

1910607-A1-Engineering Management

by Carl Jones

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1.0 Executive Summary

This assignment provides a detailed strategic review of a company using appropriate tools and techniques.

SWOT analysis has been carrying out on the company and has identified all areas for improvement

The concept of 'Lean manufacturing' has be researched in the aid to implement tools into the company to improve already running work systems.

Analysis on finding showed how the company needs to bring in new techniques to move forward and keep achieving the vision set.

of the findings

2.0 Introduction

Avoid using first person in reports "I will"
Use the passive e.g. "a review has been"

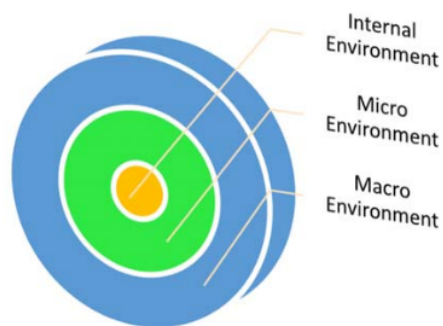
In this assignment I have been tasked to carry out a strategic review of the business plan for Hornbill Engineering Ltd. Using appropriate tools and techniques I will review all areas of the company.

I will investigate the Corporate Social Responsibilities of the company (CSR) and make sure they are being upheld. Carry out a brief introduction to 'lean manufacturing' and how it may be adopted to benefit the company. Based on the finding justified recommendations will be made and presented.

Finally, the company's vision and mission statement will be looked at and analysed to check if its current for any findings.

3.1 Task 1- Tools and Techniques to conduct strategic reviews

Hornbill Engineering strive to be a successful business in the field of Water, Gas and Electrical industry installations. To maintain this all environments and factors need to be evaluated, diagram below shows the three environments



Internal Factors

- Employees
- Management
- Culture
- Structure
- Training

Micro or task factors

- Competitors
- Suppliers
- Consumers
- Intermediaries

Macro or External factors

- Political
- Environmental
- Social
- Technological

Using available tools and techniques to review Hornbill Engineering Ltd strategic business plan.



3.1 Pestle analysis

caps please PESTEL

External or Macro environment effect the company on a year-by-year basis. To be success Hornbill Engineering needs to adapt. Pestle analysis abbreviated to the six major headings for external factors.

3.1.1 Political Factors

These are Government made decisions and Law.

- Through political affairs such as referendums and general elections. Hornbill Engineering monitor necessary developments to establish any expected or unexpected impact to its business.
- Changes in Government policies are monitored though various means i.e. HSE Bulletins, British Safety Council, IGEM, RoSPA, plus other. A register is in place and reviewed annually. Changes to future legislations are acted on. This allows the company to change the way it works, for example training staff or upgrading safety equipment.
- An increase in the national minimum living wage per year may result in the labour rate increasing, therefore this could result in increased overheads and or restrict the number of employees employed.

3.1.2 Economic Factors

- Economic factors are the main concern for most businesses is the UK economy. Due to Hornbill's diverse range of client base and services, the market would have to significantly slow to cause major concerns, however creating a wider ranging client base would no doubt be of benefit.
- The company is also heavily affected by the price of oil due to rising fuel costs. The company monitors annual mileage of its vehicles which is used to establish fuel consumption and identify trends that require attention.
- the emergence of COVID-19 has also put economic pressures on the company. The pandemic impacts, employees required to self-isolate or enter lockdown periods. Additional costs will be incurred for preventative measures attributed to protecting employees and meeting legal guidance. Some of the costs have been offset by business grants and furlough scheme support. Costs have also been offset by assisting employees to work from home.

3.1.3 Social Factors

Hornbill Engineering Ltd provide local resources to client sites wherever possible. Employees are expected to work hours that represent a need to the client's requirements and may call for early starts / late finishes. Each working day will consist of 8 hrs. and may on occasions start and finish times may have to be flexible. Employing suitable staff can be challenging and a plan for Hornbill undertake the apprentice and graduate scheme with the view to develop their skills and the business requirements accordingly.

Any media contact or views would be through the Board of Director's. Any law changes affecting social factors should be picked up through the relevant registers in place.

The company have an equality policy which states that discrimination is unlawful and has a breakdown of various areas and the action to be taken to address any issues raised.

The company use the internet to advertise and market its services. In addition to this, marketing material is also published and distributed to potential customers.

