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APPENDIX GA36a

LEVEL 4 ASSESSMENT SPECIFICATION

Student name:	Jacob Williams	Student ID number:	
Programme:	HNC/D IN Mechanical Engineering/Electrical/Electronic Engineering		
Module:	Management, Innovation and Sustainability		
Module code:	M5X01176	Contribution to Overall Module Assessment (%):	50%
Lecturer:	Coral Planas	Internal Verifier:	Dr. R. Kadhim.
Assignment Title:	Engineering Case study	Word count (or equivalent):	1200 min
Submission deadline:	02/05/2019	Return date of provisional marks & written feedback:	23/05/2019
Submission method:	All written assessments, where practical and possible, must be submitted via Turnitin unless otherwise instructed by the Lecturer. (Please DO NOT put this assessment specification into Turnitin or it will match many similarities with other students' submissions.) Alternative submission method (if applicable): Late submission of the assessment will result in a late penalty mark. Penalties for late submission: Up to one week late, maximum mark of 40%. Over one week late, 0%. Only the Extenuating Circumstances Panel may approve a change to submission dates.		
Academic honesty / referencing:	Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.		

Module Learning Outcomes (from module syllabus)

- 1) Demonstrate the ability to apply appropriate theoretical and practical methods to the analysis and solution of structures and dynamics engineering problems.
- 2) Demonstrate key transferable skills in problem formulation and decision making, interpreting experimental results.

TASK DESCRIPTION

Assignment Brief

This module introduces the student to the social and commercial context of the engineering industry in terms of business environments including: management organisation and administration, regulation and legislation.

Assignment Scenario

You have been working as an Engineering Technician for a small to medium sized engineering company manufacturing parts for the aircraft industry. Your duties are to ensure the production process operates efficiently and that all aspects of installation and maintenance are carried out in accordance with recognised procedures and cost effectively.

In recent years the company has seen a steady decline in turnover and profit, mainly resulting from increased competition from within the UK and overseas along with a lack of investment in technologically advanced systems and machinery.

The company has advertised the position of 'Engineering Project Manager' with a good salary, private health insurance and a final salary pension. The position is being advertised internally and externally.

Applicants are required to (a) deliver a 10 minute PowerPoint presentation outlining the key factors that influence organisational success and to balance them against the key factors that could potentially lead to organisational failure and (b) write a structured report (minimum 3000 words) encompassing the factors outlined in (a) detailing how those factors can be utilised to address the following issues:

- Falling Sales
- Limited European and International customer base
- 10% reduction in production targets on previous year
- 5% increase in product rejection rates
- Escalating maintenance costs
- Unusually high turnover of staff
- 3 '7 day' + lost time accidents

Your research should result in a professional report and PowerPoint presentation with clear structure, aims, objectives and outcomes based on your research. This presentation and report can then be delivered and submitted as required as part of the job application process.

Your research should result in a professional report and PowerPoint presentation, the report and the presentation can then be delivered and submitted as required as part of the job application process.

Your report should include;

- A title page
- Table of contents
- Introduction
- Objectives
- Theory / Research
- Methodology
- Results
- Analysis
- Discussion / Evaluation
- Conclusion
- References

Word count: The recommended word count is 3000 words.

GUIDANCE FOR STUDENTS IN THE COMPLETION OF TASKS

You will need to consider:

- **Business Organisations And The Environment:** types of business organisations; analysis of the organisation and its external environment; the engineering industry in the UK and global economy.
- **Regulation and Legislation:** product liability and contractual obligations, data protection legislation, protection of intellectual property.
- **Business Ethics:** Corporate social responsibility, the engineer's responsibility to society.
- **Management and Group Behaviour:** management and leadership styles; management roles; management decision making and problem solving; management of change; motivation; quality management; group behaviour and dynamics; individual behaviour; personality and perception.
- **Marketing:** the marketing mix; sponsorship funding models; developing a business plan for a Small Business Unit.
- **Project Management:** Project planning techniques, project monitoring, managing risk.
- **Brexit:** Comment on the potential effects (positive or negative) this will have on the economy in general and more significantly the company in which you are employed.

The report must be structured to include a contents page and a page of references which record all sources of information used in the report adhering to the 'Harvard' referencing system.

Any quotations or citations within the report must also be referenced using the correct method as detailed in the 'Harvard' referencing system.

MARKING CRITERIA AND STUDENT FEEDBACK

This section details the assessment criteria. The *extent* to which these are demonstrated by you determines your mark. The marks available for each criterion are shown. Lecturers will use the space provided to comment on the achievement of the task(s), including those areas in which you have performed well and areas that would benefit from development/improvement.

Common Assessment Criteria Applied		Marks available	Marks awarded
1. Research-informed Literature Extent of research and/or own reading; selection of credible sources; application of appropriate referencing conventions.			
You have provided plenty of informative which would certainly be used in a case study analysis such as this.		30	18
2. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline.			
Plenty of knowledge which shows basic knowledge. You have used it quite well, but a lot of missed opportunities of elaborating on main areas.		25	15
3. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence			
A lot of description included in this assignment but not a lot of consistent analysis evident. You had lots of ideas but could have applied them better.		15	9
4. Practical Application and Deployment Deployment of methods, materials, tools and techniques; application of concepts; formulation of innovative and creative solutions to solve problems.			
A couple of examples used to strengthen your argument, but again not enough elaboration and exploration of concepts.		15	8
5. Skills for Professional Practice Attributes in professional practice: individual and collaborative working; deployment of appropriate media; presentation and organisation.			
A good PowerPoint, which includes a balance of what can affect a business both positively and negatively.		15	9

Assignment Mark Overall (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed.)

