MARK PLAN AND EXAMINER'S COMMENTARY

The mark plan set out below is that used to mark these questions. Markers are encouraged to use discretion and to award partial marks where a point was either not explained fully or made by implication. More marks are available than could be awarded for each requirement. This allows credit to be given for a variety of valid points which are made by candidates. The answers provided are more comprehensive than would be possible in the time available for candidates. They have been prepared to accommodate a wide range of possible answers and interpretations by candidates.

Question 1 – Doiry Ltd

General comments

This question is the mini case.

It is based on a company, Doiry, which manufactures and sells oat milk, a type of plant-based milk. It has established facilities in Europe and North America, and has recently opened a facility in Asia.

The plant-based milk market has grown in both UK and North America, and Asia is predicted to have the highest levels of growth in the future. Doiry has a patented process, Pressoat, for producing the oat milk faster and more cheaply than established processes. Doiry aims to reduce its environmental impact across its operations.

A visualisation showing the environmental impact of different types of plant-based milk and cow's milk is provided alongside overall financial and non-financial information for the year ended 31December 2021 with comparatives. Charts showing the breakdown of revenue and operating profit by region were also provided.

Doiry is considering an offer to license Pressoat to a Chinese food production company, Yunnan, and assumptions and key terms of the proposed agreement were included in an exhibit.

1.1 Assess Doiry's environmental, social and economic sustainability. Set out additional information that would be useful in making this assessment. Ignore the proposed arrangement with Yunnan.

Sustainability is about maintaining the world's resources for future generations. Sustainability can be looked at under three key headings: social, environmental and economic.

Social

- Social sustainability is about providing a safe work environment, health and safety measures, diversity and community investment.
- Doiry has local production facilities in the countries its sells in rather than central production, this allows local job creation where it operates.
- It also has high standards in terms of the working environment and pays a living wage to local workers. It is clear it is trying to not exploit workers when it sets up its production facilities.
- Doiry also uses local suppliers which again can help the local community and provide more jobs and wealth in the community.

Environmental

- Environmental sustainability looks at the impact of a business on things like climate change, pollution and the use of natural resources.
- Doiry manufactures and sells plant-based milk which provides an alternative to cow's milk. It is clear from the charts that plant-based milk has less of an environmental impact, both in terms of water used and CO_2 emissions per litre produced, than cow's milk. So, in this instance Doiry is set up as an environmentally sustainable business.
- Doiry tries to keep its transport emissions down by having local production facilities as well as local suppliers. The scenario does not state where the production facilities are but, given there are only 10 in total, Doiry does not have one for every European country so some transportation, and the associated emissions, must take place.
- However, Doiry is trying to source as much as it can from local suppliers meaning that in some instances it would have to source from further afield and this would increase its environmental footprint.

- Although Doiry's oat-based milk is producing less emissions and water use than cow's milk, it is not the lowest impact plant-based milk; this is soya milk. So, it could be argued if it wanted to be fully sustainable, Doiry could move to production of soya milk as this has a lower impact on the environment.
- Also, although it has local production, any kind of setting up of production facilities does have an impact on the environment and in order to build these and set up the Pressoat machine there would have been a lot of emissions produced. These are not factored into the 0.9 CO_2 emissions per litre that oat milk produces.
- Doiry uses recyclable packaging, which is better for the environment, but it relies on consumers to recycle this properly and it may not be able to be recycled in all locations it operates in.
- Natural capital comprise the natural assets (e.g. land, water etc.) that provide everyday resources. Organisations that use up stock of natural capital without replacing it or allowing it to recover run the risk of the collapse of ecosystems. The charts show that the production of oat milk uses less of the natural assets such as water than cow's milk. It is not clear from the scenario what demands Doiry makes on suppliers in terms of their use of land for growing oats and if they allow the land to recover.

E**conomic**

- This looks at the economic stability a company brings, growth and job creation and investment in innovation and new products.
- Doiry's patented technology for extracting the oat milk – Pressoat – could be considered as a strong asset to ensure its economic stability.
- Pressoat allows a cheaper, faster and more healthy milk to be produced as it retains the vitamins from the oats, so it could be said that Doiry should look to share this technology with others so they can also benefit, as this could both help the environment and provide more economic stability to Doiry with the income it could obtain.
- Given the high price of plant-based milk compared with cow's milk, it may not be economically sustainable for consumers on low and middle incomes who cannot afford to make these environmental choices in their weekly shopping. Oat milk is 76% more expensive per litre on average than cow's milk.
- We could question how economically sustainable Doiry is given it only produces one product, using this specific process. Oat milk may fall out of favour, or be replaced by a newer more environmentally friendly plant-based milk. Another company may come up with a more efficient process to the Pressoat.
- It is considering licensing the Pressoat process; if it does this it could be creating its own rivals which would impact its sustainability.

Additional information required:

- Doiry's specific emissions per litre of milk produced to compare to standard environmental impact given in graphs
- More information about the use of the waste product sold on as animal feed to see what impact this has on CO_2 emissions ie, does it reduce them so approaching net zero emissions.
- The CO_2 emissions associated with transport, packaging and raw materials rather than just those associated with making the plant-based milk.
- Other methods that are used by plant-based milk producers compared with the Pressoat.
- Whether the recyclable packaging can be widely recycled in all locations Doiry sells the product in.
- The location of each of the production facilities and the markets they transport to.
- Information on competitors and what other products they produce to give an idea of what additional products Doiry could diversify into.
- Information on suppliers, location, environmental policies and use of natural capital.

