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APPENDIX GA36a

LEVEL 4 ASSESSMENT SPECIFICATION

Student name:	Gareth Hill	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.

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 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:	Gareth Hill	Student P number:	
Programme:		Year of programme	
Assignment Title:	Management, Innovation and Sustainability		

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

Student's Name	Gareth Hill	Date	02/05/19
Student's Signature	G. Hill		

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 shown a great deal of research has been carried out and you have described it and related quite well throughout.		30	18						
2. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline.									
I was very impressed with the demonstration of your knowledge. You have developed your units with quite good analysis.		25	16						
3. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence									
You have demonstrated good analytical skills for some important parts of the assignment. More synthesis would have given you a higher mark.		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 good application of information. This assignment really provides the company with plenty of ideas of where improvements can be made.		15	10						
5. Skills for Professional Practice Attributes in professional practice: individual and collaborative working; deployment of appropriate media; presentation and organisation.									
Your power point did not include a lot of detail. Such a shame as the assignment contained plenty of knowledge evidence.		15	8						
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.)		<table><tr><td colspan="2">Late Submission Penalties (tick if appropriate)</td></tr><tr><td>Up to one-week late</td><td></td></tr><tr><td>Over one week late</td><td></td></tr></table>		Late Submission Penalties (tick if appropriate)		Up to one-week late		Over one week late	
Late Submission Penalties (tick if appropriate)									
Up to one-week late									
Over one week late									
		61	%						

2019

Management, Innovation & Sustainability

AET BUSINESS ANALYSIS
HILL, GARETH

SEWS-E |

Management, Innovation and Sustainability

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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 following points will be analysed in order to present a thorough understanding of the above.

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

Introduction

I have been employed with AET (Aerospace Engineering Technology) as an Engineering Technician for a total of 5 years now. During my time as a Technician, I have worked closely with the production

team and have built a good knowledge of the production process and machine maintenance & installation. It saddens me to see that during the last few years, annual targets are being missed, sales are declining and quality has taken a severe hit. However, with the knowledge of the company that I possess, I believe that I can implement changes that will restore AET to its former glory. I therefore, wish to apply for the role of 'Engineering Project Manager'. In this report, I will put together a detailed analysis of the failures of the business, and suggest areas in which AET can improve.

Analysis of the business

My first port of call is to analyse the current climate of the business. I will break down the strengths and weaknesses of the business, in order to gain a basic understanding of the structural successes and failures of AET. In order to do this, I will first undertake a SWOT analysis.

SWOT

Aerospace Engineering Technology	
Strengths	Weaknesses
Established Business	Falling Sales
Supplier Agreements	Limited international customer base
Existing Customers	Increase in product rejection rates
Trained Staff	High turnover of staff
	Faulty/low quality equipment
	10% reduction in production efficiency
	Poor marketing
Opportunities	Threats
Expansion into international markets	Lack of current employee experience
Research into new technologies	Increased quality from competitors
Introduction of new product	Customers growing impatient
Hire experienced workers to create new senior project team	Current supplier market has become over saturated with competitors

PESTLE

In order to take a view of some of the impacts on the business that are outside of company control, I have made a PESTLE analysis of AET in its current situation. This analysis will allow the business to take appropriate steps to ensure security of the business.

PESTLE - AET	
<u>Political</u>	<u>Economic</u>
Brexit	Inflation
Tax Policy	Growth Rate
<u>Social</u>	<u>Technological</u>
Education	Emerging Tech
Cultural Norms (Boeing accident)	R&D Efforts
<u>Legal</u>	<u>Environmental</u>
Regional Laws	Climate Change
	Energy Availability

