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MATTHEW AND (1903400)

MANAGEMENT INNOVATION &
SUSTAINABILITY EXAMQuestion ①

a) Supernatant

Annual Cash Flow Cumulative Cash Flow

Year

0	(200,000)	(200,000)
1	20,000	(180,000)
2	40,000	(140,000)
3	60,000	(80,000)
4	60,000	(20,000)
5	60,000	40,000

Break-even is $\frac{1}{3}$ of a year into Year 5, so it's 4 years 4 months.

Fuge 41 Annual Cash Flow Cumulative Cash Flow

Year 0	(200,000)	(200,000)
1	80,000	(120,000)
2	60,000	(60,000)
3	60,000	0
4	40,000	40,000
5	40,000	80,000

Break-even is achieved at Year 3.

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Centre 4 Annual Cash Flow Cumulative cash flow

Year	(200,000)	(200,000)
1	60,000	(140,000)
2	60,000	(80,000)
3	60,000	(20,000)
4	60,000	60,000
5	60,000	100,000

Brocheven is a $\frac{1}{3}$ of a year into year 4, so it's 3 years 4 months

Year	Cash flow (£)	DISCOUNT FACTOR	PARENT VALUE (£)
0	(200,000)	1	(200,000)
1	20,000	0.9091	18,182
2	40,000	0.8264	33,056
3	60,000	0.7513	45,078
4	60,000	0.6830	40,980
5	60,000	0.6210	37,260

Total cash flow = £174,556

Net present value = 174,556 - 200,000
= (£25,444)

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FUGLE 4-1	Year	Cash Flow (£)	DISCOUNT FACTOR	PRESENT VALUE (£)
	0	(200,000)	1	(200,000)
	1	80,000	0.9091	72,727
	2	60,000	0.8280	49,684
	3	60,000	0.7513	45,078
	4	60,000	0.6830	41,212
	5	60,000	0.6290	37,742

Total cash flow = £ 219,550

$$\text{Net present value} = 219,550 - 200,000 \\ = \underline{\underline{£ 19,550}}$$

Centre 4	Year	Cash Flow (£)	DISCOUNT FACTOR	PRESENT VALUE (£)
	0	(200,000)	1	(200,000)
	1	60,000	0.9091	54,545
	2	60,000	0.8280	49,684
	3	60,000	0.7513	45,078
	4	60,000	0.6830	40,980
	5	60,000	0.6290	37,742

Total cash flow = £ 227,448

$$\text{Net present value} = 227,448 - 200,000 \\ = \underline{\underline{£ 27,448}}$$

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c) In my opinion, I would opt for project CENTRE 4 as it has the best capital return over the 5 year period. It's closest competitor, PROJECT FUGE returns £7898 less over the same period. The ~~negligible~~ negligible downside of CENTRE 4 is that it takes 4 months longer to break even, but the return over time is the greater asset.

d) Two factors to consider when making capital investment decisions are :-

- Business Confidence
- Motives for investment.

BUSINESS CONFIDENCE is basically the current condition of the company. i.e. state of economy, current share of the market, order levels, success of historical projects, profit margins.

MOTIVES FOR INVESTMENT is basically why is the company investing. i.e. modernisation, expansion, diversifying product line, to meet ever changing environmental legislation.

Question (2)

Installing a new SAP information system to control stocks and costs is needed in the business to ensure that it remains competitive, and therefore benefits the company and ultimately its customers and employees. It will allow better interaction with companies suppliers and keep an accurate track of stock levels to minimise delays in supply and ensure that no sales are lost, ultimately increasing customer satisfaction.

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In addition to increased customer satisfaction (and therefore more sales) it will enable more efficient stock replenishment, ensuring that the company never runs out of the necessary materials required to provide its service to the customer. Maintaining accurate stock levels will also reduce wastage and ultimately save costs.

There are two main "issues" that need to be considered to ensure that this change takes place smoothly.

The first is the technological aspect of the change.

Arachne Ltd. needs to ensure that its infrastructure is modern enough to accommodate the new system, and it also needs to ensure there are enough end user terminals available to the workforce, to ensure accurate and timely data management.

The second "issue" is a people problem. All employees must buy into the SAP system. This is done by ~~ensuring~~ assuring employees that they will benefit from the new system, i.e. their job will be less stressful and it will free up time to concentrate on other aspects of their jobs. It will be integral to the success of the project implementation to ensure the correct level of training to all personnel, excepting that there will

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be some employees that will require more training than others. To this end it may be a good solution for Archae Ltd to designate certain members of its staff as "subject specialists" to have the workforce's skills set as time goes by.

