



Cambridge International AS & A Level

BUSINESS

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Paper 3 Case Study

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INFORMATION

- This insert contains the case study.
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Cash4Trash (C4T)

C4T is located in the capital city of country A in Africa. This private limited company was started six years ago by Andy and Kris, who both had experience working for a large international charity. C4T is a social enterprise, initially financed by international charities and a grant from the government of country A. The government also provided land to C4T for its factory. C4T's corporate objectives include two social objectives which are to:

- improve the environment of the city
- provide jobs for the unemployed.

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C4T collects and cleans all types of recyclable materials that have been discarded as trash (rubbish). The clean materials are then used to create products for sale, such as bags made from woven plastic. A local artist volunteers her services to help with product designs.

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C4T has grown and now manufactures a range of products from recycled materials, including bags and jewellery. Cases for laptops and smartphones are currently its most popular products. Products are sold to local people and tourists in its shop next to the factory. C4T also sells via its website.

C4T employs 90 people in its factory, who were previously unemployed. It runs training courses for 16 to 18 year olds to teach them basic skills. All profit is re-invested to expand and improve the business. C4T has won awards for being a sustainable social enterprise.

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Operations problems

Factory employees work in teams and are rewarded with bonus payments if they exceed targets. Each team collects materials and other resources needed for production from a central store. However, sometimes this store runs out of resources, halting production.

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Products are checked for quality at the end of the production process and many are rejected and faults have to be corrected. Employees have been trained to specialise in one task within one team. Andy and Kris feel that time and resources are being wasted and would like to reorganise the factory and improve employee flexibility.

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Marketing

Marketing products made from recycled materials can be a major challenge in country A. Many consumers think these products are of inferior quality. However, C4T's brand image is strong. Its products have featured in premium magazines and on websites aimed at consumers who are 'socially responsible'. Kris works hard to keep the C4T website up-to-date and maintain its social media presence, as part of the company's attempt to establish good customer relationships.

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An ambitious new idea

Plastic water bottles have become a real environmental problem over recent years as more are bought and thrown away when empty. Kris is planning to introduce a new type of product. He thinks there is a market for durable, reusable plastic drinking bottles. These will be made from recycled plastic and marketed as souvenirs for tourists. Demand will be highest during holiday periods. They will be produced in a range of colours, with country A's name and flag on them. A new C4T slogan 'Protecting the environment' will be printed on each bottle.

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A factory extension will be required to recycle the plastic materials to be used and to manufacture the bottles. Kris is planning to recruit the new employees required on part-time flexible contracts. C4T's objective for the bottles would be to make a profit, so labour costs will need to be kept low. The recruitment of skilled employees able to achieve high productivity levels will be important.

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Finance

The factory extension will cost \$1.5m to build and equip with machinery. The government of country A will provide a grant of \$1m. Andy and Kris are hoping to raise the remaining \$0.5m from a bank loan. However, a local venture capitalist has offered to invest \$0.5m in return for 30% of the profit from the new product and substantial involvement in future decision making. C4T's latest accounts valued its non-current liabilities at \$3m and its capital employed at \$5m. Forecast annual data for the reusable bottles is shown in Table 1.

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Table 1: Forecast annual data for the reusable bottles

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	Forecast data for 2021 (\$000)
Revenue	390
Material and recycling costs	130
Labour costs	100
Marketing, management and administration costs	60

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A special order

C4T has been approached by a design company in country A with a one-off special order. This company specialises in computer and phone accessories. The order is for 5000 cases for laptops, which would be branded with the design company logo. The design company will pay \$5 per case. C4T sells similar cases for \$7. C4T would need to move employees and resources from other product teams to increase capacity if the order is accepted. Average material and labour costs are not expected to change. The design company requires the laptop cases to be delivered during 2021. Financial and capacity data is shown in Table 2.

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Table 2: Special order data

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Special order number of units	5000
Annual capacity for laptop cases	12000
Forecast output of laptop cases in 2021 without the special order	9000
Usual price per unit	\$7
Proposed special order selling price	\$5
Total raw material variable cost at annual output of 9000 laptop cases	\$18000
Total labour variable cost at annual output of 9000 laptop cases	\$13500

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The economy

Country A has a relatively young population with an average age of 28 years. It is one of the fastest growing economies in Africa. The government is stable and incomes are rising, especially in the cities. Unemployment is falling which has led to some worries about increasing inflation which means the central bank may raise interest rates.

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Further options for growth

In addition to the reusable bottles, Andy and Kris are looking for other growth opportunities for C4T. They are both committed to their original social enterprise, but have different ideas of how to move the business forward. Two possible options are: 80

Option 1 – favoured by Kris

Increase recycling facilities further, using additional new machinery at the current site. Manufacture low-cost reusable shopping bags which would be branded 'Bag4Ever'. These would be mass-produced and sold in bulk to supermarkets and shops. They would be sold at a low price, as an alternative to single-use plastic carrier bags which the government will ban in 2022. 85

Option 2 – favoured by Andy

Enter into a joint venture with a well-known African design company to launch a range of luxury travel cases. These would combine recycled materials with other materials, such as leather and traditional African designed cloth. These cases would be made in a new factory. They would be promoted to high income consumers and sold through outlets in shopping centres (malls) and airports in many countries. 90

C4T will only be able to afford one of these options and it is clear that they both take the company in different strategic directions. Further information about the two options is in Table 3.

Table 3: Research data for Options 1 and 2 95

	Option 1 Bag4Ever project	Option 2 Luxury travel cases	
Initial cost (\$000)	500	800	
Probability of success	0.8	0.65	100
Expected monetary value (\$000)	1500	3000	
Time needed for implementation	10 months	18 months	
Major driving forces	• Use of C4T core competency • Possibility of further government funding	• High added value and therefore potential profit • Opportunity to enter export markets	105
Major restraining forces	• Lack of experience of mass production techniques • Possible shortage of recyclable materials	• Lack of marketing expertise in overseas markets • High level of competition in market for luxury travel cases	110

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