Late Submission Penalties (tick if appropriate)

Up to one-week late	
Over one week late	

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COMMON ASSESSMENT AND MARKING CRITERIA

Assessment Criteria	OUTRIGHT FAIL	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	EXCELLENT	EXCEPTIONAL
	0-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
1. Research-informed Literature Extent of research and/or own reading, selection of credible sources, application of appropriate referencing conventions	Little or no evidence of reading. Views and findings unsupported and non-authoritative. Referencing conventions largely ignored.	Poor evidence of reading and/or of reliance on inappropriate sources, and/or indiscriminate use of sources. Referencing conventions used inconsistently.	References to a limited range of mostly relevant sources. Some omissions and minor errors. Referencing conventions evident though not always applied consistently.	Inclusion of a range of research-informed literature, including sources retrieved independently. Referencing conventions mostly consistently applied.	Inclusion of a wide range of research-informed literature, including sources retrieved independently. Selection of relevant and credible sources. Very good use of referencing conventions, consistently applied.	A comprehensive range of research-informed literature embedded in the work. Excellent selection of relevant and credible sources. High-level referencing skills, consistently applied.	Outstanding knowledge of research-informed literature embedded in the work. Outstanding selection of relevant and credible sources. High-level referencing skills consistently and professionally applied.
2. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline.	Major gaps in knowledge and understanding of material at this level. Substantial inaccuracies.	Gaps in knowledge, with only superficial understanding. Some significant inaccuracies.	Evidence of basic knowledge and understanding of the relevant concepts and underlying principles.	Knowledge is accurate with a good understanding of the field of study.	Knowledge is extensive. Exhibits understanding of the breadth and depth of established views.	Excellent knowledge and understanding of the main concepts and key theories. Clear awareness of challenges to established views and the limitations of the knowledge base.	Highly detailed knowledge and understanding of the main theories/concepts, and a critical awareness of the ambiguities and limitations of knowledge.
3. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence	Unsubstantiated generalisations, made without use of any credible evidence. Lack of logic, leading to unsupported/missing conclusions. Lack of any attempt to analyse, synthesise or evaluate.	Some evidence of analytical intellectual skills, but for the most part descriptive. Ideas/findings sometimes illogical and contradictory. Generalised statements made with scant evidence. Conclusions lack relevance.	Evidence of some logical, analytical thinking and some attempts to synthesise, albeit with some weaknesses. Some evidence to support findings/views, but evidence not consistently interpreted. Some relevant conclusions and recommendations, where relevant	Evidence of some logical, analytical thinking and synthesis. Can analyse new and/or abstract data and situations without guidance. An emerging awareness of different stances and ability to use evidence to support the argument. Valid conclusions and recommendations, where relevant	Sound, logical, analytical thinking; synthesis and evaluation. Ability to devise and sustain persuasive arguments, and to review the reliability, validity & significance of evidence. Ability to communicate ideas and evidence accurately and convincingly. Sound, convincing conclusions / recommendations.	Thoroughly logical work, supported by evaluated evidence. High quality analysis, developed independently or through effective collaboration. Ability to investigate contradictory information and identify reasons for contradictions. Strong, persuasive, conclusions, justifiable recommendations.	Exceptional work; judiciously selected and evaluated evidence. Very high quality analysis, developed independently or through effective collaboration. Ability to investigate contradictory information and identify reasons for contradictions. Highly persuasive conclusions
4. Practical Application and Deployment Effective deployment of appropriate methods, materials, tools and techniques; extent of skill demonstrated in the application of concepts to a variety of processes and/or contexts; formulation of innovative and creative solutions to solve problems.	Limited or no use of methods, materials, tools and/or techniques. Little or no appreciation of the context of the application.	Rudimentary application of methods, materials, tools and/or techniques but without consideration and competence. Flawed appreciation of the context of the application.	An adequate awareness and mostly appropriate application of well established methods, materials, tools and/or techniques. Basic appreciation of the context of the application.	A good and appropriate application of standard methods, materials, tools and/or techniques. Good appreciation of the context of the application, with some use of examples, where relevant.	A very good application of a range of methods, materials, tools and/or techniques. Very good consideration of the context of the application, with perceptive use of examples, where relevant. Evidence of some innovation and creativity.	An advanced application of a range of methods, materials, tools and/or techniques. The context of the application is well considered, with extensive use of relevant examples. Application and deployment extend beyond established conventions. Innovation and creativity evident throughout.	Outstanding levels of application and deployment skills. Assimilation and development of cutting edge processes and techniques.
5. Skills for Professional Practice Demonstrates attributes expected in professional practice including: individual initiative and collaborative working; deployment of appropriate media to communicate (including written and oral); clarity and effectiveness in presentation and organisation.	Communication media is inappropriate or misapplied. Little or no evidence of autonomy in the completion of tasks. Work is poorly structured and/or largely incoherent.	Media is poorly designed and/or not suitable for the audience. Poor independent or collaborative initiative. Work lacks structure, organisation, and/or coherence	Can communicate in a suitable format but with some room for improvement. Can work as part of a team, but with limited involvement in group activities. Work lacks coherence in places and could be better structured.	Can communicate effectively in a suitable format, but may have minor errors. Can work effectively as part of a team, with clear contribution to group activities. Mostly coherent work and is in a suitable structure.	Can communicate well, confidently and consistently in a suitable format. Can work very well as part of a team, with very good contribution to group activities. Work is coherent and fluent and is well structured and organised.	Can communicate professionally and, confidently in a suitable format. Can work professionally within a team, showing leadership skills as appropriate, managing conflict and meeting obligations. Work is coherent, very fluent and is presented professionally.	Can communicate with an exceptionally high level of professionalism. Can work exceptionally well and professionally within a team, showing advanced leadership skills. Work is exceptionally coherent, very fluent and is presented professionally.

Student Self Evaluation Form

Student name:	Jacob Williams	Student P number:	
Programme:		Year of programme	
Assignment Title:			

This section repeats in brief the common assessment criteria detailed on previous pages. The *extent* to which these are demonstrated by you determines your mark. Using these criteria, tick the box that best indicates the level of achievement you feel you have achieved with regard to each of them.