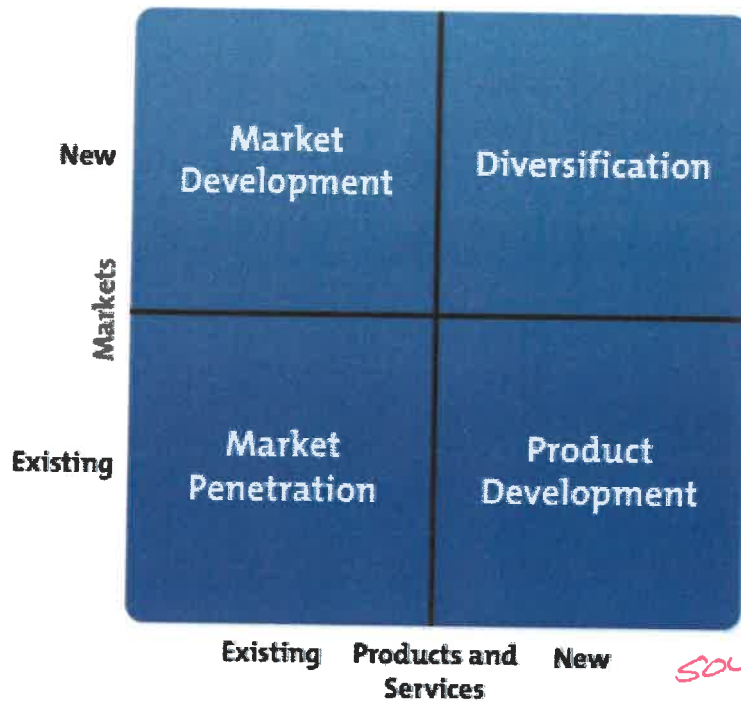
Key Issues

Falling Sales

Probably the biggest failure of all that is currently affecting the business is the decrease in sales as of late. No business can be successful without an income and with the decline in sales, income is rapidly decreasing for AET. So, what are the main reasons for this drop in sales? ✓

Poor Marketing

One of the contributing factors to the fall in sales, can be attributed to a severe lack of marketing of our current product list and company in general. At AET, we have not diversified our product range for many years. Because of this, marketing has become lax and we are not reaching new markets. We have nothing to offer our existing customers as they are already aware of us and our product, and we are not attracting new customers as our marketing strategy is stagnating. In order to branch out into new markets for both new and existing customers, I am going to use an Ansoff Matrix. In 1957, H. Igor Ansoff, created a matrix which presented a quick way to think about the risks of marketing growth (Team, 2019). ✓ *good.*

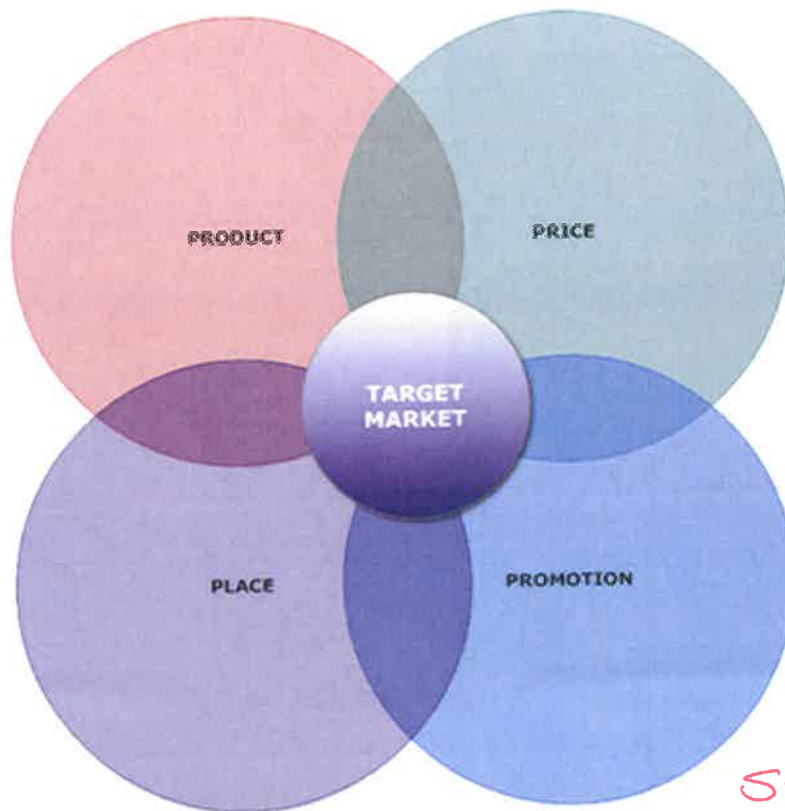


source? ✓

As seen above, the Ansoff Matrix looks at two different categories. 'Markets' and 'Products & Services'. The idea behind this matrix is that once you move from an existing market/product to a new market/product, the risks of growth will increase. The bottom left of the matrix is the safest area and the top right is the area with most risk. Moving horizontally or vertically from the bottom left will bring a new risk. At AET we are currently in the safest position within the matrix. But, seeing as sales are currently falling, I believe it is time for our marketing team to expand the market area and enter one of the fields of risk. ✓

Firstly, we need to introduce and market a new product. Introducing a new product will show our current customers that we have the ability to stay competitive with the competition and also that we strive to improve our product. During the launch of a new product, it is vital to look at our competitors to see how they are marketing their product. Our biggest rivals in the UK are Boeing. Boeing have built their advertising campaign from the idea of customer satisfaction, through ideas of community and value. They fund projects that support young learning and education throughout the UK, and in doing this, showcase their own products. They use their designs and drawings to teach in the field of engineering. This teaching passes to students, potential students and their families and friends, and gives the impression that Boeing are a company that values its customers and actively tries to improve communities. This idea of marketing our product towards bettering the lives of our customers should be brought into our strategy. reference. ✓

One easy way to look at marketing a product is to study the '4P's' of marketing. The 4P's of marketing, look at a Target Market, and use the 4P's (see below figure) to create the best possible marketing campaign. ✓



Source .

