor vending machines more environmentally friendly by incorporating solar panels to support their electricity needs. By installing solar panels on top of each vending machine, we can harness

clean and renewable energy from the sun, reducing our reliance on traditional electricity sources and minimizing our carbon footprint. The solar panels will generate electricity during daylight hours, powering the vending machines and ensuring their uninterrupted operation. Any excess energy produced can be stored in batteries for use during low light or night-time periods.

As part of our comprehensive green initiative, we propose a solution to minimize waste in the recycling process of plastic bottles. Currently, when plastic bottles are recycled, the liquid inside is often discarded, resulting in a significant amount of wasted resources. To address this, we suggest implementing a filtration system in our factory to extract and purify the liquid from recycled bottles. This filtered liquid can then be repurposed for various cleaning purposes within our operations, such as equipment cleaning, floor washing, or irrigation for green spaces.

### **3.3 Business Goals**

#### *Promoting health and sustainability*

At our core, we are driven by a dual purpose: to encourage healthy hydration habits and to champion environmental sustainability. Our business is dedicated to provide high-quality water bottles that not only serve as a convenient hydration solution but also contribute to the global effort of reducing plastic waste.

Our primary objective is to promote the importance of staying hydrated throughout the day while minimizing the environmental impact caused by single-use plastic bottles. By offering durable, reusable water bottles, we empower individuals to make a conscious choice for their own health and the well-being of our planet.

We firmly believe that access to clean, safe drinking water should be universal, and our water bottles are designed to be a part of that solution. By using our bottles, individuals can confidently carry their water wherever they go, eliminating the need for purchasing plastic bottles and reducing the unnecessary waste that accompanies them.

#### *Raise awareness of public on “BYOB” (Bring Your Own Bottle)*

Our business also strives to raise awareness among the public about the importance of bringing their own bottles and reducing the consumption of single-use plastics. We firmly believe that by encouraging the adoption of reusable alternatives, we can collectively make a significant impact on the environment.

We are committed to making sustainability convenient and accessible to everyone. To facilitate this, we have strategically placed recycle stations in multiple locations, ensuring easy access for our customers to return their bottles. Additionally, we continuously explore partnerships with local businesses and organizations to promote our cause and amplify our impact. By choosing and recycling our water bottles, individuals become ambassadors of change. They not only prioritize their well-being by staying hydrated but also actively contribute to a more sustainable future.

## **4. Sales & Marketing Strategy**

### **4.1 Marketing Positioning**

We have considered the four fundamental elements of marketing positioning, which are Product, Price, Place, and Promotion, also known as the “4Ps”.



We have set a lower price than the competitor to attract customers and create a competitive advantage. We also decrease our production costs by reusing the water bottles.

We offer various sales channels for our customers and ensure that the product is conveniently accessible to them at the right time and place. More details will be mentioned in “4.4 Sales Channels”.

We will advertise our product on different social media, such as Facebook, Instagram, and more. Our goal of promotion is to raise awareness, generate interest, and persuade customers to choose the offering over competitors. More details will be mentioned in the “4.5 Promotion Method.”

Our product could satisfy customer needs and solve their problems. Our customers could buy a bottle of water on the street when they are thirsty. At the same time, they can reuse the water bottle by filling it with water.

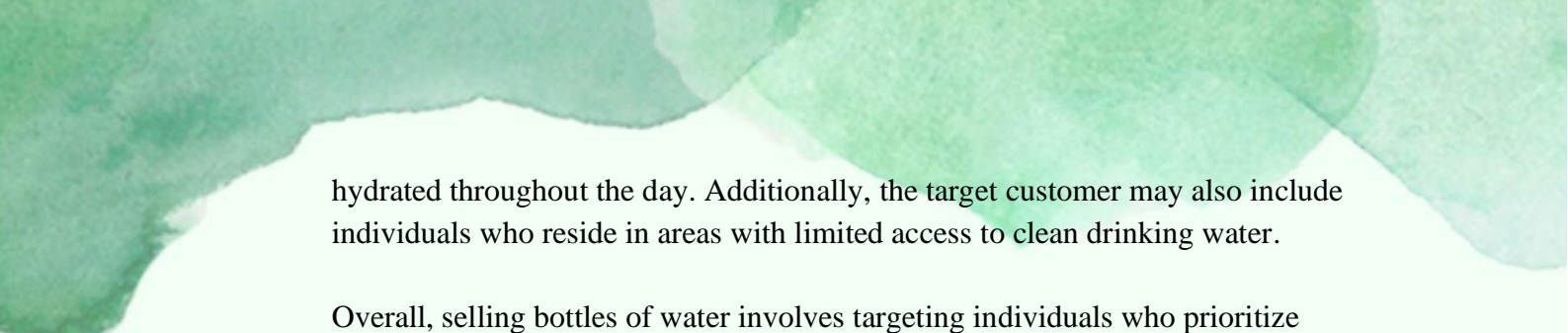
In summary, price, place, promotion, and product are interrelated elements of the marketing positioning that collectively shape a company's marketing strategy.