Common Assessment Criteria Applied	Level of Achievement						
	REFER		3 rd	2:2	2:1	1 st	1 st
	OUTRIGHT FAIL	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	EXCELLENT	EXCEPTIONAL
1. Research-informed Literature	0-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
	☐	☐	☐	☒	☐	☐	☐
2. Knowledge and Understanding of Subject	0-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
	☐	☐	☐	☒	☐	☐	☐
3. Analysis	0-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
	☐	☐	☐	☒	☐	☐	☐
4. Practical Application and Deployment	0-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
	☐	☐	☐	☒	☐	☐	☐
5. Skills for Professional Practice	0-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
	☐	☐	☐	☒	☐	☐	☐

PLEASE COMMENT ON AREAS IN WHICH YOU FEEL THAT YOU HAVE PERFORMED WELL	PLEASE COMMENT ON AREAS YOU FEEL THAT YOU NEED TO DEVELOP
No Comment	No Comment

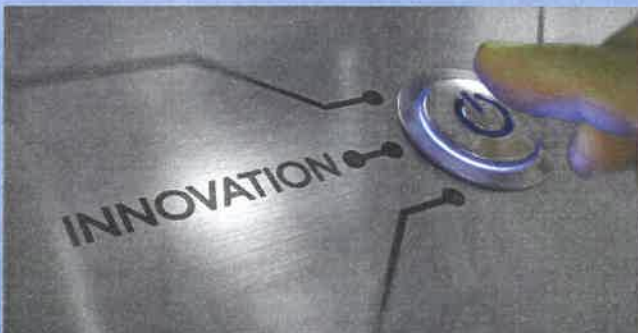
Student's Name	Jacob Williams	Date	02/05/19
Student's Signature			

University of Wales Trinity Saint David
Module Code: M5X01176 Management,
Innovation and Sustainability

Management, Innovation and Sustainability

WIL15826428

Jacob Williams



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B/E have a high customer satisfaction rate, a strong free cash flow. Whereas APE have increasing

SWOT – B/E Aerospace	
Strengths	Weaknesses
• High level of customer satisfaction. • Good returns on capital expenditure. • Strong free cash flow. • Strong dealer community	• Financial planning isn't done properly. • Investment in R+D is low. • Investment required for new technologies. • Poor marketing
Opportunities	Threats
• Decreasing the cost of transportation. • New environmental policies. • Opening up new markets with government agreement. • Lower inflation rates. • New technologies to invest in.	• Intense competition. • No regular supply of innovative products. • Shortage of skilled workers in the industry. • New environmental regulations. • Growing strengths of local distributors.

rejection rates and a limited customer base which is not helping. Although by looking at the opportunities, APE have scope to expand and create new products which will lead to a new/bigger customer base.

PESTLE

By using a PESTLE analysis it gives a bird's eye view of the whole business environment from all of the different angles that are assessed when contemplating on a certain plan/idea.

PESTLE – Aerospace Precision Engineering	
Political	Economic
• BREXIT will inevitably affect APE.	• Increase in air travel demand due to economic growth. • Exposed to volatile currency movements.
Social	Technological
• Dramatic growth in commercial travel. • Employment will increase	• New technologies are being introduced to the aerospace industry. • More money is spent in R+D
Legal	Environmental
• Compliant with all of the air travel regulations.	• Sustainable future targets, the requirement to make components as efficient as possible.

PESTLE – BOEING	
Political	Economic
• One of the most popular players in the aviation industry.	• With the recession, BOEING had to make cuts to their prices to make themselves competitive.
Social	Technological
• More people are using air travel to get from A to B. • Preferred transportation method for the millennial generation.	• Excellent technology capabilities in the aircraft they produce. • Better fuel efficiency than any other aircraft.

Assignment Brief

This module introduces the student to the social and commercial context of the engineering industry in terms of business environments including: management organisation and administration, regulation and legislation. The below points are to be addressed.

- Falling Sales
- Limited European and International customer base
- 10% reduction in production targets on previous year
- 5% increase in product rejection rates
- Escalating maintenance costs
- Unusually high turnover of staff
- 3 '7 day' + lost time accidents

Introduction

I have been working at APE (Aerospace Precision Engineering) for nearly 7 years, and since the beginning of my employment it has been noticeable that the company hasn't been reaching its annually targets for a number of years. The company is not the 'go-to' for the Aerospace industry as it once was, we have declined in a number of ways. In the recent weeks a new job role has appeared on the notice board which I feel would suit me very much as I want to put APE back on the map. By applying for the role 'Engineering Project Manager' I feel that I would offer fresh ideas and strategies to get APE back where it used to be in the Aerospace Industry.

Analysis of the business

SWOT

By analysing the company with a SWOT analysis, it is a good place to start to identify the Internal Strengths, weaknesses as well as the external Opportunities and Threats

SWOT – Aerospace Precision Engineering	
Strengths	Weaknesses
• Established Business. • Trusted supplier chain. • Trained staff.	• 5% increase in rejection rates. • 10% reduction in production. • Poor equipment. • High turnover of staff. • Limited customer base. • Falling sales.
Opportunities	Threats
• Expansion. • Create new product. • New equipment to invest in.	• Unreliable. • Ignoring competitors.

By comparing the two SWOT analysis' above, it is clearly visible that APE isn't doing so well. Comparing the above SWOT with B/E in the Aerospace industry there are clear differences. (Anon., Unknown). For a thriving business in the Aerospace industry, this is how a SWOT should be looking. There will always be room for improvement but overall, it looks a good business.

	• BOEING spend a lot in R+D to develop the best technology.
<u>Legal</u>	<u>Environmental</u>
• BOEING is a big employer – a lot of labour laws are applied. • Passenger safety and other factors are always taken into consideration.	• BOEING are committed to protecting the environment, by increasing the efficiency of their aircraft. • Set environmental targets for their facilities and work hard to meet them.

(Pratap, 2017)

By comparing the above, it is clear that another company in the Aerospace engineering sector has a lot more going for it when comparing the PESTLE side by side.

Key Issues

The reasons why APE has declined in the past few years are as follows;

- Falling Sales.
- Limited European and International customer base.
- 10% reduction in production targets on previous year.
- 5% increase in product rejection rates.
- Escalating maintenance costs.
- Unusually high turnover of staff.
- 3 '7 day' + lost time accidents.

Falling Sales

With falling sales being one of the key factors why APE has been declining in recent years. With the business not generating the turnover that has been projected, this has had knock on effects throughout the business. A few reasons have been listed below why APE is losing sales;

- Poor marketing.
- Competitors making a better product.
- Customer satisfaction falling.

