

EXAM

1) 200,000 5 years

	Net Cashflow	Cumulative CF
a) 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

Supernatant payback period

$$\text{year 5} = \frac{60,000}{12} = 5000 / \text{month}$$

$$\frac{20,000}{5000} = 4 \text{ months}$$

∴ payback period is 4 years + 4 months

Fuge 41

	NCF	CCF
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 period is 3 years

Centre 4

	NCF	CCF
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

$$60,000 / 12 = 5000 / \text{month}$$

$$\therefore 40,000 / 5000 = 8 \text{ months}$$

~~∴ payback period is 3 years and 8 months~~

∴ payback = 3 years and 8 months

b) calculate NPV for each. DF = 10%

	Supernatant		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 = £174,556

NPV = Total cash flow - Investment

$\therefore = 174,556 - 200,000$

$= -£25,444$

Project fuge 41

	CF	DF	PV (£)
0	200,000		200,000
1	80,000		72,728
2	60,000		49,584
3	60,000		45,078
4	40,000		27,320
5	40,000		24,840

Total = £219,550

$\therefore \text{NPV} = 219,550 - 200,000$

$\therefore = £19,550$

Centre 4		
	CF	PV (£)
0	200,000	200,000
1	60,000	54,546
2	60,000	49,584
3	60,000	45,078
4	60,000	40,980
5	60,000	37,260

$\therefore$ Total cash flow = £227,448

$\therefore$ NPV = 227,448 - 200,000

$\therefore$ = £27,448

c) Evaluate which is best?

For payback period, "Project Fuge 41" gives the quickest return of "3 years" on the initial investment.

When considering the "return of capital", "Centre 4" project gives the "best return" so in my opinion project Centre 4 is the best as the "return on investment is only 3 years and 8 months."

d) Evaluate 2 factors.

An important factor to consider is the change in technology "that is taking place to ~~implement~~ implement a more energy efficient and "new model" of the centrifuge. This improved efficiency can help reduce "emissions."

D) Another factor to consider would be to try and "compete with their competitors." This could be due to "receiving pressure via legislation" or due to seeing "Success from their competitors."

2) Workforce is established - 25 years - Strong resistance to changes.
Employees are competent but some are not as confident.
opportunity to train for less confident employees.
opportunity to give older employees responsibility + authority.



A well established engineering company will need to maintain its "competitive edge" in their field. Keeping accurate records of stocks is extremely important as it allows you to "plan accordingly" when stocks are low and keep an "accurate record of your costs."

This "step change" is needed to adapt to the advancements in technology and to make use of the systems available.

Not only will this change "add value" to the organisation but it will iron out the "differences in competency" between the workforce and "level people out."

As a manager it is important to "clearly communicate" the reasons why this change is needed to the already well established workforce as ~~without~~ I believe there will be some "resistance issues."

This already established culture is where the resistance will be as the main body of the workforce would be comfortable with how things are and ~~would~~ see the change as unnecessary. They see it as "disruptive + stressful."

As a manager communicating this "new and muchly improved" change to the organisation ~~to~~ in a strategic manner is vital.

Using "Lewins forcefield model" to compare the driving factors and the resisting factors. ~~the model~~.

The "internal factors" of the change are "inefficiency in current methods." Another factor would be to vastly improve "cash flow" of the business. Another factor to consider would be to train employees that are less confident on computer systems.

The Resisting forces would be that the workforce is happy with the "current culture" that exists. A change brings "insecurities". It is important to communicate that this change is "an opportunity."

As a leader to address this change is to give the resisting employees the task of "training the other employees that need it".

This gives the "resisting employees" an opportunity to develop their own skills "further" and take on the "challenge of implementing this change".

Giving the employees the task of training will do wonders in "team building" and "creating chemistry" between new and older workers. The sense of authority they receive from taking this on gives a "sense of empowerment" and this will "motivate and drive" the workforce to implement this change.

Another model that can be used to implement this change is to use "SWOT Analysis". This model helps in understanding the "strengths + weaknesses" the company has in their field. Alongside this, the model helps you "compare opportunities" that present themselves e.g. "New SAP System"

change

And compare this to the threats ~~the~~ presents.

As a manager, using these models will help me build a strategy to implement this change. It is important to use the correct style of leadership when implementing this change.

Using McGregor "theory Y" approach I believe will serve best for this kind of change. The employees enjoy their jobs. The "added responsibility" will bring value to their presence and create "motivating situations". As the manager, I communicate the change but the actual implementation will be down to the workforce.

I will only step in if I have to after this. This will decrease the "resisting force" and thus the change is more likely to succeed.

3) Four Areas - two technicians → specialists

more than 1 tech off at once (sickness scenario)

Train all techs to be specialists. → resistance to change

Transformational Leadership style - Inspire

Servant theory - compromise with the techs + ops.



In this situation, the company is "losing out" due to absenteeism and they are made to get cover in.

This is an "added + unwanted" cost to the company as it "affects their profits" (minimal however overtime it adds up).

This is a threat to the company as they will overtime lose capital and lose their standpoint in the market.

~~This change needs to be implemented by an "authoritarian leader" i.e. me~~

A model to consider is "Kotter and Schlesingers"

6 ways of overcoming resistance to change.

It is important to communicate to the technicians and operators that the company will start to lose its competitive edge in the markets if they do not address the issue of absence. The next step is to ensure that "all of the current technicians and operators" will be taking part in this change in order to "maintain balance and keep it fair." It will be the line managers job to support and facilitate the training as they directly deal with the technicians + operators.

As the production manager I would be willing to "negotiate the terms of training" to not hinder any individuals specialities in the workplace.

Little and often method of training in order to progress everytime they are training but also have enough time away from the job and go back to their specialities.

The need to tell the employees that this needs to happen would be unnecessary at this point as I believe they would be happy with these approaches.

It is important to inspire the workers to administer this change and help them see an opportunity for growth, whilst maintaining their strong skills.

Being a "transformational leader" is the best approach to gain the "commitment of the workers."

You have communicated the issue without the need of "punishing workers for not complying."

"Negotiating the terms" with them also takes away any "insecurities" they may have had about the change.

Inspiring the workforce would have a positive effect as individuals would be more motivated in their roles.

They would receive "non financial benefits" like "job enrichment."

The workers can challenge themselves ~~and~~ by rotating onto different jobs / expanding their role.

~~There are many factors which need to be considered~~

Another factor to consider would be "job empowerment" for the workers. They are able to do their jobs with "less supervision" after training is completed.

These motivating factors I have explained are modelled by Herzberg's two factor theory.

By negotiating the terms of how the training will take place ("little + often"), you give the workers the opportunity to regularly sit in their usual role without hindering their ability. ~~This would also be likely to affect their~~

Using this approach would also less likely "affect their productivity bonuses" as they are continually rotating.

This will allow them to maintain their hygiene factors "(bonuses)" that will not hinder their motivation.

Another leadership style to implement into this change is the servant leader theory. This is important as it creates trust between the workers + the managers.

By identifying the needs of the workers i.e. their hygiene factors (bonuses), I can ensure that the change will not affect them during the change but instead maximise their performance in the workplace.

This will be a reciprocal service as there is a level of trust and no "bossing around" involved.

It is important to understand that utilising multiple styles of leadership in a situation like this will allow the changes to occur smoothly.

A more stern but ~~also~~ negotiable approach to highlight the differences and address them to suit the organisation and suit the workers.