### **4.2 Target Customers**

The primary target customer includes individuals who prioritize convenience, hydration, and portability. This can encompass a broad range of people, such as commuters, athletes, students, travellers, and those engaged in outdoor activities. These customers often value the convenience of having a readily available source of clean and safe drinking water.

Demographically, the target customer can span across various age groups, from students to seniors. Moreover, we target health-conscious individuals who are mindful of their water intake. At the same time, we cater to environmentally conscious customers by promoting sustainability and the “4Rs”.

In terms of psychographics, the target customer for our product may include individuals who lead active lifestyles and prioritize fitness and wellness. They may be conscious of their hydration needs and seek out convenient options to stay



hydrated throughout the day. Additionally, the target customer may also include individuals who reside in areas with limited access to clean drinking water.

Overall, selling bottles of water involves targeting individuals who prioritize convenience, hydration, and portability. By understanding the needs and preferences of this target customer, our business can develop effective marketing strategies and product offerings to meet their demands in a competitive market.

## 5. SWOT Analysis

SWOT analysis is a framework used to evaluate the current state of a business or a specific project. It involves analysing internal factors (strengths and weaknesses) and external factors (opportunities and threats) that can impact the organization's performance.

### Strengths:

#### 1. Uniqueness

Our product provides a service that is as of right now brand new to Hong Kong, therefore we will have the advantage of being one of the only companies in the market providing the specific service of selling water bottles, allowing the customer to return them with a refund and reusing the bottle all in one.

This sets us apart from other bigger water companies.

#### 2. Strategic location

Our vending and filling machines are going to be set up all over Hong Kong in convenient locations, considering how much Hong Kong people prioritize convenience over everything else, this gives us an advantage in attracting customers.

#### 3. Low price

When our customers return our bottles, they are refunded a set amount of money, and when deducting the refund from the selling price, the net price will end up being lower than the current market price for water bottle. This gives us an advantage with the price and makes it easier for us to attract customers.

### Weaknesses:

#### 1. Lack of reputation

As our company is still fairly new, potential customers might continue to gravitate towards larger and more well-known brands already existing on the market, it might be hard to get potential customers to actually pay for our product and services as we do not have an established reputation.

#### 2. Less margin

As our company focuses on reducing the use of plastic bottles, our low prices might in turn cause our profit and margin to be quite low. This is not ideal but it should only be a main problem for the first few years, as we get established as a

## SWOT ANALYSIS

	Helpful to achieving the objective	Harmful to achieving the objective
Internal origin (attributes of the organization)	Strengths S	Weaknesses W
External origin (attributes of the environment)	Opportunities O	Threats T

company and we reach more consumers, our profit and margin should increase as well.

### 3. Inexperienced

As this is our first time starting a business, we might not have the experience necessary to solve all potential problems that might arise. But as time goes on, we should be able to adapt accordingly, and this should not be a long-term weakness.

## **Opportunities:**

### 1. Government's policies

The government is currently focusing on the environment as well, they have schemes that allow them to lend us funding which can support it. Our company, in general, will have the support of the government because of our aim, this will allow things like setting up machines in public sports grounds much easier.

### 2. Environmentally-friendly trends

Because the government has been heavily promoting a better environment. This has also caused many Hong Kong citizens to pay more attention to their own habits and what they do. This means that consumers are more likely to choose environmentally friendly products such as products from our company. This means that this is a good time to establish our company.

## **Threats:**

### 1. Well-established competitors

Our main threats will be our competition in other water brands as they might already be doing something similar to our services although not the same (e.g. Bonaqua, Watsons ), it would not be hard for our competitors to change somethings so that their services completely overlap with ours, this would make it a lot harder to retain or attract new customers. We can choose to collaborate with our competitors by offering our services to combine with their products which will solve this problem

### 2. Public perception

The public might be hesitant to accept our product, they might especially be concerned about hygiene problems. We can promote our cleaning process more to alleviate any public concerns.

## 6. Sales Channel

As mentioned in the “4.1 Marketing Positioning”, sales channel is important to introduce our product to the public and reach specific sales targets. Our main sales channel would be direct sales through different shops or vending machines.

### MTR stations:

MTR stations are known for their high volume of foot traffic as they serve as a major transportation hub in urban areas, it also attracts a diverse range of people. By offering easy access for drinks to them, it caters to most of the customers who will walk pass the mtr station. Placing a vending machine placing in MTR stations can also serve as an opportunity to advertise our products and increase the visibility of our brand.