'Product' is the start point for this analysis. We must ensure that we are providing a product that is satisfying the needs of our customers. During the product development phase, the marketing team must do in depth research of the potential customer, and also of the life cycle of the product. Typically, a product life cycle will consist of three phases, growth, maturity and decline. If we are to keep a healthy maturity phase, we need to hit the ground running in our growth phase. We will also look at introducing design changes towards the end of the product life, so that we can keep sales up during the decline phase. This will keep revenue steady while we prepare the next generation of products for launch.

In order for a product to be successful, it needs to be attractive to customers. In order for our new product to do so, we will need to ask questions of the product.

- How will the customer use it?
- Where will it be used?
- What are the customers' requirements for the product?
- What features must it include in order to reach these requirements?
- Are there any unnecessary features?
- How is our product different/superior to competitors?

If all of these targets can be addressed and targeted towards our clientele, then we will have grounds for a successful product.

The next factor to consider is 'Price'. A competitive price for a product can make or break a company. If the price is too high, then it will drive away a large portion of potential customers. Too low and profits may not meet a level to maintain and grow the business. Pricing is carefully developed to reflect the quality of a product, and also to meet company profit targets. If high volumes of a product are sold, then selling for 15-20% of production value may be affordable to keep acceptable profit margins. For more bespoke products, a profit of around 50% is more

Where
to the
company
on the
life cycle?
Decline?
if so then
ideas
would
be applicable
to that
stage.



agreeable. As a fairly small engineering company, I believe that our product and pricing should be aimed towards a more bespoke market. We will price according to a lower volume of sale, and focus on product quality and customer service. This will ensure that our smaller customer base, will consistently return to us for a bespoke product, that they will not be able to receive from other customers.

Now that the product has been designed and priced, it is time to consider 'placement'. Where a product is distributed from can greatly affect its attractiveness to customers, and ultimately, sales. The distribution of a product needs to be in a location that is available to all buyers. In order to better understand an ideal location for distribution, the following questions should be addressed.

up to do
market
research
and
re-analysed.

- Where do clients purchase products from? i.e. Shop, online, etc.
- Are distribution channels easily accessible?
- How does the distribution strategy compare to our competitors?
- Will a sales force be required?
- Will a physical store be necessary? Or will online suffice?

In general, our sales are going to be made online, so a shop will not be necessary. Customers will be able to view our products at trade shows or in house events, and as it is a bespoke market, will have an advanced knowledge of what they require. As for distribution, it is possible to calculate the ideal coordinates for a distribution centre. The calculation takes into account, X & Y coordinates of all customers, along with their projected purchasing quantity. Below is an example of how this works, using a sample of our current customer base.

	X Coordinate	Y Coordinate	Units	X Units	Y Units	Total Units
Customer A	15	5	300	15 x 300	5 x 300	300
Customer B	20	10	200	20 x 200	10 x 200	200
Customer C	30	15	150	30 x 150	15 x 150	150
			Total	13000	11750	650

Chosen Location	X Coordinate	Y Coordinate
	13000/650	11750/650
	20	18.07692308

It can be seen that in this situation, the ideal location for distribution based on sales and location would be at X=20, Y=18.

Limited European and International customer base

As noted above, marketing for AET has been lacking over the last few years. I have also noted that during this time, that our International and European client base has been disappearing. Whereas

our marketing failures are a factor in this, it is not the only factor. One major factor in this struggle is due to the uncertainty of Brexit. After the vote of 2016, Britain voted as a majority to leave the European Union and brave independence and the uncertainty of the free market. Whilst this is an ongoing affair, the full effects of this vote are not yet known. The UK aerospace industry generates around £74bn a year for the UK economy, and since the vote of 2016, a dramatic drop in capital investment of £22bn has already been seen (Adams, 2018). As this investment continues to drop, investment from overseas becomes a self-fulfilling prophecy. European countries do not want to invest in the UK as they are concerned over import/export deals and how trade into the UK may slow, and increase lead times of products, and decrease quality.