Examiner's comments

This was a very well answered requirement, nearly all candidates used the SEE (Social, Environmental, Economic) model headings to structure their answer and offer sensible points to assess Doiry's sustainability. Most answers showed a good understanding of the different types of sustainability with the best answers offering both positive and negative aspects relating to Doiry's sustainability eg, when discussing the recyclable packaging, also commenting on the fact it might not be recycled everywhere and Doiry packages each litre singularly which may be bad for the environment.

Weaker candidates limited their marks by not offering examples of additional information they would find useful despite this being specifically requested.	
Total possible marks Maximum full marks	**12** **11**

1.2. Using the data in Exhibits 1 and 2 and the other information provided, analyse the performance of Doiry in the year ending 31 December 2021 compared with the previous year.

Note: The figures in red represent calculations a candidate could perform.

Year ended 31 December	2021	2020	% changes
	£'000	£'000	
Revenue	32,865	24,486	34.2%
Cost of sales	22,784	16,495	38.1%
Gross profit	10,081	7,991	26.2%
Gross profit margin	30.7%	32.6%	
Operating expenses	5,873	4,672	25.7%
Operating profit	4,208	3,319	26.8%
Operating profit margin	12.8%	13.6%	
Non-current assets	39,489	30,517	29.4%
ROI	10.7%	10.9%	
£ NCA per production facility	£3,949	£3,815	3.5%
Quantity of litres sold ('000s)	24,540	16,500	48.7%
Average price per litre	£1.34	£1.48	-9.8%
Gross profit per litre	£0.41	£0.48	-15.2%
Number of production facilities	10	8	25.0%
Revenue per facility	£3,287	£3,061	7.4%
Number of employees	215	175	22.9%
Revenue per employee	£152.86	£139.92	9.2%
Number of employees per facility	22	22	

Analysis of exhibit 2:

Revenue by region			**% of revenue**		**Year on Year % change**
	2021	**2020**	**2021**	**2020**	
Europe	21,362	18,605	65.0%	76.0%	14.8%
N. America	7,888	5,881	24.0%	24.0%	34.1%
Asia	3,615	-	11.0%	0.0%	-
Total	32,865	24,486	100.0%	100.0%	34.2%
Operating Profit/Loss by region			**% of operating profit**		**Year on Year % change**
	2021	**2020**	**2021**	**2020**	
Europe	5,092	4,099	121.0%	123.5%	24.2%
N. America	(505)	(780)	-12.0%	-23.5%	-35.3%
Asia	(379)	-	-9.0%	0.0%	-
	4,208	3,319	100.0%	100.0%	26.8%
Operating profit/ loss margin by region	**2021**	**2020**			

Europe	23.8%	22.0%			
N. America	-6.4%	-13.3%			
Asia	-10.5%	-			
Total OP (as above)	12.8%	13.6%			

Revenue
There has been a 34.2% increase in revenue in the last year, driven by the increase in the market for plant-based milk. The growth in the plant-based milk market was 16% in the UK and 20% in North America, so Doiry's growth far outstrips that. It would be useful to have the market growth figures for the different types of customer and different types of plant-based milks as well as in other locations.

The increase for Doiry has also been driven by its geographic growth, with growth seen in all locations it operates in. Its Asian presence in Japan was new in the year to 2021 so this new geographical market accounts for £3.6m or 11.0% of the revenue growth.

The number of production facilities has increased from 8 to 10. It is not clear if the two new facilities are both in Japan or there has been some other new facility opened in one of the existing markets. Given that the average revenue per facility is £3.3m it seems likely that there has been one opened in Japan as the revenue there was £3.6m. This could then account for some of the growth in the European or American market, as it needs to increase capacity to match the rise in demand for plant-based milk. It would be useful to have a breakdown of where the facilities are in each of the existing locations year on year to confirm this.

The number of employees per facility is consistent year on year which could mean they are of a consistent size but it would be useful to know the exact size of the facilities, in particular the new ones, to see how much of the growth is due to opening new production facilities and how much is overall growth in the market.

Revenue per employee has risen from £139.92 to £152.86, this may be due to efficiencies i.e. needing less employees to produce increased quantities of milk. The average price per litre has fallen from £1.48 to £1.34, this is below the average consumer price for a litre of oat milk which is £1.50 and closer to the consumer price for soya milk. This could be due to a number of different factors, including different prices for oat milk depending on the markets Doiry operates in compared with the UK price. However, it may also be due to the customer mix, as consumers buying direct on the website are likely to pay a higher price per litre i.e. closer to the £1.50 compared with larger supermarkets and hospitality venues which buy in bulk and are likely to gain a cheaper price per litre from Doiry. Again, it would be useful to have a breakdown of revenue per customer type here to confirm this.

Cost of sales/ Gross profit
The cost of sales has increased at a higher rate than revenue resulting in a fall in the gross margin from 32.6% to 30.7%. The costs here will include both the raw materials to make the oat milk and the staff directly involved in production. This could mean that the cost of the raw materials or the new staff in the Japanese location is higher than in existing locations.

The relative increase in cost of sales has impacted on the profit per litre which has fallen from £0.48 to £0.41. Whilst some of this fall can be explained by the fall in revenue per litre for the reasons discussed above, it is clear there is a higher cost of production for Doiry this year.

Operating profit
Operating expenses have increased by 25.7% in the year. Whilst it is to be expected that some of the operating expenses were fixed, a rise here is most likely due to the new facilities opening and the launch of its product in Japan. The operating profit margin has fallen from 13.6% to 12.8%. Whilst this is impacted by the fall in GPM it is also impacted by the rise in operating expenses.