Poor Marketing

The marketing of a product is integral, without marketing nobody will know what they are buying in to. It puts the product on the map. All marketing specialists will know that a marketing strategy has to be in place in order for a product/business to thrive. Questions have to be asked if there has been enough money injected into the marketing side of the business in recent years because this can be one of the many causes of falling sales. If money has been invested, has it been marketed to the correct audience? Maybe it has been advertised to the wrong sector (Duermyer, 2019).

In order to improve the marketing strategy all marketing tools must be taken into account, which is known as the marketing mix or 4 P's;

1. Product
2. Promotion
3. Place
4. Price

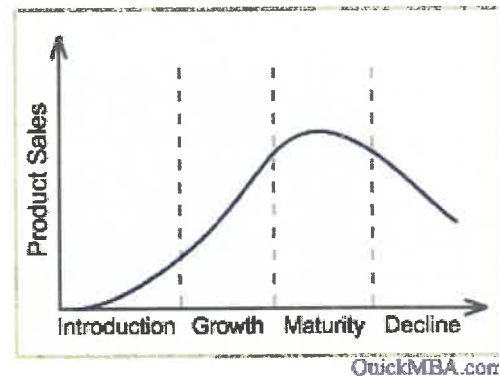
By investigating into these four factors, I will be able to see if the correct marketing strategies are being used.

Product

The product must be correct to start with, will it meet the customer needs? (that is the main selling point). The product that we sell at APE must meet the requirements of the customer and fulfil their needs to a standard that is second-to-none. This can be done by doing some market research on our competitors, see what they make, what standard they make it to and what their after sales support is like. If APE were to achieve all of these targets, customers will come to us as we will be the most reliable.

To the right, there is a product life cycle, every product in the world is based off one of these, for instance one of our plastic parts that we make for planes, when the plane is introduced, we need to begin to introduce our plastic parts, then they begin to grow as manufacturing goes up with the planes, then they mature this is the point where they've made all of the planes they need to so they don't need any more of the components and then the sales decline as they aren't purchasing any of the plastic components anymore.

Product Life Cycle Diagram



Price

Once we have a product in mind that will be sold to the customer, now the price of the product is important. If the components are priced too cheap, APE will not make much/any money which will lead to the business falling through. Or if the components are priced too expensive, no customers will purchase any of the products as they will just go to our competitors. So finding the perfect balance is difficult and important.

Promotion

Now that we have a product and price in mind, a promotion method will have to be thought of. It is time to get the word out there that we are producing second-to-none components. As an engineering firm, it is difficult to advertise as it is industry work. Below, I have listed the main promotion techniques;

1. Advertising
2. Public relations and Sponsorships
3. Personal selling
4. Direct marketing
5. Sales promotion

Advertising

This method involves using television, radio, print-ads etc. it can an expensive method of advertising as these methods advertise to a lot of people, therefore the companies charge a lot of money. This advertising method would not be appropriate in my opinion because

Public relations and Sponsorships

This method is similar to the above although it gets the public involved with the business, also with sponsorships, by sponsoring a sporting team this will get the name out there but it is still not the right way to advertise APE in my opinion.

good
you have
made a
strong
effort to
spread the
news to
the masses.

plenty of
scope for
expansion.

Personal selling

A process of helping and persuading one or more prospects to purchase a good or service or to act on any idea through the use of an oral presentation (Lumen, n.d.)

Direct marketing

This is the method that would suit APE the most in my opinion, as this method involves getting the customer on site and showing them what we do. We can then sit down with them and discuss business as the customer representative is the person we will need to impress.

Sales promotion

Media and non-media marketing communication are employed for a pre-determined, limited time to increase consumer demand, stimulate market demand or improve product availability. (Lumen, n.d.)

Place

Place is important as anything in the 4P's of promotion as it is vital that the location is right. For a business like APE we will need to think about the logistics and how accessible the company is. Logistics can be a big expense when shipping components to the customer if they are far away. It is better to have our site as close to the customer as possible to reduce the logistics cost.

What would you suggest?

Competition

When it comes to competition, APE must know who they are, and what they are offering (Info Entrepreneurs, 2009). This is important because it can help us make a better product than our competitors, also make our services/marketing better than our competition. We can also include the information we have gathered to the marketing strategy. While making the most of our competitors' strengths, weaknesses, opportunities and threats (SWOT), it is very important to analyse competitors, to see what they are doing good and to see what they are doing bad.

In order to find out who our competitors are, we can conduct some research to find out who they are;

- Advertisement.
- Questionnaires.
- Internet searches.
- Information provided by customer.
- Search for existing patented product which is similar to ours.

And the information we need to know about them are;

- What products they are producing.
- What they charge.
- If they are innovative.
- The technology they use.

What would you do with that information?

Customer satisfaction

Keeping customers satisfied is one of the most important things in business, if you keep customers happy, they will return for more of our produce. It is important we keep all customers happy with second to none service.

Customer Loyalty

Trust is required for a customer and a supplier to work well together. Loyal customers will keep coming back to purchase the product. If APE were to deliver a product like this, the 'falling sales' wouldn't be happening as our customers would be coming back for more of our products.

Reduces Negative Word of Mouth

Research shows that customers are more likely to share more negative experiences than positive experiences. This is because everyone remembers the bad experiences and forget the good ones (WishDesk Official, 2018). My aim would be to negate all of the negative experiences, so our customers would only have positive feedback. I think this would have a big effect on the 'falling sales' issue.

Promotes Customer Retention

The longer the customer remains satisfied, the longer they would be coming back to APE for our products, this is also a step in the right direction for maintaining customer loyalty.

Retaining Satisfied Customers is Cheaper than Acquiring New Customers

It is worthwhile spending resources on the customers we have already acquired as we already know that they will place orders when they want our product. If we spend our resources on a customer we haven't acquired it is a big risk as all progress could be lost if the customer were to choose a different supplier (WishDesk Official, 2018).

Customer Satisfaction matters more than Price

All customers want to be treated like royalty, especially when they are paying a premium on the product that they are purchasing. Research has shown that the customer will choose a supplier that has satisfied them in the past/present over cheaper suppliers. This is because the customer is happy with the work the supplier has done.