Employee engagement is key to the projects success. Archae Ltd must ensure its workforce are fully informed at all stages of the project, and reassure its staff that the modernisation will not result in redundancies.

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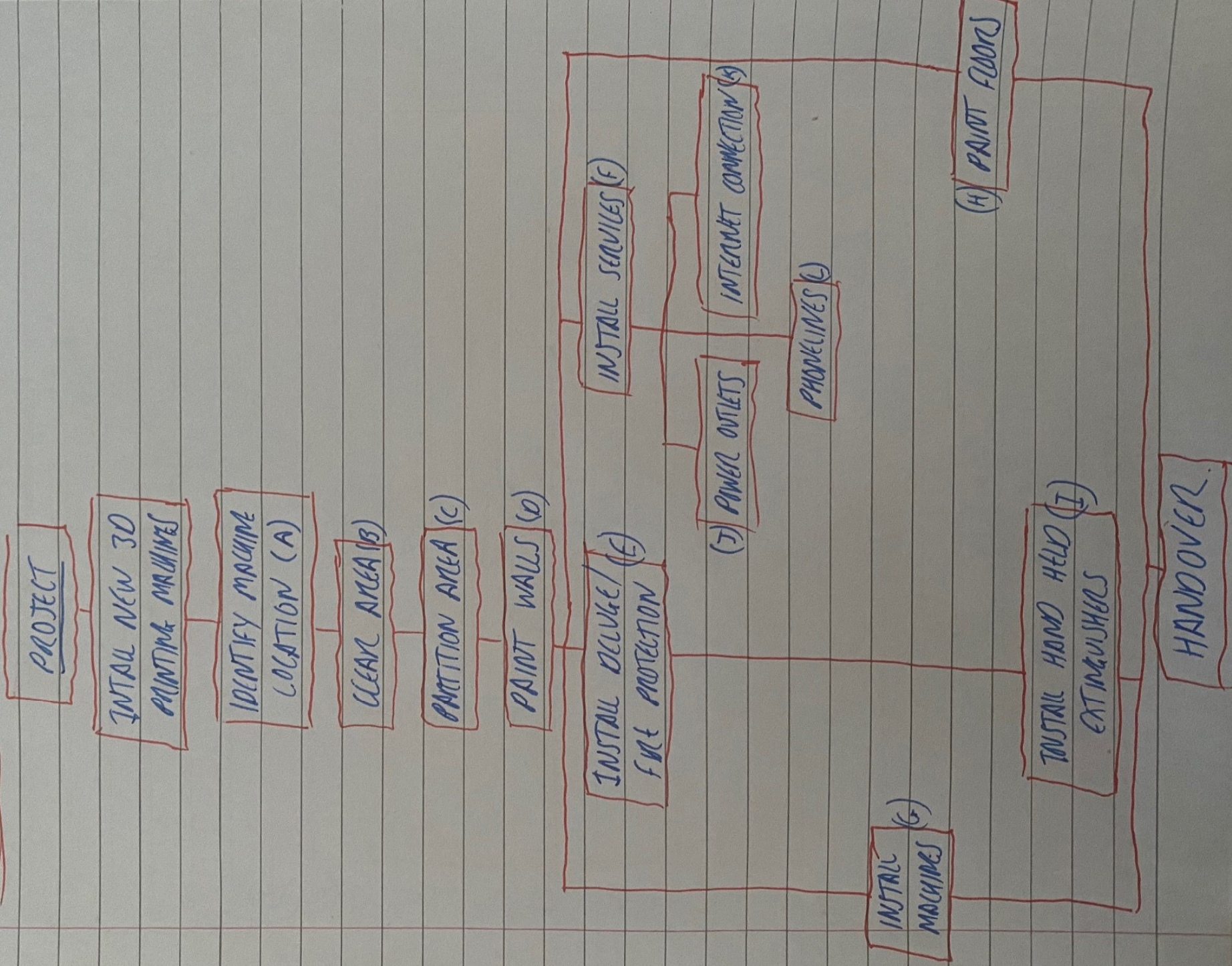
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Question (4)



CRITICAL PATH ANALYSIS (CPA)