Another major cause for concern from Brexit to the aerospace industry, is the status of UK's membership to the European Aviation Safety Agency (EASA). EASA provides certification to all parts created for the aerospace industry and ensures that they all meet a certain standard. Countries within the European Union, are bound to buy products that meet this standard. If the UK were to lose this membership, then it would be significantly more difficult to prove that the quality of components was to this standard (Adams, 2018).

Incentives for Customers

In order to combat Brexit and the slight downturn in the UK economy, it is important for us to keep international customers interested in our products. Firstly, we should be offering our existing customers an incentive to stay with us. I believe that with our sales team, we can come to an agreement on a loyalty discount that we can offer our existing client base that will keep them loyal. Next, we will need to bring in new customers, and in order to do this, we should be offering a free trial of one of our parts, for new customers. The intention behind this free part is for our customers to take to their facilities and test them to destruction. This will give new customers peace of mind that any product they buy from AET will be fit for purpose and will last through the stated life of the part. To further this, it is vital that we are confident in the ability of our product and that we provide a full guarantee that the product will last through its stated life cycle.

10% reduction in production targets & 5% increase in rejection rates

In our end of year report, AET saw a 10% reduction in our production targets, from the previous year, and a 5% increase in our overall rejection rates. I believe that the two are linked and can be attributed to the following.

- High turnover of staff
- Poor quality of staff training
- Poor management

High turnover of staff

High turnover of staff is detrimental to any successful business. Having to constantly train people from scratch, allows for more mistakes and vastly increases the lead time of a product. It also uses up valuable time of the senior members of staff and adds pressure to the company to keep these senior members. If all senior members of staff were to leave the company, it would be impossible to train a new workforce and remain competitive in the industry. Staff turnover can be reduced, but only if we change how we manage the business and our staff.

Firstly we need to introduce a fair working wage to all members of staff. Higher positions should command higher pay and also more responsibility. This will provide its own incentive for those who

want to excel have an opportunity to do so. There also needs to be a change in wage security, and wages for all team members should be high enough to live on. Everyone comes to work for the salary so that they may live comfortably, and the stress of a low paid job will show in our workforce if that is what we provide. Employees need a clear mind in order to work well and also a sense of value. Employees will not feel valued if we offer them the lowest salary possible (Staff, 2018). Better wages elsewhere will always motivate staff to leave for greener pastures.

I mentioned above that employees want to feel valued in the work they do. Employee value will usually lead to higher loyalty to the business. I believe we can increase employee value in the following ways.

Recognition

Giving employees recognition for their hard work and continual support is vital. This can come in the form of pay increases and bonuses, or even just giving them a 'job well done' on successful completion of tasks. Soliciting the opinion of staff and implementing their ideas where appropriate is also a great way to do this (Miller, 2018).

Invest in continued development

Nothing will provide as powerful of an effect on employee value as investing into the development of staff. By staging yearly or quarterly performance reviews, we can gain an understanding of the career goals of our staff and help them to achieve this. If they can get to the heights that they wish whilst at AET then they are highly likely to stay. Having a clear path to their goal will also help this and help motivate them to stay active and work to the best of their abilities (Miller, 2018).

Provide work of an appropriate difficulty level

Providing work that is suitable to each individual member of staff will prevent employees from becoming bored with their tasks. With continual progression and work towards better standard of work, this will keep all employees engaged in their activity. Increasing their realm of responsibility to an appropriate level will also help this. Staff do not want to feel babied and watched throughout every stage of their task. They need to feel trusted.

Maslow's Hierarchy of Needs

Maslow's hierarchy of needs is a theory in psychology that addresses a five-tier model of human needs. This model is applied to staff needs, and can be used to pinpoint whether staff are happy in their work or not. The five tiers can be split into growth needs and deprivation needs. The idea behind deprivation needs are needs that need to be met in order to be satisfied and are said to motivate workers (McLeod, 2018). For example, if someone earns a low salary and struggles to pay their bills each month, this will motivate them to push for a higher salary.

The five tiers are as below:

Physiological Needs

The physiological needs are fairly standard needs for survival. These needs include food, water, breathing etc, but also needs that can be met in work such as shelter and temperature regulation.

Security and Safety Needs

These safety and security needs become a bit more complex than the previous tier. They detail a need for security in fields such as financial, health, and safety against accidents/injury. When looking for work, these needs are a significant factor in someone's choice of workplace.

Social Needs

These needs look at the emotional connections that people need to feel in order to feel fulfilled. They include friendships, romantic attachments, family, and social groups.