The chart showing the geographical split of operating profit shows that whilst Europe made a strong profit of £5.1m, the American and Asian markets made a loss for Doiry. The loss in the American market has fallen from £780k to £505k, which is a positive trend. The Asian market saw a loss of £379k. It is possible that in the first few years of setting up production in a new market Doiry experiences losses before getting themselves established, as with Europe.

The European market, with a £5,092k profit on revenue of £21,362k, actually has an operating margin of 23.8%. In the future as the American and Asian markets become profitable the overall operating margin may be far higher for Doiry.

NCA/Return on Investment
The ROI is strong in both years for Doiry, however due to the losses in the new markets it has fallen from 10.9% to 10.7%. Investment in NCA has increased by 29.4% over the year. The NCA per production facility has increased 3.5% from £3,815 to £3,949, reflecting the investment in the newer facilities and the fact that in 2020 some of the cost of older facilities were depreciated.

Conclusion
Overall Doiry's performance is strong, as it has grown both as a result of the market growing and also their geographic expansion. Currently their American and Asian markets are loss making but going forward using the example of the lifecycle of the European market its likely that this will become profit generating once larger volumes are achieved.

Examiners comments
This requirement had the second highest average on the paper. It incorporated the more traditional data analysis element and was generally well done.

Given the variety of data given in the exhibit, candidates were expected to give some thought to what calculations to perform to explain the change in performance.

It was pleasing to see that most candidates had used SpreadJS to perform their calculations and laid out their answers clearly in an appendix. A small minority continue to limit their ability to score marks by producing only a list of year-on-year percentage changes, giving very little insight into what is happening and why. However, this was less evident than in previous sittings and many candidates did offer a good range of different financial and non-financial calculations.

At the top end many candidates produced professional looking, clearly labelled appendices. They combined calculations on the company as a whole with a further analysis of the regional data. Discussing the changes at a regional level provided much better context for the changes that occurred at the whole company level. The best candidates were able to discuss that, although newer regions were loss-making this might be expected at this early stage and it was possible that Doiry was using its pricing to penetrate into these new markets.

Total possible marks	**20**
Maximum full marks	**18**

Discuss whether Doiry should enter into the arrangement with Yunnan. Provide supporting calculations using Exhibit 3

5 year profit for Doiry	**£'000**
Licence fee (5 years x £250,000)	1,250
Revenue share (£79,000 x 0.1)	7,900
Profit	**9,150**
OR	
1 year profit for Doiry	£'000
Annual licence fee £250,000	250
Revenue share (£79,000*0.1)/5	1,580
	1,830
Comparison to existing profit levels:	
Yearly as a % of 2021 gross profit	18.2%
2021 profit per litre (=10,081/24,540)	£0.41
Number of extra litres to sell over five years to match licensing profit (=£9,150/£0.41)	22,274 (or 22,317 if rounded 0.41 above)

Licensing
A licence grants a third-party organisation the rights to exploit an asset belonging to the licensor, in this case the patented Pressoat method of extraction and the Doiry brand name.

Advantages for Doiry
- It will be able to quickly grow in the Asian market with little investment.
- If successful it could offer licences in other countries across the world to become a much larger organisation.
- As it has agreed a licensing fee and a revenue share per litre sold this is all profit for Doiry without any extra investment. The licence fee is a fixed income and, as it is a revenue share rather than a profit share, it will not have the risk in sharing any losses Yunnan may have in the first few years of production. This might be good for Doiry who it can be seen from part 2 tends to achieve operating losses in their first few years of production.
- The total profit from the agreement over the five years could be £9.15m or £1.8m annually. £1.8m is 18.2% of their current annual gross profit. In order to match the profit over five years using its current profit per litre they would have to sell an additional 22,274 thousand litres.
- It would allow Doiry a presence in the Chinese market very quickly as Yunnan thinks it can scale up production in a matter of months. If Doiry did not do this and wanted to wait to do enter China itself, it may take longer and be loss making in the short term.
- If it does not take up the offer, Yunnan may decide to launch its own brand which may gain popularity in the Chinese market before Doiry could enter the market, so it would lose any advantage of its well-known world-wide brand name.
- Having the oat milk made locally with a local business appears more sustainable than other options of exporting to China or setting up its own facility, which could involve the movement of staff or sourcing materials from existing markets.
- The revenue share is a fixed sum so if the price per litre for consumers should fall it still has its guaranteed income. It is likely that over the next five years with more plant-based milk producers in the market the price per litre is likely to fall as it did in the European market.

Disadvantages for Doiry
- Yunnan appears to be a much larger organisation than Doiry, there could be a power imbalance and the terms offered e.g. the profit share per litre might not be the best it could obtain.
- The retail price per litre is very high in China, and if Doiry licenses the product to Yunnan rather than sells there for itself it only gets access to a very small proportion of the price with the revenue share.
- There is the possibility that Yunnan might learn all about the methods used by Doiry and then at the end of the licensing agreement set up its own facility and become a rival for Doiry in the Asian market instead. Although the Pressoat method is patented it is not clear if this is a worldwide protection or just for local markets it currently operates in. It would be worth getting legal advice on this before entering into the licensing agreement.
- Yunnan's reputation does not appear to be as sustainable as Doiry's, this could cause reputational damage both in China and with its existing customers who value Doiry as a sustainable company. However it could be argued that by licensing to Yunnan, Doiry would help Yunnan become a more sustainable business.
- It is unclear what happens at the end of the five years, whether this will continue and on what terms, and what penalty clauses there might be. Also, whether after five years Doiry is able to go into the Chinese market with its own facilities.
- The assumptions have been prepared by Yunnan and may not be accurate. It is unlikely that the 79 million litres will be evenly spread over the five years, as production is likely to start smaller, so the revenue share will not be earned evenly over the five years. There is a risk that if the oat milk does not take off in China as expected the volumes and therefore the revenue could be a lot lower.
- The estimate for litres of oat milk is for production rather than litres sold. It is possible that Yunnan will produce more than they can sell, or will drive down the price of oat milk by overproducing. However as Doiry receives a flat fee per litre sold it is insulated from this.
- Doiry is reliant on Yunnan reporting the litres sold accurately for the revenue share, it would need to do due diligence on Yunnan before signing up for the licensing agreement.