Limited European and International Customer Base

Give incentives to current customers

- When the same customer is buying a lot of the same item, if one customer has put a lot of orders in they will expect a saving as they have given us so much business. By offering incentives to customers that give us a lot of business that will keep them happy and it will give us an advantage when looking for new customers.

Expansion

By looking at APE's SWOT analysis, there is room for expansion, this is one of the key factors when producing components. If there is not enough room for producing components, expanding must be one of the options, with more room there is more scope for obtaining new customers. By using the 'Direct marketing' method we could get the customer on site and show them the room we have for the components we could potentially be making for them. By expanding then, we would have to employ more engineers to work on the shop floor to meet the expectations of the customer. If we had the floor space and no one working there it would be pointless to expand therefore a lot of investment is required if APE was to be expanded.

Produce completely different products

Maybe it is time that APE was to start producing parts for customers in a different industry of work. E.g. Automotive industry. Because if we are struggling getting a bigger customer base in the Aerospace industry, maybe it is best to look in different industries. This would be out of APE's comfort zone, but it will also add more competition.

what are the risks? good.

Free trials to new customers

Giving free trials to new customers is one for the best ways to get them on board. If we offered to produce components for free for an upcoming prototype build they would be interested to see the quality of our component.

BREXIT

A big grey area is BREXIT, as Great Britain is due to leave the European Union the trading standards could be affected. As we only have a limited customer base, it is important we keep them close as if we are struggling to gain new customers. Introducing new European and International is even harder now as our trading costs have gone up.

10% Reduction in Production Targets / 5% Increase in Product Rejection Rates

With APE having a 10% reduction in production targets and a 5% increase in product rejection rates, it could be a lot of potential reasons why this could be happening, I have listed a couple below;

1. Untrained staff – High turnover of staff.
2. Management style used.

Untrained staff – High turnover of staff

Having a high turnover of staff isn't good for any business, as the business is investing in training employees constantly. This is defiantly a big issue within APE as this is costing a lot of money and employees are being trained and leaving, their experience is not being used at the workplace. We need to look at why employees are leaving, I have listed a few reasons below;

1. They're motivated by a better wage
2. They aren't engaged in the work
3. They are bored
4. Poorly managed

Better wages elsewhere

All people come to work for money, there's no denying that. But for some people money isn't everything, those people want to be happy in their jobs. But one of the reasons staff are leaving because they could be doing the same job, but getting paid a lot more to do the same job in another engineering firm down the road. Frederick Winslow Taylor conducted an experiment, and his hypothesis is that if people are rewarded more money they will stay and work, this theory is also known as the 'money as the motivator theory' (Hearst Newspapers, LLC, 2019).

They don't feel important/bored

When an employee doesn't feel they are important they get de-motivated, and in Frederick Herzberg ^(data) two factor motivation theory, it is all about making the employee feel important. This is done by giving rewards, recognition, responsibility, advancement and growth to the employee (Expert Program Management, 2019). The other factor is then the 'Hygiene Factors' these include company policies, supervision, relationships, work conditions, salary and security (Expert Program Management, 2019). There are a lot of things that bring these two factors together, and by getting a balance of them, Herzberg believed that employees will be happy and motivated.

Poorly managed

When employees are poorly managed they will not work to their full potential. Every employee has different motivators and it is important for managers to understand what motivates his employees. I have discussed this below where I analyse the different managerial styles;

- Authoritarian
- Democratic
- Laissez-faire

Leadership style used

There are many management styles used across the world, and all are effective in their own way. But it is important for managers to understand their employees and use the correct management style to suit the employees, this is also a challenge as different employees will want to be treated in different ways. These are the most common manage styles used;

1. Authoritarian
2. Democratic
3. Laissez-faire

Authoritarian

This is the leadership style used by managers who want to be in control continuously, they don't let their staff work off their own initiative, they also micromanage every task possible for that sense of control and they also fear uncertainty and doubt. This management style is not a good one to motivate staff as they do not feel important because they have no sense of responsibility as the manager is doing all of the thinking for them. There is also a sense that the team isn't trusted because the manager is always getting involved. There are many more advantages and disadvantages with this leadership style, some of the advantages are, an authoritarian leadership style will produce consistent results in small-group situations, it also reduces the time to make decisions, there is a clarity of a chain-of command, it can provide a boost in productivity. Here are more of the disadvantages of this leadership style, it can cause employees to rebel, there is reduced group input, there will be a lack of feedback in the group. (FOW, 2019)

Democratic

This is where the manager always puts decisions out to the employees for everyone to come together to make a decision. It will also empower the group members when they have training to do the job at hand, as they will not have to keep asking the manager what to do, once they have the training and skills they can then complete the task off their own accord. This method of management has positives and negatives, some of the positives is that the responsibility is delegated between the employees and everyone has a role to play in the overall decision, another positive is creating job satisfaction, when people have responsibility, it make them feel important thus meaning they enjoy work more. Although there are some disadvantages with a democratic leadership style, one of them is uncertainty, if the group of employees and manager is split over a decision, the final decision may not be made for a lot longer as the manager will not stand up and make the final decision, this type of manager would not function well in an authoritarian roll as the manager doesn't have the ability to make the decision there and then. It can also be time consuming, sometimes a decision has to be made there and then. For a democratic leader this will be difficult as the he is used to discussing the situation with employees (Teamwork Defanition, 2017).

Laissez-faire

This leadership style is where the manager rarely gets involved, he lets his employees crack on with the job at hand, although this method has advantages and disadvantages, here are some of the advantages; it can work for teams with a high level of skill and experience, employees will value their independence. Here are the disadvantages, this leadership style is not good for groups which lack experience and skills, it can result in poor performance and outcomes, the leader can appear

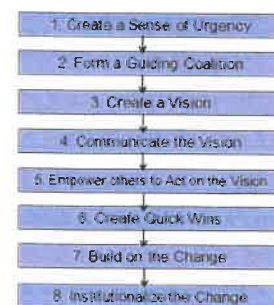
uninvolved and there can be some confusion in the group with regards who does what. (Verywell mind, 2019).