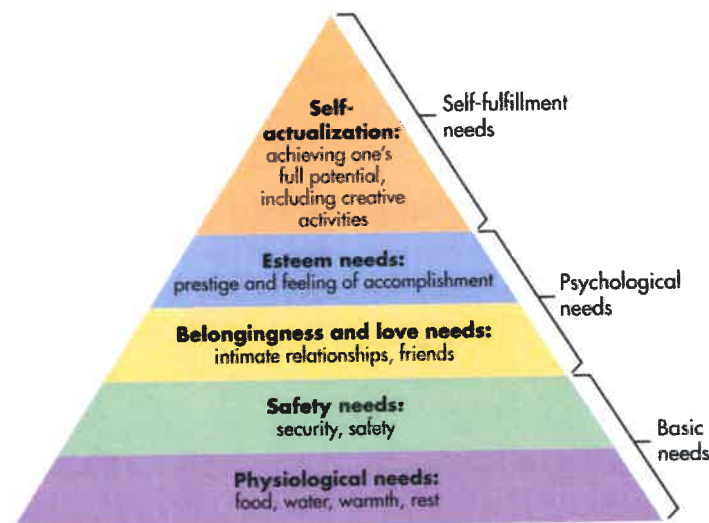
Esteem Needs

This fourth level looks at an individual's need for appreciation and respect. People need to feel that they are valued and appreciated. This ties into the staff value that I have talked about later in this section.

Self-Actualization Needs

At the highest level of this hierarchy is the need for self-actualization. This details a person's desire to be all they can be and pushes them to better themselves, both in the workplace and at home.

If all these needs are met within the workplace, it will create a working environment that people are happy to come to and have no doubts about. The constant challenging of these needs and a push to try and constantly better them is what will keep staff loyal and proud of their work.



Source .

Management style

A large factor in what makes people want to come to work/work for a certain company is how that company is managed. Different management styles will motivate in different ways, and there is no perfect management style. I will briefly explain some of the key management styles and the pros/cons of each, and how employees react to these styles, as well as which style/mix of styles I believe we should adopt here at AET.

Authoritarian/Autocratic

Authoritarian leadership style is all about controlling the decisions made and dictating to employees what is going to be done. There is little to no input from employees in decision making and is run with discipline and control. Authoritarian leadership was highly regarded one hundred years ago, but as the first world has progressed, a solely authoritarian style is no longer seen as a

successful management style. A typical autocratic leader will base their decisions from their own personal experience and judgements and will:

- Not seek feedback for choices made
- Not trust employees with tasks
- Create a style that focuses on completing the task at hand
- Decide on all employee progression and goals

Authoritarian leadership can be a successful leadership style in the short term and can motivate employees through fear and strict control. Tasks that are extremely time critical may benefit from this no nonsense style where decision making is quick and final. Short term, this style can also help a less experienced employee, as they will be given very clear and strict instructions to follow. The downside of this is that it will hinder their long term progress as they are not given freedom to learn and develop. Long term use of this style can lead to less productivity and a want to miss working days, as the leader is seen as cold and bossy. This may also lead to resentment in the manager and wanting to see them leave their position (Articles, 2018).

good.

Democratic

Democratic management, sometimes known as 'shared leadership', is a style of management where employees and managers work together to introduce the best solution/working method to a task. In this style, everyone is given a chance to put their ideas across, and an open and flowing discussion is encouraged. The leader of the group is there to make sure that all have a chance to have their say, and to steer the conversation down a productive path. While the leader will still ultimately make the final decision, it is more often than not, based on an overall agreement from the group discussion, and is seen to be the best suited solution for a majority. Research has shown that this style is one of the most effective styles of leadership and can lead to higher overall productivity (Cherry, 2018).

A democratic leadership style can draw the best ideas from a group and implement the best ones. This leads to the most creative solutions to problems and can often reveal a solution that would otherwise not be thought of. This style will also make employees feel more valued, which as I have stated previously, can boost performance and an employee's desire to do better. This will make employees more likely to care about the end result, rather than just getting the task done. Whilst this leadership style has been proven to be the most effective overall, it does have a few drawbacks. One of which is that in time critical situations it can often take too long to produce a suitable solution and to give each individual their role. In certain scenarios, the experience of a group may not be high enough to set a plan for a task. In these situations it is more practical to have an experienced member of the group to take control and implement a solution.

quite descriptive

good.

Laissez-Faire

Laissez-Faire is a leadership style that has a hands off approach to management. Employees are given lots of freedom and allowed to make their own decision. They are given a loose task and must work towards completing this in whichever way they see fit. Research has shown that this leadership style contributes to the lowest productivity amongst groups of employees (Cherry, 2019).