3.1.4 Technological Factors

New advancements in technology have brought various new opportunities for Hornbill with advancements in computer software and online sharing. The use of a SAGE system with Microsoft licenses and other numerous computer-based licenses are purchased throughout the company to enable access to current technology and provides the tools needed to deliver its services.

Funding has been made available for employees to undertake various types of training. Hornbill's workforce has more than 27 years' experience within their industry, the company's current ISO9001, 14001 & 45001 certification, shows a maturity in the company's approach towards management systems.

Information and communication can be passed between clients with the use of email, mobile phones/landline phones. All computer users can access the business servers which enables information to be accessed from any location. Published company information is available globally via the internet.

New projects which come into the business are assessed for feasibility and then appropriately reviewed to ensure the most competent person is assigned to the project.

Global communications can be carried out through the internet, a website is used to demonstrate the services that can be provided, the areas in which are operate and details the relevant contact information to enable all forms of contact, such as telephone, email, mail.

Hornbill implemented a non-contact thermal temperature scanner to prevent employees or visitors with high temperatures from accessing buildings. This system enables to monitor and better control potential COVID-19 cases.

3.1.5 Environmental Factors

With increased pressure on companies to address environmental issues and adopt ways of operations which would benefit society, Hornbill are committed to reducing its carbon footprint by monitoring fuel usage, energy used and wastage. The company have started building a fleet of electric vans.

3.1.6 Legislative Factors

Following recommendations during our ISO9001, 14001 & 45001 audits Hornbill have joined a system called Activ, which assesses the company's compliance to legislative requirements. In addition to this, Hornbill receives automated updates to relevant updated legislation.

3.2 SWOT analysis

SWOT analysis assists to understand what aspects of the company needs to be change due to the influences of internal and external factors.

Below is a SWOT analysis carry out on Hornbill

SWOT ANALYSIS	
Company Name: Hornbill Engineering	
INTERNAL	EXTERNAL
Strengths • Company has a good reputation and has long standing contracts and relationships. • Hornbill is a growing company with plans to expand into nuclear & construction industries. The company is also looking to expand its present client base within existing sectors but in new countries. • The company is viewed as a relatively low-cost supplier. • Hornbill have a positive cashflow and access to financial reserves • Accident & incident rates are low with no prosecutions. • Company has contracts with utility & steel suppliers. These industries are not greatly affected by a negative economic picture. • There is acknowledgement that there are improvement opportunities for SHEQ. Company has begun implementing a series of improvements. • Given our type of work, the company has not been significantly affected by COVID-19. • There are a lot of skilled and experienced personnel within the business. • Hornbill have numerous accreditations including 9001, 14001 & 45001 • Company's change to new legal register system with automated notifications has reduced the risk of non-compliance.	Weaknesses • Rise in non-conformances during the past 6 months could lead to loss of reputation and contracts. • Some leaders are reluctant to challenge – culture improvements. • SHEQ related non-compliance. • Succession planning needs to be implemented. Processes need to be created to ensure that personnel appointments are correct for the job. • Remote working of business means it is difficult to monitor all activities. • Some activities require more robust supervision and better auditing. • Some contracts have been undervalued which has put time and cost pressures on the job. • New hires need to be better vetted. • Company does not always seem to be unified. The 3 departments do not always communicate well.

EXTERNAL	
Opportunities • Hornbill must ensure that they are at the forefront of the change to renewable & cleaner energy sectors. • Better monitoring of employees via tracking systems. • Asia offers significant opportunities for the organisation. • Improve the brand of the organisation. Website requires updating, company can improve its eco-friendly image and could do more in the community. • Review of the financial waste streams will identify key savings and enable higher profits. • Clearer roles and responsibilities will prevent misunderstanding, improve compliance and quality standards. • Further utilisation of technology will improve SHEQ. Lone working monitoring systems & online induction programmes are examples of opportunities	Threats • UN's Sustainable Goals (2030) will put pressure on company to meet targets. • Stakeholder's change in attitude towards climate concerns means that Hornbill must be seen to being climate aware company or risk losing business and brand image. • UK's commitment to Net Zero objective will begin to impact company. • Hornbill rely on gas and electrical suppliers for a lot of our work. It is likely that there will be a shift in demand to cleaner energy sources over the next decade. • Brexit will see some changes in HSE related activities. Hornbill need to be aware and prepared. • Due to Hornbill's global workforce, there is a need to monitor global political events that may impact our business. The recent USA position on favouring home workers highlights this. • Recent non-conformances have put pressure on our relationship and contracts with key customers. • Pandemic continues to pose issues for the company e.g. absenteeism & inability to attend some work sites. Vaccination programme will assist but it is unclear if disease mutation is possible