Time for a change of management style

With APE, it is a business in decline, and as discussed above with the different management styles it could be time to change the management/leadership style. From the information given like 10% reduction in production, 5% increase in rejection rates and a high turnover of staff it is evident that the management style which is being used at this moment in time isn't working. From what I can gather, the leadership/management style which is being used (by the sounds of it) is an authoritarian style, as I have discussed above, it is a very select style which only works for smaller teams and doesn't give employees any sense of independence. I would propose a change in this leadership style to a more democratic/laissez-faire style which will give employees much more independence and a change for them to think off their own initiative. The style that I would like to implement have been tried and tested and I think it would suit APE perfectly, given the situation. *good*

Although, changing managerial/leadership style is not as easy as a flick of a switch, it takes time to make the changes that I would like to introduce. The method that I would use to implement the change is Kotter's change theory, this theory has 8 steps to it, I have listed them below (Mind tools, 2019);

1. Create urgency
2. Form a powerful coalition
3. Create a vision for change
4. Communicate the vision
5. Remove the obstacles
6. Create short-term wins
7. Build on the change
8. Anchor the changes in corporate culture



Create urgency

When a change has to be made, it helps if the whole company really wants to change. This helps a lot if everyone is on board because it will make the change a lot easier, because everyone will want the same outcome. As a manager, these are some of the steps that can be taken to create urgency in the business; by identifying potential treats and examining the opportunities scenarios can then be developed, this can be done by analysing the SWOT analysis. Starting discussions with employees and give convincing and dynamic reasons to get employees discussing. (© Mind Tools Ltd, 1996-2019, 2012)

Form a powerful coalition

Now convincing people that the change is necessary, this is difficult because strong leadership is required and must have strong support from key people within the company. (© Mind Tools Ltd, 1996-2019, 2012)

Create a vision for change

When thinking of the new ideas, it is best to keep it all clear so everyone can grasp the overall vision and it will be easier to remember for everyone in the team. These are the steps that will help create a vision, develop a short summary, create a strategy, make sure everyone can describe the changes in detail, and practise the vision speech regularly. (© Mind Tools Ltd, 1996-2019, 2012)

So what changes would you implement?

Communicate the vision

When the vision is in your head, the only thing that will hold it up in the company is communicating it. As competition will be very high, it will be important to communicate it frequently and powerfully to get your message across. The vision can be used from the beginning, there is no need to call for meetings to discuss how the changes will affect the working life, begin to use them instantly in every day-to-day task. With this, it will stay fresh in everyone's mind as it is being used instantaneously. These are the steps that can help; talk often about the change vision, everyone will have concerns it is best to address then so they will not worry about anything, apply the vision to all aspects of the operation. (© Mind Tools Ltd, 1996-2019, 2012)

Remove the obstacles

When making changes, there will always be obstacles, these obstacles will have to be removed for the changes to be made possible. By removing these obstacles, it will empower everyone involved and they will execute your vision for change. These are the steps that will help; Identify or recruit change leaders whose role is to deliver the change, analyse the organisational structure, job descriptions to ensure they are in line with your vision, recognise and reward the people who are making the change possible, find out who is resisting the change these people will require additional needs. (© Mind Tools Ltd, 1996-2019, 2012)

Create short-term wins

Success is the biggest motivator, once the company has a taste of victory, they will want more of it. When making a change short-term wins will be required as it is needed to see the success in order to carry on with the changes. These are the steps to this; don't choose expensive early targets, analyse all pros and cons of all the targets you have set, reward those who have helped achieve your goal. (© Mind Tools Ltd, 1996-2019, 2012)

Build on the change

It has been argued that a lot of change projects fail because teams think they have done the job too early, real change runs deep in the company. As discussed above, quick wins are only short term successes, longer term targets are required. I have listed some of the key elements to build on the change; after every win analyse what went right and wrong to improve the next time, continue setting goals, continuous improvement is always required, keep ideas fresh. (© Mind Tools Ltd, 1996-2019, 2012)

Anchor the changes in corporate cultures

Finally, to make the change stick around for a long time, it should become a core part of the company. Continuous efforts must always be made to implement the changes and that it is seen in every aspect of the company. All company leaders must also support the changes as they have teams of their own. (© Mind Tools Ltd, 1996-2019, 2012)

Escalating Maintenance Cost

Cost escalation can have a serious impact on a business's competitiveness and profitability. This can be down to a series of events such as; managerial style, materials, labour, supply chain and equipment.

Managerial style

I have discussed managerial styles below, and the best way to change leadership above. It is so important that the correct managerial style is used as this is a big motivator as people will not just work for money, they seek happiness also.

Materials

If the cost of raw materials were to change during production, which they usually do. This is another reason for escalating maintenance cost. Maybe it would be good if all raw materials were researched and analysed to see where a cost down is possible.

Supply Chain

As mentioned above, APE's customer chain is limited, and usually if the customer chain is limited, the supply will be limited. Having a limited amount of suppliers is dangerous as they will have the monopoly and they will be able to control the costs of the raw materials and other things. It is better to branch out to other suppliers so there will be a lot more

Equipment

With the rise of the escalating maintenance costs, it is important to analyse at what the money is being spent on. The machinery and equipment that employees use on a daily basis is the best place to start. Machinery and equipment can be very expensive, especially if you are replacing a whole shop floor, and if the company is losing money it is harder to justify the big costs, because there may be higher priorities at the time. The answer to this is maybe leasing equipment, I have listed a few advantages and disadvantages for leasing equipment below (Copyright © 2019 MH Sub I, LLC dba Nolo®, 2019);

Advantages of leasing

- Less initial expense
- Tax deductible
- Flexible terms
- Easier to upgrade the equipment

Disadvantages of leasing

- Higher overall cost
- The company will never own the equipment
- Obligation to pay for the entire lease term

But then on the other hand, I have listed a few advantages and disadvantages for buying equipment (Copyright © 2019 MH Sub I, LLC dba Nolo®, 2019);

Advantages of buying equipment

- The company will own the equipment
- Tax incentives
- Possibility of depreciation deduction

Disadvantages of buying equipment

- Higher initial expense
- Getting stuck with old equipment

Generally it is a business decision when deciding what route to take, in terms of buying or leasing. But at this moment in time, I think it would be very beneficial for APE to start leasing equipment as maintenance costs are escalating and this would be a short term remedy until APE can begin making more money.