Conclusion

Given the speed at which Yunnan can set up production facilities and the possible increase in profit for Doiry of £9.15m over the five years, this would appear on the face of it to be a good option. However, Doiry should be careful with its reputation and gain assurances from Yunnan about how sustainable its processes will be e.g. will it also use recyclable packaging? Will it sell on the waste product as animal feed? Either party could also possibly renegotiate the licence fee or a different profit share before the final agreement. As the revenue share is just 3% of the retail price per litre, it may be possible for Doiry to obtain a higher price per litre sold.

Examiner's comments

Overall this requirement was reasonably well answered, with most candidates providing some basic supporting calculations to show the potential annual profit or the total profit over five years.

Most candidates structured their answer with benefits and risks of the proposal, however there was a notable number of candidates failing to understand the nature of the arrangement despite being told about the licensing agreement. These students scored low marks as they were unable to discuss a range of relevant points about the agreement using the facts given in the scenario other than basic comments about working with a third party.

Candidates obtaining higher marks on this requirement provided a broad-ranging discussion of the licensing agreement and whether Yunnan was the right licensee. They related their discussion to the figures in Q1.2 to provide some context and offered some indication overall of the desirability of the arrangement.

Total possible marks	**16**
Maximum full marks	**14**

Question 2 – Xoug Ltd

General comments

In this scenario Xoug was a new company set up by two brothers to sell their product, the Coddle. The Coddle is a screen free sleep aid to help those with insomnia by providing a mix of sound and light to help the user fall asleep.

The brothers have applied for a bank loan for the final stages of their product development and the bank requires a business plan in support of the loan application.

Assumptions for the first four years of business were provided in an exhibit as well as potential changes to sales volume forecasts under the best-case and worst-case scenario.

Students were asked to prepare sections of the business plan including: forecasts, an analysis of risk and parts of the marketing strategy.

Prepare the following three sections of the business plan required by the bank:

1. Profitability:

- **Calculate the yearly profits and the total profit for the first four years, based on the original forecast assumptions in the Exhibit.**
- **Discuss the original level of total profit and the impact on it of the worst-case and best-case scenarios. Show supporting calculations.**

To:	**Bank**
From:	**An Advisor**
Date:	**Today**
Subject:	**Xoug Ltd business plan**

Yearly profits and comparison to best-case and worst-case scenarios

Original scenario					
	Year 1	**Year 2**	**Year 3**	**Year 4**	
Consumer	450	900	1,800	3,600	
Small retailer	1,350	2,700	5,400	10,800	
Large retailer	2,700	5,400	10,800	21,600	
Total	4,500	9,000	18,000	36,000	67,500
Revenue					
Consumer	£22,500	£45,000	£90,000	£180,000	
Small retailer	£44,550	£89,100	£178,200	£356,400	
Large retailer	£67,500	£135,000	£270,000	£540,000	
	£134,550	**£269,100**	**£538,200**	**£1,076,400**	**£2,018,250**
Variable costs per unit	£54,000	£108,000	£216,000	£432,000	£810,000
Contribution	£80,550	£161,100	£322,200	£644,400	£1,208,250
Annual fixed costs	150,000	150,000	150,000	150,000	£600,000
Profit	**£(69,450)**	**£11,100**	**£172,200**	**£494,400**	**£608,250**
				Total profit	**£608,250**
				Margin	**30.1%**
				Average sales price	**£29.90**

Summary				
	Original forecast	Worst Case	Best case	Average profit
Profit/(Loss)	£608,250	£245,775	£849,900	£567,975
Margin	30.1%	17.4%	35.1%	
Profit difference to original forecast		(362,475)	241,650	
% difference		-59.6%	39.7%	

The original scenario gives a total profit of £608,250 over the four years with a loss in year 1 rising to a large profit in year 4 of £494,400. This gives a margin of 30.1%.

In the worst-case scenario, with a 30% drop in sales volumes the profit overall will be £245,775 for the four years. This is a £362,475 or 59.6% difference from the original forecast. This worst-case scenario is extreme; although it is a concern it will be important to know the probability of the worst-case scenario occurring. Under this scenario the margin falls to 17.4%.

In the best-case scenario, with a 20% increase in sales volumes there is an overall profit for the four years of £849,900 which is an increase of £241,650 or 39.7%. This shows the potential upside potential for the Coddle product though again it will be important to know the probability associated with the best-case scenario. The profit margin rises to 35.1% under this scenario.

The average of the three scenarios is £567,975. Assuming each scenario had an equal likelihood of occurring, this would be a good expected profit for the first four years of trade.

Given the large swing between the worst- and best- case forecast, the profit with the Coddle is risky but it can be mitigated against. Please see the next section on risks.

Examiner comments

This requirement was a business plan however in many instances candidates did not achieve this format mark as they did not produce a professional looking business plan suitable for the bank.