Characteristics of this style include

- Freedom for employees to make their own decisions

- Leaders provide resources and tools needed for task
- Employees are expected to complete tasks and problem solve on their own
- Employees are given freedom, but onus of the task is still the leader's responsibility

Laissez-Faire can be a beneficial leadership style under the correct circumstances. If the group of employees have a high understanding and skill level in the subject, then this free flowing approach can often yield positive results. In certain situations, the group can be more knowledgeable than the leader, and therefore it is productive to draw on the experience of the group. On the flip side of this, in situations when the group are lacking in knowledge, this level of responsibility can lead to disaster in the decision making process. Strong guidance is needed when skill is lacking. The freedom that this style brings can often lead to employees going off track or being unaware of the finer point of their goal. Advice is harder to come by and it leads to low accountability and passivity from staff.

Chosen Management Style

I believe that the management style that AET needs to adopt is a mixture of the three stated above. No one style is ideal for all situations and a great manager should be able to bend their style to suit the situation and each employee. Democratic is needed to help employees feel engaged and valued. Laissez-Faire is necessary in small amounts in order to keep staff from being overly stressed. It is also useful in encouraging employees to take on responsibility without being asked. And finally, autocratic is a necessary style at times when high urgency is needed or when employees are not responding to the more relaxed way of working. Occasionally it is useful for a manager to show those who they are commanding that they are firmly in charge.

✓ good, this has been deemed from thorough research!

Escalating Maintenance Costs

Another big problem currently faced by AET is the rapidly escalating costs of maintenance of our production machinery. This cost not only affects revenue, but also down time and product quality, and can be heavily linked to some of the other problems that I have mentioned above. A great deal of our current machinery is getting towards the end of its life cycle, and the constant downtime for repairs is not only costly in spare parts, but also wastes production time, and is upping the rejection rates. As we are a fairly small scale business, I propose that we look at the potential to lease equipment rather than buy it.

Leasing allows us to pay a regular sum of money in return for use of a new piece of machinery. Occasionally, the maintenance of the machine will also be undertaken by the leasing company, but this will depend on the type of lease (NIBusinessInfo, 2018). Operating leases and contract hire will include maintenance costs. Buying an asset outright is a useful investment if there is capital available, as it will cost less in the long run. But as we at AET don't have a high enough turnover of cash, using a large chunk of our capital on machinery, would be risky and tie up a lot of our capital.

Advantages of Leasing

- No large upfront cost
- Better quality equipment
- Fixed period of payments, making budgeting easier
- Easier to forecast cash flow
- Depending on the lease agreement, may not have to worry about maintenance costs
- Easy to upgrade or replace equipment

✓ very good

Disadvantages of Leasing

- Occasionally requires a deposit which can tie up capital
- More expensive in the long term
- Company has to VAT-registered in order to start a leasing agreement
- Don't own the asset

Advantages of Buying

- Own the asset
- Less overall cost
- Treated as owner for tax purposes
- Not tied into an agreement

Disadvantages of Buying

- Up front cost. Ties up capital
- Responsible for all maintenance
- Risk of machinery breaking
- Depreciation of assets over time
- Can't spread costs

I believe that AET should lease equipment in order to reduce maintenance costs, and to avoid tying up too much capital. Whilst overall costs may be higher, it will put less of a strain on the company and make day to day life easier to manage.

3 '7 Day' + Lost Time Accidents

I believe that this section can heavily be attributed to the points above made about equipment quality and staff training/turnover. Looking at why accidents are happening and how to prevent them in the future, we need to conduct risk assessment for all old tasks and all future tasks and analyse the risks they pose to staff. Measurements can then be put in place to prevent further accidents. All staff old and new will also be required to attend regular health and safety sessions in order to be up to date on all safety regulations old and new.

Bibliography

Adams, P., 2018. *Aerosociety*. [Online]
Available at: <https://www.aerosociety.com/news/brace-for-impact-brex-it-and-the-uk-aerospace-supply-chain/>
[Accessed 27 March 2019].

Articles, E. B., 2018. *Authoritarian Leadership*. [Online]

Available at: <https://www.educational-business-articles.com/authoritarian-leadership/>
[Accessed Tuesday 30th April 2019].

Cherry, K., 2018. *What is democratic leadership?*. [Online]

Available at: <https://www.verywellmind.com/what-is-democratic-leadership-2795315>
[Accessed 30th April 2019].