By getting newer equipment in the workplace will make employees want to work more also, as they will have newer tools and equipment that isn't breaking down. This will fall in Herzberg's two factor

theory (as mentioned below) where increasing a hygiene factor will make them want to work and help motivate them. Also leasing equipment will avoid paying a big upfront cost.

Unusually High Turnover of Staff

In the recent years, the company has had an unusually high turnover of staff. There are new staff being recruited constantly and this is not a good sign for the company financially and socially, maybe it is deemed 'not a good place to work', obviously this problem must be addressed quickly as the company cannot always train new employees, there will always be someone in training. The focus must then go on keeping these employees in the company, as they will gain valuable experience.

Here are some of the main reasons why some companies have a high turnover of staff (Martinelli, 2017);

1. Lack of growth and progression.
2. Being overworked.
3. Lack of feedback and recognition.
4. Poorly managed

Lack of growth and progression

When there is little opportunity for growth and progression in the workplace, employees don't stay for long as they can't see themselves climbing the ladder in work, it is deemed a dead-end position.

Being overworked

In all workplaces, being overworked can be difficult for employees as they will have less time to spend on their social life, the balance must be right for everyone. If the balance isn't there and employees are just spending time in work, they will become unhappy and they will not want to come into work as they are sick and tired of working.

Lack of feedback and recognition

When employees do something good in the workplace, it is important for the manager to recognise it and give them feedback, even if they are doing something incorrectly, employees will appreciate feedback on where they can improve. But as mentioned above if it is a dead-end job employees are likely not to care about feedback.

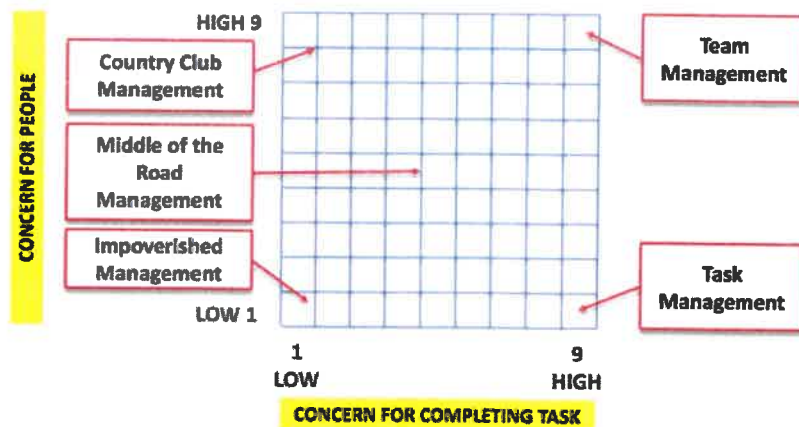
Poorly managed

Having poor leadership in the workplace is one of the biggest factors of high turnover of staff. If employees are under poor management, they will not feel important, or that their work is not important as they have a poor working relationship with their boss. Employees under poor management will look for any reason to get out of the job they are in. and in my opinion, this is the problem we have here with APE, as the management is so poor at the moment.

Blake Mouton Managerial Grid

As mentioned above, the manager at APE looks to be an authoritarian type. This style is not a great way of controlling a group of employees as the manager will always be micromanaging the employees and not letting them get on using their own initiative, this is exactly what employees don't like.

By looking at the Blake Mouton Managerial Grid diagram to the right, it gives us an indication of what managers are out there. On the X axis there is 'concern for completing task' and on the Y axis there is 'concern for people'.



And by analysing the grid, it is visible that there are 5

management styles which are being used (Tutor2u, 2018);

1. Country club management
2. Middle of the road management
3. Impoverished management
4. Team management
5. Task management

Country club management

Focus on creating a safe, comfortable working environment with minimal conflict.

Middle of the road management

Compromises made to achieve acceptable performance; thought to be the less effective leadership style.

Impoverished management

Laissez-faire; minimal effort on management; hoping to avoid blame for errors

Team management

Staff closely involved in decision making and feel valued; consistent with McGregor's Theory Y

Task management

Autocratic style, consistent with McGregor's Theory X. Workers have to complete tasks – nothing else.

From analysing the above Blake Mouton grid, we can assume that the manager in charge of APE at the moment is a Task Management style, where McGregor's Theory X is implemented. This is where the management assumes that employees;

- Dislike their work
- Avoid responsibility
- Have to be controlled
- Need to be supervised every step of the way
- Have no incentive to work
- No ambition

This is an old-school theory as it is easier to find another job where you are happy, but years ago, it was a lot harder to just quit your job because employees would have big families to feed and income would be low, so to go from an income to no income would be tragic for families years ago.

From the above list, this matches what I said above about why there is a high turnover of staff. But some staff may care about what they do and personal development.

In my opinion the management style Team Management which implements McGregor's theory Y where managers have an optimistic, positive view of their employees, this gives employees a lot more responsibility in the workplace and they value their jobs a lot more;

- Happy to work on their own initiative
- More involved with decision making
- Self-motivated to complete their tasks
- Enjoy taking ownership
- Seek and accept responsibility with little direction
- View work as fulfilling challenges
- Solve problem creatively and imaginatively

But as said above, also it is impossible to change the management style overnight, this is why the Kotter's change theory must be used to get the best out of the workforce and tackle the high turnover of staff. Or even middle of the road management can be compared to Team Management to analyse the pros and cons of both managerial styles, I feel this would be the best thing to do in this case as the Task Management style is not working at all.