This requirement had the highest average on the paper. Nearly all candidates used SpreadJS to perform the calculations accurately and were also able to show the profit figure for the worst- and best- case scenario comfortably. Most candidates presented their calculations in a clear and understandable format for the business plan, however a notable minority did not adequately label workings so where there were errors in the final figures they were hard to follow.

Whilst candidates performed very well on calculations, there was a polarised performance on the discussion element of the question with some candidates not attempting this part of the question. Where they did they often simply repeated in words the results of the calculations rather than offering any insight into the figures and the relationships between them eg, needing to understand the probability of the best- and worst- case scenarios occurring.

Total possible marks	14
Maximum full marks	12

2. Risk:

- **Prepare an analysis of risk and possible mitigants. Refer to your calculations in part 1 where appropriate.**

Risks and mitigants
Financial risks

- The Coddle is a new product, as yet unsold, so there is a risk that this will not be popular or the market for it has been overestimated. This risk could be mitigated with thorough market research to confirm the potential sales volumes and also the willingness of retailers to stock the product.
- The Coddle is a high-priced consumer product so an economic downturn, where people are cutting their discretionary spending, may impact on the potential sales. This is hard to mitigate against but Xoug could adjust its marketing mix in order to deal with it including altering the price or looking to

different markets to sell the product online in places which are not suffering the same economic conditions.
- The fixed costs of Xoug are high at £150,000 which means that in the first year there is a loss and very low profit in year two under the original scenario. This increases operating gearing. Xoug is relying on increasing volumes of sales to drive its profits in subsequent years. As the volume of sales rises over the years this will become less of a risk and it might be that variable costs per unit fall with the increased level of production which means the contribution per unit would increase.
- Under the worst-case scenario Xoug is loss-making, however this is an extreme scenario. It is also possible that if the production was 30% lower then fixed costs might fall to some extent too. Many new products are loss-making at first launch, however the size of the loss could be mitigated against by better market research. Alternatively the brothers may decide to delay their entry into the market to a more favourable time.
- Under the best-case scenario the Coddle's profit is more than double the original forecast, there is a risk that this scenario is optimistic. The probabilities for the scenarios are important. If the worst, best and original scenario are all equally likely then the average annual profit would be £567,975.

Operational risks
- There is a risk that the product does not work as advertised. The product has been developed with a sleep clinic, but it is not clear how large the sample size has been for testing the product. If it does not work and receives bad reviews the product will fail. This could be mitigated by further testing prior to launch; when testing is positive this could be included within the marketing for the device e.g. X% out of those tested found it helped them sleep better.
- Doug and Xand are inexperienced at running a business, and they have not yet secured key board positions such as a finance and a sales director. In order to mitigate this they could get interim or freelance board members to help with the launch of the product or get help from a consultant who works with start-up businesses.
- The product may be very successful and achieve the best-case scenario but this comes with the risk of having to produce enough units to be able to sell and not have stock-outs, which upset customers. This could be mitigated against by using strong production planning and securing forward orders from larger customers where possible.
- Xoug does not yet have relationships with the larger retailers which it wants to stock the Coddle. If it fails to secure this channel then it would not be able to make 60% of the projected sales. This could be mitigated by hiring a sales director with links to large retailers or postponing the launch of the product until contracts are signed with them.
- Xoug may be dependent on customers that are much bigger than it, this is a risk as it could drive down the price it can charge them (which is much lower than for individual consumers), as well as meaning these larger customers can dictate credit terms which could be a risk for cashflow for a new business. This could be mitigated by hiring an experienced sales director to negotiate good contracts with the retailers. Xoug has already secured some interest from smaller retailers and if this generates strong consumer demand this could reduce the power of the larger customers as they will want to stock a popular product.

Strategic risks
- The device is competing with a number of other sleep aids in the market including some apps which might provide the same kind of sounds for a lower price or for free. This could be mitigated by emphasising the screen-free element of the device which is an important aspect. Use of technology is a key reason for the rise in insomnia so consumers may not want to use their phone or tablet app to help get them to sleep.
- The brothers have not made this product themselves, as the research was conducted with a private sleep clinic and production was outsourced. There is a risk that the product could be easily copied or the makers could use the design themselves. The Coddle device should be patented to protect the design from theft.
  The brothers have no financial expertise and are trying to recruit a finance director, which casts doubt on their current projections. These should be verified by an experienced external third party for reasonableness.

Alternatively students could have used the PESTEL model to generate risks eg,
- Legal: There is a risk that the product could be copied if it is not patent protected. Lion, the competitor, has a similar product. Lion could enter the UK market from the USA. It has already launched and had good reviews in America whereas the Coddle is starting from scratch.
- Social: Looking at social factors there is a risk that using sleep aids is a fad and new types of sleep aids may come into fashion. Although there may be an element of different sleep aids coming in and out of favour, the market itself could be considered to be robust due to the rise in insomnia in some

form for many adults in the UK. This fact is not likely to go away and Xoug may accept this risk whilst ensuring it promotes the benefits of its Coddle device and medical research that backs it up.
- Technology: There is the risk that the product could be technologically superseded. The brothers can continue to look at research and development with the sleep clinic and can update the product. This may also add to the product life; as updates are made customers might want to buy the latest model of the Coddle.

Examiner comments

Performance on this question was mixed. The best candidates discussed a broad range of risks, including financial risks as highlighted by the forecast in part 1, and offered a specific mitigation for each risk identified. However, there were many candidates who provided a very narrow discussion of risks or solely focussed on the numbers in the forecast without mitigation or, where mitigation was included, it was not related to the specific risks identified.