Cherry, K., 2019. *What is Laissez-Faire Leadership*. [Online]

Available at: <https://www.verywellmind.com/what-is-laissez-faire-leadership-2795316>
[Accessed 30 April 2019].

McLeod, S., 2018. *Maslow's Hierarchy of Needs*. [Online]

Available at: <https://www.simplypsychology.org/maslow.html>
[Accessed 01 May 2019].

Miller, B., 2018. *How to make employees feel valued*. [Online]

Available at: <https://hrdailyadvisor.blr.com/2018/12/27/how-to-make-employees-feel-valued/>
[Accessed Tuesday 30th April 2019].

Miller, B., 2018. *How to Make Employees feel valued*. [Online]

Available at: <https://hrdailyadvisor.blr.com/2018/12/27/how-to-make-employees-feel-valued/>
[Accessed 27 April 2019].

NIBusinessInfo, 2018. *Deciding whether to lease or buy*. [Online]

Available at: <https://www.nibusinessinfo.co.uk/content/decide-whether-lease-or-buy-assets>
[Accessed 01 May 2019].

Staff, S., 2018. *The Importance of Pay Philosophies*. [Online]

Available at: <https://www.salary.com/blog/the-importance-of-pay-philosophies/>
[Accessed 27 March 2019].

Team, T. M. T. C., 2019. *The Ansoff Matrix*. [Online]

Available at: https://www.mindtools.com/pages/article/newTMC_90.htm
[Accessed Monday 25th March 2019].



Management Innovation and Sustainability

GARETH HILL

Organisational Success

- ▶ Clear objectives
- ▶ Continual business development
- ▶ Remain competitive
- ▶ Long & short term business plan

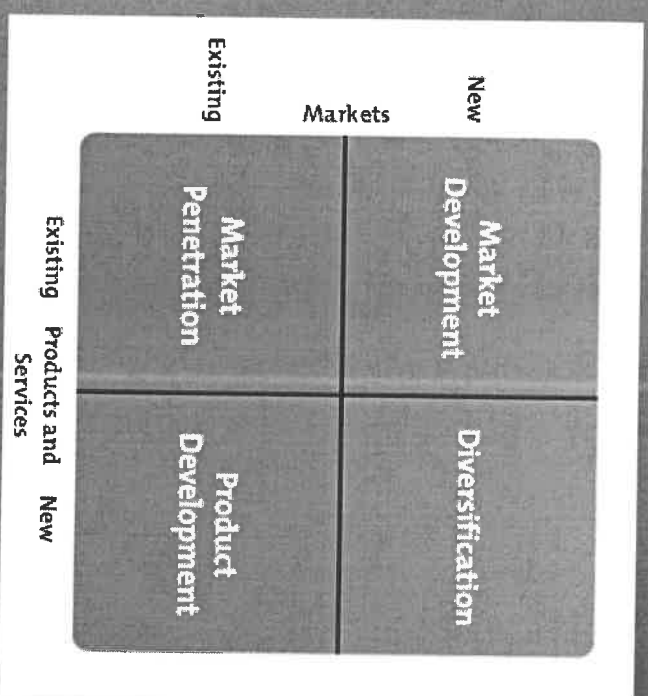
Analysis of Business

- ▶ SWOT
- ▶ PESTLE
- ▶ Analysis of competitors

✓

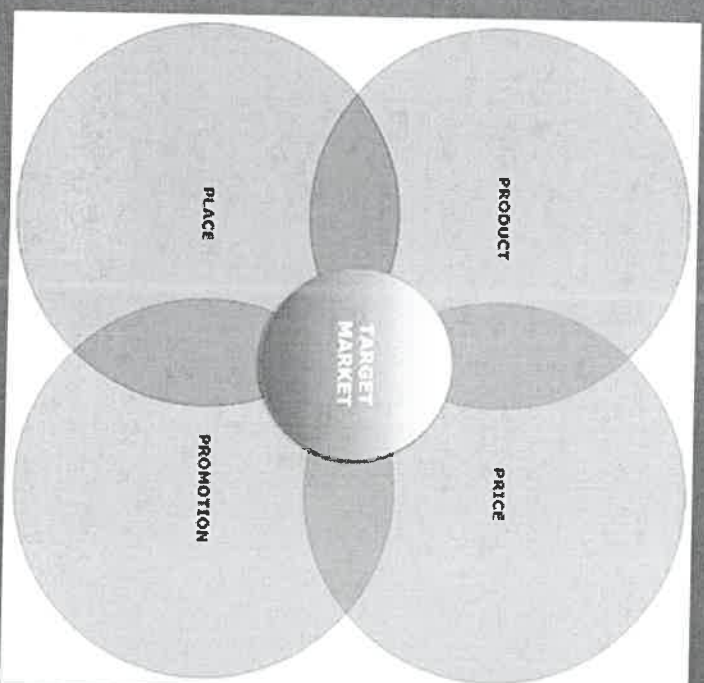
Understanding the Market

- ▶ Ansoff Matrix
- ▶ Introduction to new market
- ▶ Introduction of new product
- ▶ Understanding business trends



