



## 1 UPlane Components (UC)

UC is a private limited company providing engine parts for commercial aircraft. It uses batch production in factory A and flow production in factory B. As part of UC's commitment to corporate social responsibility (CSR), it provides a training scheme for the long-term unemployed, based in factory A.

UC's products are sold to aircraft engine manufacturers. Demand for aircraft engines has increased by 45% over recent years. The aircraft engine manufacturers want inventory just when needed and are demanding a reduction in prices. 5

In 2017, UC opened factory B which is 5 km away from factory A. Factory B has a high level of automation, resulting in low unit costs for the parts produced there. Production is capital intensive. UC has a plan to automate factory A. The production workers are not happy about this proposal and have asked for more details. The workers' representatives have asked for a meeting with the human resource manager. 10

In December 2019 a fault was discovered in one of the engine components supplied by UC and produced in factory A. UC had to recall 2000 parts at a cost of \$200 000. This has had an impact on part of its triple bottom line and UC is unlikely to meet its targets. Table 1.1 shows some financial data for UC. 15

**Table 1.1: Financial data for UC**

	Year ending 30 November 2019 (\$m)	Year ending 30 November 2020 (\$m forecast)	
Revenue	5.8	6.4	20
Cost of sales	2.3	3.4	
Expenses	1.3	1.6	
Cost of recall	-	0.2	

Amjit, the human resource manager, believes that the fault was caused by the negligence of Jack, one of the production supervisors. Jack claims that he was made to work overtime to try and meet production targets. This caused him to become tired and make a mistake in one batch of parts. Amjit wants to dismiss Jack. 25

- (a) (i) Define the term 'corporate social responsibility (CSR)' (line 3). [2]  
(ii) Explain the term 'triple bottom line' (line 15). [3]
- (b) (i) Refer to Table 1.1. Calculate the forecast profit margin for the year ending 30 November 2020. [3]  
(ii) Explain **one** likely effect on UC of a decrease in profit. [3]
- (c) Analyse **two** likely effects on the other employees if Jack is dismissed. [8]
- (d) Recommend whether UC should automate factory A. Justify your recommendation. [11]

## 2 Electric Cars (EC)

EC is a public limited company producing electric cars. Market research suggests that electric cars are in the early stage of the product life cycle. The demand for electric cars is likely to increase substantially in the next 10 years. EC is based in country X, where it is one of three electric car manufacturers. However, other manufacturers could start to produce electric cars if the forecast market growth is correct. 5

EC's promotion has only been aimed at high income groups. The government of country X recently announced that it will support the use of electric cars. This will help EC to achieve its objective to increase sales volume by 50% over the next two years.

One year ago, EC invested \$10m in new production facilities. The investment was funded by a long-term bank loan. Interest payments on the bank loan have reduced EC's profit margin from 9% to 4%. EC will need to cut unit costs through increased efficiency. 10

EC initially launched its cars using a price skimming strategy but sales growth has been slow. If EC can achieve a 50% growth in sales over the next two years, it will be in a strong financial position. This means it will be able to spend more on the development of a larger product portfolio of electric cars. 15

Jancie, the Finance Director, has produced forecasts for EC's financial data over the next two years, as shown in Table 2.1.

**Table 2.1: Extract from EC's forecast financial data**

	2020 (\$m)	2021 (\$m)
Inventories	30	50
Cash	10	20
Trade receivables	10	20
Trade payables	25	30
Current ratio	2	<b>X</b>

- (a) (i) Define the term 'efficiency' (line 11). [2]
- (ii) Explain the term 'product life cycle' (line 2). [3]
- (b) (i) Refer to Table 2.1. Calculate the value of **X**. [3]
- (ii) Explain **one** reason why EC's liquidity is forecast to change. [3]
- (c) Analyse **two** reasons why clear business objectives are important for EC. [8]
- (d) Recommend changes EC could make to its marketing mix to achieve its growth objective (line 13). Justify your recommendation. [11]

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