Total possible marks	12
Maximum full marks	11

3. Marketing:

- **Prepare a marketing strategy which covers market segmentation, pricing and methods of promotion only.**

Market segmentation

- Market segmentation divides the mass market into smaller sub-segments of similar customers who can be treated the same for marketing purposes. Segmenting the market will allow Xoug to tailor its marketing for the needs of its customers.
- Segmentation can be done on a number of different bases including customer type. Xoug's customers are made up of retailers (large and small) and consumers who will be the end user. Xoug will need to market to both these different markets by driving consumer demand which will ensure retailers want to stock the product. It also need to convince retailers there is a gap in the market, and they should themselves target this product at its customers.
- Within the retailer customers, Xoug will further segment the market into the size of the customer and thus the likely size of their order. Larger retailers are likely to have high volumes and smaller retailers will have lower volumes. As can be seen by the volume forecasts, the original assumptions show 60% of sales to large retailers and 30% to small retailers.
- Xoug will also segment the retailers by their customers. The Coddle retails at £50 per unit so would appear to be an expensive product, therefore Xoug will target higher end retailers who can attract customers who will pay £50 per unit.
- Within the consumer market Xoug will further segment the market to those consumers who are more likely to have sleep issues/insomnia: older consumers and high users of technology who again are likely to have sleeping problems.
- It is said that one in three people in the UK have sleep issues which is a large potential pool of people, however only a small proportion of these people will be actively using a sleep aid at any one time, making it a niche market.
- Xoug is operating in the niche market of sleep aid devices and will choose just one or two segments on which to really focus its marketing efforts. This will allow Xoug to understand the needs of this particular group of consumers, then ensure that each £ of marketing budget spent is more targeted which will optimise the return on investment.
- Xoug is targeting those consumers who use technology and this impacts on their sleep, therefore it is likely that many will buy the product online, whether through Xoug's own website or the website of the retailer. This means that Xoug should target larger retailers with established e-commerce channels.
- Older customers may not make the same use of technology but may still have sleep issues. These customers will be more likely to use the physical shops of both small and large retailers to make their purchase.
- This niche market is highly attractive as it is measurable in terms of the number of people with sleep issues and accessible by multiple methods of promotion (see below). It is also likely to grow with more of the UK population getting older and/or using technology.

Pricing

- The price of a product includes the end price to the consumer, as well as any discounts for trade.
- Xoug has identified its retail price as £50 and will be offering discounts to retailers who order in higher volumes to reduce the price to £25 or £33, depending on size.
- Prices should be set with regard to the 3Cs: Costs, Customers, Competitors. The variable cost per unit for the Coddle is £12, so whatever the price Xoug is more than covering its variable costs. However, depending on the mix of customers it is not always covering its full fixed costs. In the original scenario, the Coddle does not cover fixed costs in the first year and makes a loss of £69,450. However in the worst case scenario, due to the lower volumes of sales, the first year loss is £93,615. Therefore the volume of units sold has a large impact on the annual profit that can be achieved at this price point.
- Customers are expected to pay £50 per unit for the Coddle, making it a high-end product. Xoug management will conduct market research to confirm the price point. It may be that in the early stages of the Coddle launch some pricing promotions are used in order to generate interest. For example they could offer discounts to consumers. However, it will need to do this in conjunction with the retailers who may want Xoug to take on the costs of these discounts.
- Given the higher price obtained by direct consumer purchase via the website, Xoug could have a promotion for buying direct but this would need to be discussed with retailers.
- The £50 is a premium price, which is an indication of quality of the product for the consumer. It is likely in the long term that the variable costs per unit will fall with larger production runs which will result in an increased margin.
- The Coddle is unique in terms of the sleepscapes it produces and the use of light to help regulate the breathing of the user. Therefore, there is no direct competitor price. However, Xoug needs to be mindful of how much consumers pay for other sleep aids including white noise machines and apps.

Promotion

- Promotion consists of four main elements: advertising, sales promotion, public relations and personal selling.
- For advertising, Xoug can target the segments it identifies in different ways. For those who suffer with sleep issues due to age, it could advertise in publications and newspapers read by an older age group, or advertise during television programmes watched by the target market. For those who suffer sleep issues due to their use of technology, it could target them with online advertising, adverts on social media and the use of influencers who have used the product for their sleep issues.
- Xoug will target influencers who are interested in sleeping issues and insomnia and give them a free product for their use and for them to give reviews on their social media accounts.
- For sales promotions, Xoug will promote its product at events and trade fairs for those with sleep issues.
- For public relations Xoug will also do a product giveaway with organisations who work with those with sleep issues. Again this could give feedback from users which could be used in promotional material.
- Personal selling will be done via the new sales director to form relationships with large and small retailers in order to promote the benefits of the product to them. Xoug already have some interest from smaller retailers and will build strong relationships with larger retailers.
- By offering retailers a large discount on the product for them to sell on, Xoug will be able to create a push effect to ensure their products are stocked in retailers' stores. They will combine this with the pull effect of marketing the benefits direct to consumers, so they expect the retailers to stock this product.

Examiner comments

This question has the second lowest average mark of the whole paper which is surprising for a marketing question which candidates are usually well prepared for. The question asked for specific elements of the marketing strategy and this requirement appears to have separated the candidates achieving the highest marks, who understood what each of the headings meant and offered specific examples for each based on marketing for the Coddle, from the weaker students who often did not get to grips with these specific elements, especially segmentation. Offering only lists of ways to promote the Coddle or wasting time looking at all of the 4Ps were not required.