4P's of marketing

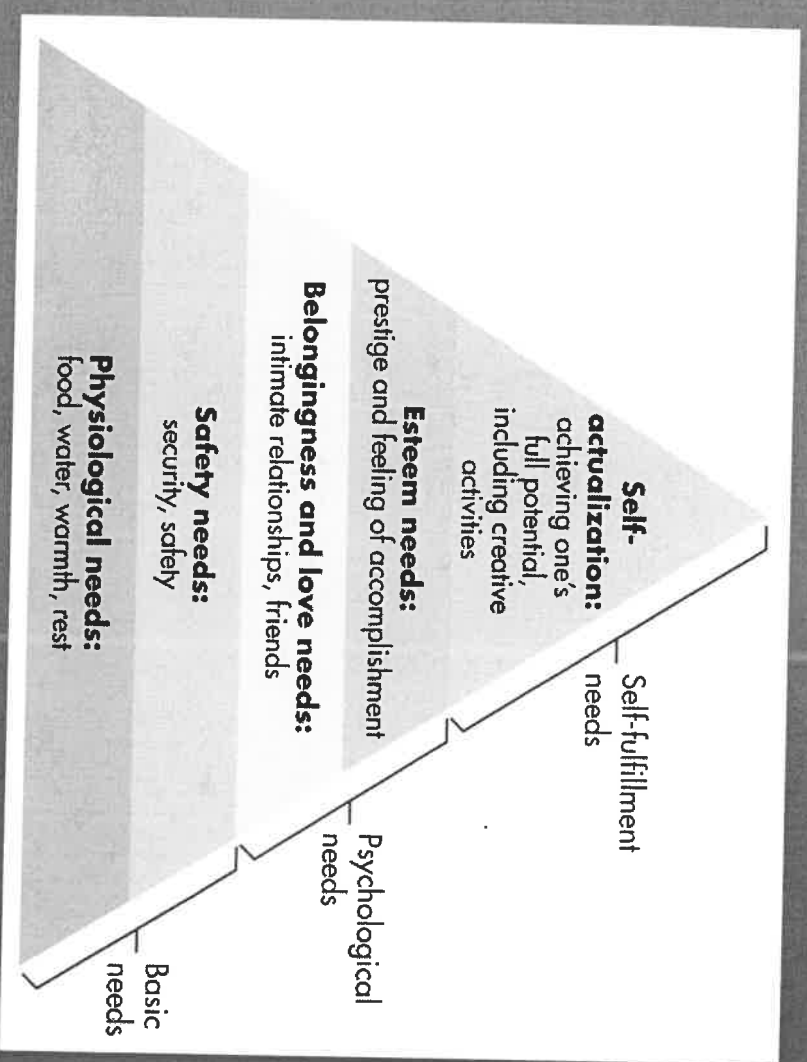
- ▶ Product
- ▶ Price
- ▶ Promotion
- ▶ Place



✓

Mazlow's Hierarchy of Needs

- ▶ Growth
- ▶ Development



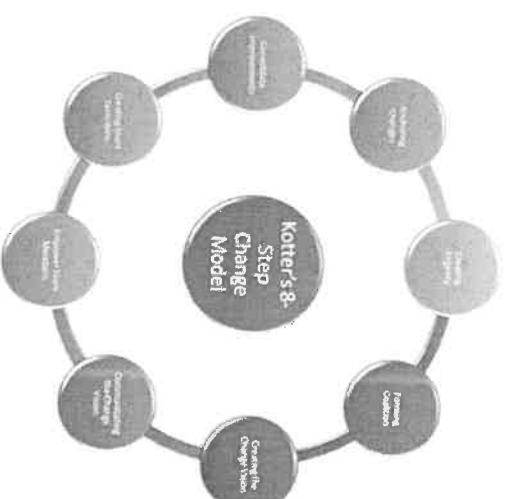
Management Style

- ▶ Authoritarian
- ▶ Democratic
- ▶ Laissez-Faire
- ▶ Which style is right?
- ▶ One style for one occasion?



Change Management

► Kotter's Theory



Q&A

✓