### Convenience store (7-11 / OK):

Convenience stores are designed to provide quick and easy access to a wide range of customers. They are typically located in easily accessible areas and often have extended operating hours or even 24/7. Convenience stores are often significantly located in densely populated areas, near residential, commercial, or urban areas.

### Sports ground, Tourist spot, Country Park:

Placing a vending machine can enhance the overall visitor experience by providing a convenient and accessible option for refreshment. This can be particularly important in outdoor locations such as sports grounds where visitors may engage in physical activities and require hydration or a quick energy boost.

### School:

We know that the best way to promote environmentally friendly idea is to do it at school, develop an eco-friendly habit from student life is much easier than change our own habit in adult life. Therefore, we decide to put our product and vending machine in the school from the second year, after examining the margin of our business.

## 7. **Promotion Method**

There are numerous promotion methods available for businesses, and the most effective one depends on various factors such as the nature of the business target audience, budget, and goals.

### *Online Advertising:*

Develop a website and optimize the content to improve the organic search ranking on different search engines, such as Google, Yahoo. This helps increase visibility and drive more traffic to the website through search engine optimization. At the same time, utilize platforms like Google Ads, social media advertisements (Facebook, Instagram, Twitter), and display advertisements to reach a wide audience.

### *Public relations (PR):*

Develop relationships with different public figures, such as journalists, bloggers and media outlets to secure press coverage for the business. Collaborate with the influencers to promote our products in order to have a larger exposure to the public.

### *Offline Marketing:*

Traditional methods like newspapers, magazines can reach a specific target customer which other methods cannot, such as people who are not familiar with smart gadgets.

### *Organising Special Events:*

To enhance public visibility, we will organise various events. "Hong Kong Green Day" has been designated for June 5th, and as part of our efforts, we will host a "\$1 Extra Dollar Recycle Event." This event will provide individuals with an additional \$1 when they recycle our water bottles. Its purpose is to introduce our business to a wider audience. Prior to this event, we will execute diverse advertising strategies across platforms such as Instagram, Facebook, and through the placement of posters in different locations. Additionally, we will seasonally host free water refills through our vending machines to encourage individuals to bring their own water bottles or buy our water bottles and refill water with them.

## 8. Finance

### 8.1 Sales Projection

	First year	Second year	Third Year
Water bottle sold	600,000	882,000 (147%)	1,261,260 (210.21%)
Water bottle income (\$15-8)	\$4,200,000	\$6,174,000	\$8,828,820
Filling water income	\$600,000	\$600,000	\$600,000
Advertisement income	\$2,190,000	\$3,285,000	\$4,927,500
Total Income	\$6,990,000	\$10,059,000 (increased 43.9%)	\$14,356,320 (increased 105%)

Due to different factors both internal and external. We estimated that the income will be increased by 105% in the third year.

#### External factors:

1. Due to the pandemic, many people don't have the habit of bringing their own water bottles. Therefore, our products encourage the public to use a recyclable, reusable water bottle throughout their day.
2. Many foreigners and travellers from Mainland China are willing to travel to Hong Kong which increases the visibility of our brand globally. At the same time, increasing the margin of our business.
3. Sales profits are mainly affected by competitors from the same industry, such as Watsons and Bonaqua. However, no competitor has the same functions as us. We include the water bottle selling, recycling, and cleaning cycle which is the characteristic of our business.

#### Internal factors:

1. We will promote our business through different channels, such as third-party platforms, search engines, and more. We will explain the function and characteristics of our business to the public, in order to increase the number of customers and business opportunities.
2. We know that payment methods are important to the customers, so we offer different payment methods to increase efficiency, such as Alipay, Payme, and more.
3. Customer service is important, we will provide a workshop for the officer to build a good brand image and provide polite, respectful, and passionate services.

## 8.2 Startup Cost

### Statement to Calculate the Startup Cost of GreenWave

	\$ (HKD)
Company Registration fee in Hong Kong	1,720
Fee for permit to sell food by means of vending machine	1,360
AI program in the collective boxes	1,000,000
Vending Machines (\$5,000*100)	500,000
Water filling Machine (\$5,000*50)	250,000
Solar panel (\$600*120)	72,000
Collective Boxes (\$3,000*100)	300,000
Electric Trucks <sup>[7]</sup> (\$400,000*3)	1,200,000
Machine in factory	1,000,000
Advertisement	1,000,000
<b>Total Start-up Cost</b>	<b>5,325,080</b>