Total possible marks	13
Maximum full marks	12

Question 3 – Pacaiste SA

General comments

This scenario looks at Pacaiste, a packaging manufacturer with eight factories across Europe and one in the UK with its head office.

Since 2020 Pacaiste's head office employees have been either remotely or hybrid working and the directors are discussing whether this should now be made permanent.

Since the company has been hybrid working there have been some issues such as poor collaboration and customer service so the IT director offered a solution in terms of specialist collaboration software to help virtual teams collaborate better. This software also has supervision features for monitoring employees. However an exhibit showed a recent news article highlighting an issue with the software recording employees at home and unions warning about the impact on employees' privacy.

3.1 Explain the factors to be considered by Pacaiste's directors when deciding whether to continue hybrid working by leasing a smaller head office space.

This is the open requirement so candidates may suggest a number of different factors.

<u>Change management</u>

- The introduction of new software to help teams collaborate may be described as incremental change because it will not fundamentally change the way the employees work but should hold some benefits for them in helping them work more closely.
- A second change is in the location/method of work, with the larger head office being replaced by one that is 10% of the size, implying a much-reduced number of employees in the head office. Whilst this has been the case on a temporary basis in the two years, for some employees who always come into the office it may feel like more of a transformational change in terms of the culture of the office and which colleagues they see on a regular basis. Managers they may not like the idea of permanently not seeing their staff in the office.
- Staff have been able to work from home for two years already so this may not be viewed as a large change.
- It is not clear whether employees have been consulted on this change, there may be individual barriers to change for those employees that still regularly come to the office. They may be quite upset at the reduction of the size of the office and the increased reliance on virtual teams.
- Pacaiste needs to ensure it has a good change management process to overcome any resistance that may be shown by individuals from the change. This may mean delaying or slowing down the transition so employees can get used to the idea.
- The move to virtual teams started as a reactive measure in 2020 and has increased flexibility but this proposed change is planned/pro-active and incremental so it would be described as Tuning in the Johnson, Scholes and Whittington model of change.
- If recruitment is widened to anywhere instead of just within commuting distance of the UK office, this may be resisted by employees who fear it would undermine their own positions, working conditions and pay. At the extreme, Pacaiste could try to recruit from countries with a much lower cost of living and therefore salary expectation which could drive down salaries for its employees based in the UK. Indeed they may fear a lack of job security.

<u>Stakeholder perspective</u>

- Pacaiste should consider the views of all the stakeholders who will be impacted by this decision.
- As noted above it will impact greatly on employees in different ways. Those staff who come into the office regularly or managers who feel they cannot maintain the same level of control will be more impacted.
- Another stakeholder to consider is the customers. Given that there are instances of the customer service levels suffering with increased homeworking it might be that they are not in favour of increasingly virtual teams. However, the software suggests they might be able to have greater involvement with some limited access to their information or orders via Confedhub, this integration could be a selling point for Pacaiste.
- Customers who prefer to meet face to face to discuss their needs may be against this change. If Pacaiste starts to recruit from a wider geographical area this could be a positive or a negative, as employees might be more local to their European customers and therefore more face-to-face discussions could take place.

- Pacaiste's reputation may suffer if it is perceived to be trying to focus on cutting costs by reducing the size of their head office at the expense of customer service. There may also be a negative perception of losing local jobs from the area where the head office is currently located.

<u>Use of specific info from the scenario</u>

- The nature of the work involves a lot of collaboration between different teams, some of which must have been done virtually previously as teams are located in different places. The introduction of Confedhub should facilitate this flexibility better and ensure the issues discussed do not arise going forward.
- Hybrid working started on a temporary basis so making this permanent now may not be such a major change or imposition on staff and they may welcome the end of any uncertainty around working methods. Conversely some employees may have always expected to go back to previous ways of working.
- The board wants to reduce the office space and use IT solutions to fill the gap in aiding collaboration. It will be important to choose the right software in collaboration with the staff eg, having a trial period with Confedhub and getting feedback from staff.

<u>Control//employee supervision</u>

- The permanent move to more virtual team working is a current trend, with writers such as Ghosal and Barlett pointing to the likelihood of such networks becoming the corporations of the future. Therefore, this might just be the direction of travel for most companies and Pacaiste are just getting ahead of the game and their rivals.
- Managers may worry that permanent hybrid working may impact on their ability to supervise staff, as they will not physically be in the same location, however the software advertises features that should aid supervision. Pacaiste should look into how use of these features will impact on management time, ie, how often managers need to review the productivity scores from Confedhub.
- The use of better software to co-ordinate teams or help them collaborate more may mean that Pacaiste gains some competitive edge over its rivals. However, the scenario suggests that some customer service has suffered, and projects are behind schedule. It could be that virtual working does not suit some employees or teams, or managers struggle to maintain the same level of control that they would in a face-to-face setting.

<u>Individual v group working</u>

- If teams are working flexibly and have the choice to either be in the office or at home the boards need to consider how it will define and foster good communication. As there will be a limit to spontaneous communication, managers may need to manufacture instances where teams can share ideas and review the process regularly to ensure they are still sharing knowledge and innovating as they were in the past.

<u>Costs</u>

- Pacaiste may consider that reducing the office space will save on lease costs. However, it needs to balance this with the long-term ongoing costs of the software and any additional costs of providing equipment for homeworking.

<u>Technology</u>

- The board needs to consider both the level of initial investment in the software and the updates that will be needed. How often these will take place, and how much downtime they will require, must be considered.
- Issues around data compliance and confidentiality need to be considered both in terms of employee data and for customers.
- Pacaiste should consider the likelihood that the software will solve the issues it has been having with collaboration. The key account managers need to work closely with the different teams, their clients and the packaging teams. It could be argued that, given they operate across Europe, much of this must have already been done on a virtual basis anyway.

