

### Centre 4

| Year | Net cash flow (£) | Cumulative cash flow (£) |
|------|-------------------|--------------------------|
| 0    | (200,000)         | (200,000)                |
| 1    | 60,000            | (140,000)                |
| 2    | 60,000            | (80,000)                 |
| 3    | 60,000            | (20,000)                 |
| 4    | 60,000            | 40,000                   |
| 5    | 60,000            | 100,000                  |

Payback between year 3 and 4

£60,000 = £5000 per month      Paid back £20,000 into year 4  
12

£20000 = 4 months  
£5000

Payback = 3 years and 4 months

### b) Supernotant

| Year | Cash Flow (£) | Discount factor | Present Value (£) |
|------|---------------|-----------------|-------------------|
| 0    | (200,000)     | 1.00            | (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 = year (1+2+3+4+5) = £174,556

NPV = Total cash flow - Initial investment  
= 174,556 - 200,000  
= ~~400~~ - £25,444

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Exam module Code: M5X01176.

Question 1

1a) Supermarket.

| Year | Net Cash Flow (£) | Cumulative Cash Flow (£) |
|------|-------------------|--------------------------|
| 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                   |

Payback between year 4 and 5

$\text{£}60,000 = \text{£}5000^{\text{per month}}$  Paid back  $\text{£}20,000$  into year 5  
12

So...  $\text{£}20000 = 4 \text{ months}$   
 $\text{£}5000$

Payback = 4 years and 4 months

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| Year | Net Cash Flow (£) | Cumulative Cash Flow (£) |
|------|-------------------|--------------------------|
| 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                   |

Payback after 3 years exactly.

### Fudge 4L

| Year | Cash Flow (£) | Discount Factor | Present Value (£) |
|------|---------------|-----------------|-------------------|
| 0    | (200,000)     | 1.00            | (200,000)         |
| 1    | 80,000        | 0.9091          | 72,728            |
| 2    | 60,000        | 0.8264          | 49,584            |
| 3    | 60,000        | 0.7513          | 45,078            |
| 4    | 40,000        | 0.6830          | 27,320            |
| 5    | 40,000        | 0.6210          | 24,840            |

$$\text{Total Cash Flow} = \text{year } (1+2+3+4+5) = \text{£ } 219,550$$

$$\text{NPV} = \text{Total cash flow} - \text{Initial investment}$$

$$= 219,550 - 200,000$$

$$= \text{£ } 19,550$$

### Centre 4

| Year | Cash Flow (£) | Discount Factor | Present Value (£) |
|------|---------------|-----------------|-------------------|
| 0    | (200,000)     | 1.00            | (200,000)         |
| 1    | 60,000        | 0.9091          | 54,546            |
| 2    | 60,000        | 0.8264          | 49,584            |
| 3    | 60,000        | 0.7513          | 45,078            |
| 4    | 60,000        | 0.6830          | 40,980            |
| 5    | 60,000        | 0.6210          | 37,260            |

$$\text{Total Cash Flow} = \text{year } (1+2+3+4+5) = \text{£ } 227,448$$

$$\text{NPV} = \text{Total cash flow} - \text{Initial investment}$$

$$= 227,448 - 200,000$$

$$= \text{£ } 27,448$$

- c) In my opinion Project Centre 4 is the best option for the company to follow. Project Supermarket can be eliminated from the options immediately as it doesn't make a profit after the 5 years. Even though Project Fudge 4L has a faster payback than Project Centre 4 it's only by 4 months. Project Centre 4 returns an extra £1898 over the 5 years and this is why I would

recommend it as the best option.

d) There are many factors to evaluate when making a capital investment decision. The main decision I think is how long before they make a return on the investment. Some investment opportunities may require a higher initial investment for things such as new equipment or <sup>new floor space</sup> ~~refurbishing~~ and could be a riskier investment due to the cost involved. These kind of opportunities take longer to pay back also. Smaller investment opportunities such as a simple rebranding could pay back your initial investment quicker but may not make as much in the long run as a larger higher risk opportunity. Another factor an investor would consider is business confidence. Is the market for the product or service growing or shrinking? Will the business continue to grow in terms of revenue? Are there going to be more direct competitors of your product/service? There are some of the factors an investor should think about before making a capital investment decision.

## 2) New System

A new system is needed to move the company in line with other competitors. Modernising the system will lead to less human error in counting stock, which will in turn lead to better control and management of inventory. Costs can be better controlled and set due to the prices being available in real time. This will make the business more competitive in the market and will hopefully lead to a more profitable and sustainable business.

For the employees that are competent in using technology. <sup>most confident</sup> ~~those~~ of these will put in a group of 'innovators'. innovators would be the first to use and get to grips with the technology. These would then become champions and teach the others how to use the system. For the people that are nervous or are reluctant to use the system. A shared understanding must be created in order to explain the benefits of the change. Additional training can be given and incentives can also be used to get more

employees to adopt the change. Once a high enough adoption rate has been reached, other reluctant employees should follow suit.

- 3) The first step I would take would be to ensure the technicians that the proposed re-training wouldn't weaken their specificity in that area. I would also communicate to them that if the re-training was successful it could lead to higher pay or more financial benefits as the company and process should become more productive. If they are still worried that they will lose their speciality I could offer them a 40/20/20 split in the shifts or hours they work in each area the 40% being in their specialised area and the other 20%'s in the other areas. This could defuse their reluctance to the proposed plan. I would listen to any solutions they had to the proposed problem and try to incorporate them into the final solution. For the operators I could guarantee a production bonus based on previous performance for the duration of the re-training and bedding in process. This should ease the worry they have. All employees would be communicated to that having a broader skill level is a positive and that ~~now~~ <sup>then</sup> it could lead to less downtime in production, therefore bigger turnover and more benefits such as <sup>better</sup> pay or bonus for all.