## 8.3 Expected Monthly Expenditure and Revenue

### GreenWave

#### Expected Monthly Income for each month

	\$ (HKD)	\$ (HKD)	\$ (HKD)
Sales			
Bottled Drinks (\$15*50,000)			750,000
Filling Drinks (\$5*10,000)			50,000
Less: Cost of Goods Sold			
Purchases			
Water		25,000	
Drinks		30,000	
Bottles		60,000	(115,000)
Gross Profit			685,000
Add: Other Revenues			
Advertisement income			182,500
Less: Other Expenses			
Office Rent		25,000	
Rental expenses of factory		45,000	
Commission expenses for convenience stores (\$15*6,000*0.4)		36,000	
Charging fee for trucks (\$1,000*4)		4,000	
Electricity Expenses		7,200	
Water bill		5,000	
Return of recycling bottle (\$8*50,000*0.5)		200,000	
Repairing Expenses		10,000	
Wages and salaries			
Water Bottle cleaning worker (\$55*60)	3,300		
Trucks Driver (\$18,000*3)	54,000		
Officer (\$20,000*3)	60,000	117,300	
Insurance Expenses		80,000	(373,000)

<b>Profit before tax</b>			<b>494,500</b>
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#### 8.4 Funding Source

Recycle funds from the government:

- 50% of total setup cost (~ HKD 2,662,540)

Budget funding:

- Recruit staff: No more than 50% of total project expenditure (~HKD 58650)
- Advertising: No more than 50% of total project expenditure (~HKD 100000)
- Expenses related to opening a business unit: No more than 50% of total project expenditure (~HKD 3056)
- Purchase machines, equipment, and molds: No more than 70% of total project expenditure (~ HKD 3025400)
- Self-funding ~HKD100000

**Total: HKD 5,949,646**

#### 8.5 Financial Projection in 3 Years

	1st year	2nd year	3rd year
Total income	6,990,000	10,059,000	14,356,320
Fundings	5,949,646	--	--
Products			
Vending machines	(500,000)	(750,000)	(1,000,000)
Water-filling machines	(250,000)	(400,000)	(750,000)
Bottles and drinks	(1,380,000)	(2,028,000)	(2,637,180)
Operating expenses	(4,476,000)	(5,371,200)	(6,445,440)
<b>Profit before tax</b>	<b>3,046,500</b>	<b>1,509,800</b>	<b>3,523,700</b>
Profits tax (7.5%)	228,487.5	113,235	264,277.5
<b>Profit after tax</b>	<b>6,115,158.5</b>	<b>1,396,565</b>	<b>3,259,422.5</b>

## 9. Risk Management

Risk management is a crucial aspect of our ESG-based company, as we recognize the challenges in generating profits while maintaining our commitment to environmental, social, and governance principles. To address this risk, we will conduct regular meetings to ensure that our finances are being utilized efficiently. By closely monitoring our expenditures and revenue streams, we can make informed decisions that optimize our financial performance. Additionally, we focus on raising awareness about our products and their environmental benefits among the general public. Through targeted marketing campaigns and educational initiatives, we aim to increase consumer demand and promote the growth of our business. Furthermore, we actively seek government incentives and support to alleviate financial burdens and enhance the viability of our ESG operations.

### Accident:

Human-related accidents pose a potential risk within our business. To mitigate this, we prioritize the safety and well-being of our employees by ensuring that comprehensive insurance coverage is in place. In the event of an accident, this insurance provides financial protection and support to affected individuals. Moreover, we invest in training programs to equip our employees with the necessary skills and knowledge to operate machinery safely and effectively. By emphasizing proper training and adherence to safety protocols, we minimize the likelihood of accidents occurring in our workplace.

### Machine error:

Machine-related errors are another risk that we proactively manage. We acknowledge that machines may occasionally malfunction, leading to disruptions in our operations. To mitigate this risk, we plan to implement a robust maintenance program that includes regular checks and repairs. By conducting routine inspections and promptly addressing any identified issues, we can ensure that our machines are functioning optimally and minimize the potential for errors or breakdowns. In cases where machine errors do occur, we have contingency plans in place to quickly resolve the situation and minimize any associated negative impact on our operations.



*Trustworthiness:*

As a relatively new company in Hong Kong, we recognize the risk associated with reputation and trustworthiness. Building a strong reputation and establishing trust among customers is paramount to our success. We address this risk by consistently delivering high-quality products and prioritizing hygiene in our operations. We adhere to stringent quality control measures and maintain the highest standards of cleanliness and safety. Through transparent communication and engagement with our customers, we aim to foster trust and confidence in our brand, mitigating concerns regarding the quality and hygiene of our products.

*Insufficient funds:*

Lastly, insufficient funds pose a risk to our business operations. To address this risk, we have developed comprehensive financial strategies that focus on prudent budgeting, expense management, and revenue diversification. By maintaining a strong financial position and exploring various funding opportunities, we aim to ensure that we have sufficient funds to sustain and grow our business over the long term. Additionally, we actively seek external funding sources, such as grants or partnerships, to support our ESG initiatives and mitigate the risk of insufficient funds.

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