Examiner comments:

This was the open-ended requirement where students had to consider what factors the directors should consider when moving to hybrid working permanently and use of the collaboration software.

Similarly to recent sittings, this open-ended requirement had the lowest average mark for any requirement on the paper. Some candidates struggled with the open nature of the requirement and did not know how to structure their answer without a specific model to rely on. Others produced a very narrow and unbalanced discussion of the proposal focussing on aspects of cost for example without thinking about key factors such as the impact on stakeholders and whether this change needs to be managed in any way.

To do well in this requirement candidates had to think on their feet and use their business acumen to consider a broad range of relevant points.

Total possible marks	13
Maximum full marks	12

3.2 Discuss the ethical issues that the directors should consider when deciding whether to use the supervision features contained in Confedhub. Advise on the actions they should take if they decide to use these features.

Ethical issues

There are several ethical issues with the Confedhub surveillance features including:

- employee privacy
- data protection
- transparency/confidentiality

Employee privacy/data protection

- The exhibits state that employees are provided with a webcam to be used in their home. When in their own homes it is likely that employees have an expectation of privacy and there may be ethical issues with the software recording non-work activity, members of the employee's family, and personal details within their home setting.
- As the software and webcam are used in the employees' own homes there may be an issue around who owns the data which is collected, and what are the rights of Pacaiste or Confedhub to collate, analyse or share the data collected.
- Any negative press from collecting this data or intrusive surveillance on employees etc will negatively impact on Pacaiste's reputation with customers and might impact on their ability to recruit staff who are unhappy with the surveillance.
- This should be balanced with the expectation that, when working from home, employees should be working and not doing their personal, non-working tasks. Pacaiste has a reasonable expectation that employees are not spending their time at home on personal business. Some of the features of the software are more common employee management features such as monitoring emails etc. that the employees are likely to be subject to already when using the Pacaiste network and computers in the office.
- Use of the surveillance features will have an impact on the ethical culture within the organisation as it will change how employees are monitored and possibly how the employees feel about the way their managers interact with them.
- Data security is a concern if the webcam or screen mirroring captures and transmits any sensitive personal information. It could be argued that during work time on a work computer an employee should not be accessing any sensitive personal information. However many employees in an office setting would use a work computer for personal tasks for example in their lunch break and would not expect their manager to see their personal details. These could be bank details or details about medical appointments that should be confidential for the user.
- There are potential legal issues regarding regulations such as GDPR/Data Protection Act 2018 on confidentiality, storage and use of personal data. There are also likely legal issues around the monitoring and surveillance of employees when at work.
- There is an issue around boundaries here, in terms of how much data and monitoring is reasonable for an employee to be subjected to, particularly when they are in their own home, and what is an acceptable use of that data. In the example in exhibit 2 the webcam was recording 24 hours a day including when the employee was not working, this is clearly an issue with recording data outside of work hours and effectively spying on the employee.

Transparency

- The key issue here is whether Pacaiste will be transparent about the surveillance features. The call centre in the example in exhibit 2 had not been fully fair and transparent with its employee and effectively monitored them without their prior consent.
- Even if they are told that they are being watched (unlike in exhibit 2), employees may feel they have no choice but to give their consent to using the webcam and installing the software as they may fear losing their job. Effectively they will have been intimidated into it. Thus, there is an issue about whether an employee can give their full informed and willing consent to such a policy.
- Even if Pacaiste is open about the surveillance features there may still be uncertainty over what data is collected. This could lead to a paranoid culture where employees fear they are being watched and worry about what data is being collected on them by their manager.
- In the long term this might impact on staff motivation and retention if the surveillance is not popular, although it is likely that others in the industry are using something similar for their homeworking teams.

Actions

- Discuss the news report with Confedhub and establish the facts.
- Consult with employees first before introduction and gain their feedback.
- Discuss the software requirements with managers, it might be that only some features would be useful, and they may not need to have the more intrusive features such as facial recognition to alert managers to non-work activity.
- Take legal advice on the surveillance features.
- Ensure employees are told of the surveillance features and how the data is collected and used. They should be fully informed about all the implications, so when they sign an agreement on having the surveillance features in the home they can be said to be giving informed consent.
- Only record or keep any data that is necessary in the course of work, rather than all data.
- If Pacaiste does decide to install the surveillance features, any data captured must be secure and there should be a policy about how long data is stored before it is destroyed which is clearly communicated to staff.
- Data collected and held should be password protected and access should be limited to a small number of people. It might be that managers just obtain an overview of what their employees have been doing or are alerted to when they are not actively working, given their productivity score, but they cannot access the actual raw data collected so would not be able to access any personal sensitive information that the system captures.

Examiner comments

This was the ethics requirement and was well answered by most candidates, who were able to identify the key ethical issues of transparency, confidentiality, privacy and data protection.

As with previous sittings a minority of weaker candidates still attempt to answer the question using the transparency/effect/fairness framework which limits their answer.

Whilst most candidates understood the key issues here only the very best candidates discussed the issue around whether there could ever be genuine consent to the surveillance features if employees feared losing their job or the impact that such a feature would have on the ethical culture of the organisation.

Actions for the directors were specifically requested and most candidates did include some actions, however for weaker candidates these were limited to requests for legal advice without noting what the legal advice would be required on. These types of generic actions receive little credit.

Total possible marks	11
Maximum full marks	10