Herzberg's Two factor Theory

Theory X and Y also works in tandem with Herzberg's two-factor theory, there is a diagram below showing what it is. In essence it shows that poor hygiene factors decrease employee job satisfaction and motivating factors increase employee satisfaction. In order to keep employees satisfied, they must be kept motivated (Expert program management, 2019)

Motivators

- Achievement
- Recognition
- The work itself
- Responsibility
- Advancement
- Growth

Hygiene factors

- Company policies
- Supervision
- Relationships
- Work conditions
- Remuneration
- Salary
- Security



By analysing Herzberg's theory, it is clear that employees aren't going to be happy at APE as they are constantly under supervision due to an autocratic leadership style in place and the working

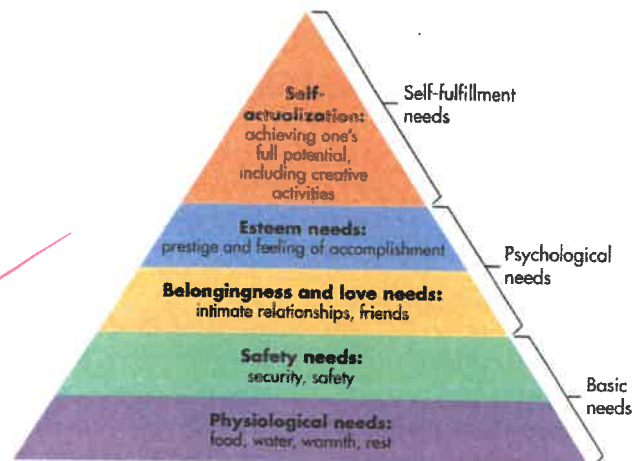
relationship they have. And looking at the motivators, there is no responsibility for the employees either which is due to the autocratic leadership style. Motivating employees by rewarding them with the 'motivators' is the best way for them wanting to stay as they will be happy

Maslow's Hierarchy of Needs

A simple way of breaking down what will help employees stay motivated is Maslow's Hierarchy of Needs, the diagram below shows exactly what it is, and it is split into 5 categories

- Physiological needs
- Safety needs
- Love and belongingness
- Esteem needs
- Self-actualisation needs

By using Maslow's hierarchy, it is another platform for managers as it is a different approach. All employees want different rewards when working and you cannot treat all employees the same as each other, otherwise there will be issues. So understanding the workforce and understanding what their needs are is very important.



3 '7' Day + Lost Time Accidents

When analysing the 3 '7' day and the lost time accidents, this is a lot of time which has been lost in a year's work. With all of this lost time it will be linked with the 5% reduction rates and the 10% reduction in targets. So this part must be tackled as it will only get worse in the future.

We must look at why there is so much time which is being lost, is APE a safe place to work, and are there countermeasures in place to make things right? A risk assessment will tell us this. also we must look at employee satisfaction, as it has been researched that employees that don't enjoy/feel important in their job will take sick days as they don't care. As mentioned above, a change of managerial style is required as the one which is being used at the moment is an autocratic one and it is clearly not working, hence why the company is in decline.

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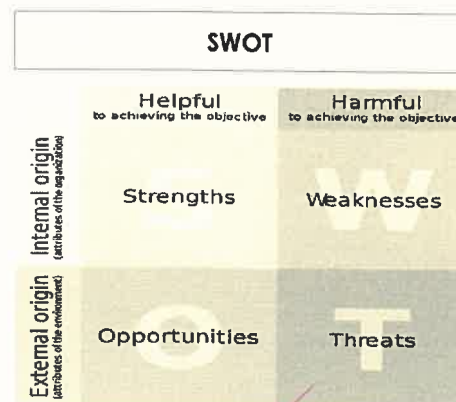
JACOB NICOLAS WILLIAMS – WIL15826428

2

Analysing the business

- ▶ SWOT
- ▶ PESTLE
- ▶ SMART

P	E	S	T	E	L
- Government policy - Political stability - Corruption - Foreign trade policy - Tax policy - Labour law - Trade restrictions	- Economic growth - Exchange rates - Inflation rate - Disposable income - Unemployment rates	- Population growth rate - Age distribution - Career attitudes - Safety emphasis - Health consciousness - Lifestyle attitudes - Cultural barriers	- Technology incentives - Level of innovation - Automation - R&D activity - Technological change - Technological awareness	- Weather - Climate - Environmental policies - Climate change - Pressures from NGOs	- Discrimination laws - Antitrust laws - Employment laws - Consumer protection laws - Copyright and patent laws - Health and safety laws



Marketing Mix

3

- ▶ The 4p's
- ▶ What are the 4p's
- ▶ Research buying and selling trends



Details of the 4p's

4

Price

Price skimming
Competitive costs

Promotion

Price Skimming
Competitive costs

Product

After sales
Installation

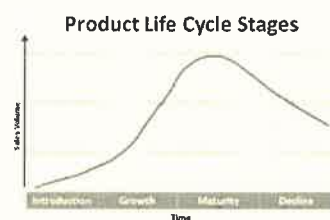
Place

Location is everything
Direct marketing

Life cycle of a product

5

- ▶ Tracking your products is important
- ▶ From the graph you can see exactly where the product begins to grow and decline.
- ▶ The 4p's tie in with this, especially promotion and price



Employee satisfaction

8

- ▶ Employee satisfaction is the key to a functioning business
- ▶ If employees aren't satisfied they will not give their all and managers will not get the best out of them

Employee satisfaction – Maslow's hierarchy

9

- By analysing Maslow's hierarchy of needs, it has been researched that employees will not be satisfied in the workplace if they feel that they don't have any of these factors

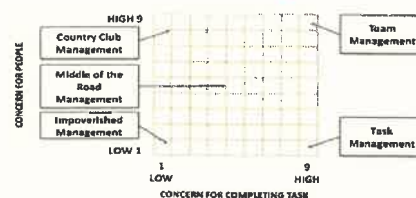


Different leadership styles and theories

10

- There are several leadership styles which are used around the world in different workplaces, and they all work in different scenarios.
- Autocratic – very strict
- Democratic – discuss everything with the team
- Laissez-faire – very placid

- Blake Mouton's managerial grid



Buying or leasing equipment?

6

- When a company uses a lot of equipment, it is best to compare if buying or leasing the equipment is the best way forward, and the most cost effective.

Buying or leasing equipment?

7

Buying

Advantages	Disadvantages
Equity in the equipment	Big initial cost
No contract	Maintenance cost

Leasing

Advantages	Disadvantages
Less upfront cost	Bigger cost in the long run
Flexible contracts	The quality of the equipment is chosen by the leasing company

A business decision must be made on whether buying or leasing is the best way to get equipment.

Managing change in the workplace

- There are various methods of managing change in the workplace, one of the theories is KOTTERS change theory.

