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Paper 3 Case Study

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INFORMATION

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Waste To Zero (WTZ)

Making use of waste

As a young boy Amandi Said supplemented his family's income by finding waste materials and products and making new products to sell. Later, he employed other teenagers to collect waste such as card and plastics in the capital city of country R. Amandi sold these waste materials to recycling companies. In 2015, Amandi set up WTZ as a private limited company and a summary of its rapid growth is provided below. 5

2015	WTZ gains contract from local government to collect recyclable waste. This is sorted at the new WTZ recycling centre and then sold to local manufacturers.	
2017	WTZ opens its first factory producing the innovative Hydrocamel – a water barrel made from recycled plastic waste. The Hydrocamel is sold to local communities and charities to improve access to clean water in low-income countries.	10
2019	WTZ converts to a public limited company. Operations expand to other major cities in country R. Additional waste recycling centres and factories open. One centre in country R burns waste products to generate electricity.	
2020	WTZ patents a process for creating bricks from waste plastic and rubber. These bricks can be used to build durable and affordable houses.	15
2021	WTZ takes over MR, a company that recycles metal.	
2022	WTZ's market share for collecting and recycling plastic waste in country R reaches 60%.	

Ownership and finance 20

Amandi retains a controlling stake in WTZ. He has always been motivated by profit and the desire to secure a future for his children. Amandi is willing to take risks. WTZ has entered new markets and invested in research and development. Business expansion has been financed by bank borrowing and by the public offer of shares on the stock market in 2019.

Table 1 and Table 2 provide selected information from the financial statements of WTZ. 25

Table 1: Extracts from WTZ's income statement (year ending 30 April)

	2022 (\$m)	2021 (\$m)
Revenue	60.0	50.0
Profit for the year	5.6	6.4
Dividends	4.8	4.4

30

Table 2: Extracts from WTZ's statement of financial position (at 30 April)

	2022 (\$m)	2021 (\$m)	
Non-current liabilities	14.0	10.0	35
Share capital	4.0	4.0	
Retained profit reserves	4.0	3.8	
Inventories	4.0	3.2	
Trade receivables	1.6	1.5	
Cash	0.2	0.4	40
Current liabilities	4.2	3.6	
Notes: Authorised share capital – 20 million shares @ \$0.5 Number of shares issued – 8 million Current share price – \$3			45

Operational efficiency

Amandi's focus has always been on minimising costs to maximise profit margins. Many factory employees are on flexible contracts and are paid the minimum wage for unskilled work. Many employees work long hours. Working conditions in WTZ's factories are difficult with poor ventilation and a lack of facilities for employees to take breaks. Employees have demanded the right to join a trade union. However, unemployment in country R is high, so WTZ has refused to recognise trade unions. 50

The new operations manager at the Hydrocamel factory, Khalid, reported the following problems to the directors:

- employee absenteeism is increasing 55
- productivity is not increasing
- quality standards are below expectations with 5% of output rejected
- inefficient collection of recycled materials
- high inventory levels.

Khalid recommends a lean approach to production including the introduction of Kaizen (continuous improvement). To be effective this change would require investment in employee training. 60

Marketing

Hydrocamel has been a very successful product since its launch in 2017. The Hydrocamel helps families reduce the time needed to collect and transport water. The Hydrocamel can store 100 litres of water and is designed to be rolled so that it is easily movable. 65

In 2019 a competitor brand, the Hippo Barrel, was launched and WTZ's sales growth slowed.

The marketing manager, Kofi, is planning a marketing strategy to increase sales to 50 000 units per year which is the maximum capacity of the factory. He collected the following information as part of his situational analysis: 70

- price of the Hydrocamel is \$140
- price of the competitor's Hippo Barrel was reduced by 20% to \$120 in 2020
- this resulted in an 8% decrease in demand for the Hydrocamel to 40 000 units in 2021
- estimated price elasticity of demand for the Hydrocamel is -1.2
- WTZ promotes the Hydrocamel through adverts in specialist magazines and by contacting charities directly 75
- the promotional budget in 2021 was \$10 000
- targeted marketing spending is estimated to have promotional elasticity of demand of 1.3.

Organisational structure 80

Amandi has not changed the organisational structure of WTZ as the business expanded. The business has a hierarchical structure with functional areas of operations, human resources, marketing and finance. The business has been successful and continues to expand.

Continued expansion has made it more difficult for Amandi to have effective control over the business. He thinks that managers focus too much on their functional responsibilities and this prevents them from planning strategically. Amandi considers the current organisational structure to be a weakness that is constraining growth. 85

In discussion with other directors, Amandi commented 'WTZ is increasingly diversified and we need a structure that can support growth and drive innovation. Changes will also be needed if we expand into other countries to process waste and generate electricity.' 90

An increased focus on corporate social responsibility (CSR)

Kofi recommends that WTZ engages more with the local community. He reported to Amandi that 'WTZ should be a leading supporter of sustainable development. We could use our expertise in recycling to develop a positive brand image and promote the company as protecting the future for all. Ambitious environmental objectives could be set. However, there is likely to be an impact on the costs of the business. There are, for example, operational and human resource issues we need to overcome as we focus on CSR.' 95

Growth strategies for the future

Amandi used strategic analysis techniques to consider the strategic direction of WTZ's continued expansion. An extract from his external environment analysis (PEST) is shown in Appendix 1. He identified two potential strategic options. Amandi plans to proceed with only one of the options. However, the Finance Director is concerned about the capital cost and the potential impact on working capital. 100

Option 1: Purchase a small business called Lacpac
Takeover Lacpac which produces recyclable non-plastic packaging for the food industry. It is an innovative company and a market leader in country R. 105

Option 2: Expansion to country S
Country S is a high-income country with a large population. WTZ would build a factory for processing plastic waste. WTZ would use its core competencies to gain contracts from the government of country S. 110

Appendix 2 provides further data on each option.

Appendix 1: External environment analysis (PEST)

<p style="text-align: center;">Political</p> <ul style="list-style-type: none"> Some low-income countries have banned processing of plastic waste from high-income countries There is proposed regulation in country R to reduce the use of plastics in food packaging 	<p style="text-align: center;">Economic</p> <ul style="list-style-type: none"> Economic growth in country R is forecast to be 5% per year on average over the next 5 years Global interest rates forecast to decrease in 2023
<p style="text-align: center;">Social</p> <ul style="list-style-type: none"> Increasing environmental awareness in country R and country S Global environmental pressure groups propose consumer boycotts against businesses which operate unsustainably 	<p style="text-align: center;">Technological</p> <ul style="list-style-type: none"> Increasing use of computer controlled machinery for collecting and sorting recycled material Innovations in processing of waste materials

Appendix 2: Summary of data from strategic choice techniques over 5-year period

	Option 1: Takeover of Lacpac	Option 2: Expansion into country S
Driving forces	Rapid market growth in use of recyclable non-plastic packaging in the food industry	Builds on core competencies of WTZ
Restraining forces	High cost	Competitive market in country S
Capital cost	\$20m	\$10m
Accounting Rate of Return (ARR)	15%	10%
Decision tree: Expected monetary value Probability of success	\$9m 60%	\$4m 70%

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