There are other tools and techniques available which assess other aspects of industry like Porter's Five Forces is a model that identifies and analyses five competitive forces that shape every industry this helps determine an industry's weaknesses and strengths. Five Forces analysis is frequently applied to understand the level of competition within the industry and enhance a company's long-term profitability. (Scott, 2021)

4.0 Corporate Social Responsibility (CSR)



It is not clear if this is what the company usually does or a vision as to what it should do. Lacks actual examples

CSR is a self-regulating business mode that helps a company be socially accountable to itself and the public. By practising CSR companies help to enhance society and the environment, instead of having a negative impact. (Fernando, 2021)

Hornbill maintains high levels of ethical, moral and cultural values i.e. integrity, fairness, best-practice and responsibility to all its stakeholders. To achieve this, the company recognises the need for a corporate vision and its implementation, through careful management from all employees to support these values. All aspects of the company's operations will be assessed for conformance to the highest industry standards through external accreditation. The Board of Directors will make every resource available to support and achieve

Corporate

Hornbill ensure a high level of business performance whilst minimising and effectively managing risk.

Customers

Maintain the highest level of quality and service. develop and maintain close communications and relationships with customers to support them in the achievement of their selected Corporate and Social Responsibility objectives.

Community

Develop and maintain close communications and relationships with local community and encourage employees to participate in local community organisations and activities.

Employees

All employees are treated with the equality, fairness, value, and respect that they deserve.

Environmental

Hornbill understand that its activities could affect the environment and the communities in which it operate. As a company it will identify, minimise, and effectively manage these impacts.

Safety

Hornbill shall provide clean, healthy, and safe working environments. Suppliers & Contractors. Select suppliers and contractors who adopt responsible business policies and practices in alignment with Hornbills own. Compliance with the highest standards of ethical and moral business behaviour must be achieved. This includes high fair-trade standards, non-use or participation of child labour, slave labour or human trafficking and the maintenance of equitable working conditions for all within their supply chain.

Communication

Hornbill will carefully inform and listen to all stakeholders, whilst maintaining a transparent and blame free environment.

5.0 Lean manufacturing.

Lean manufacturing was originally developed by Toyota Motor Company for its production system. The objective of Lean is to remove any waste and take out elements of production that do not add value to a finished product.

Along with key waste areas, there are 5 principles to lean that make it so effective for engineering production and management.



1. Value:

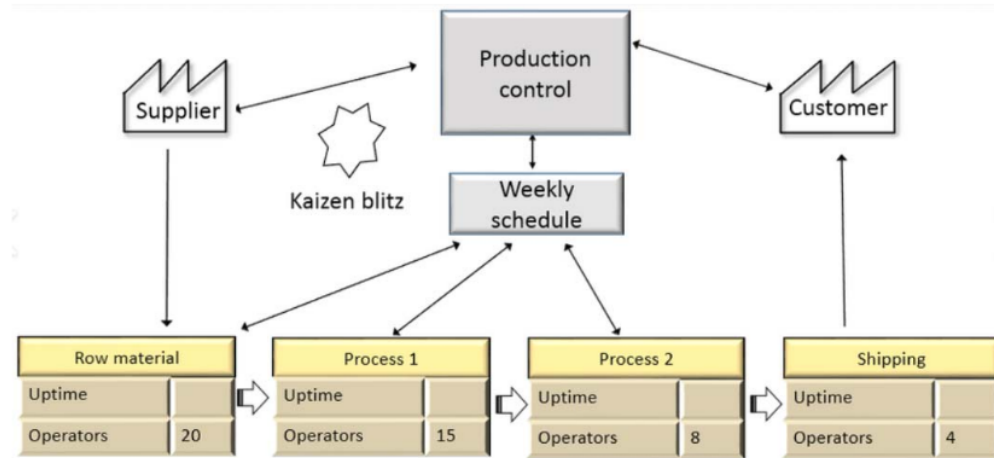
Define what is of value to the customer?

- Price
- Delivery timelines
- Quality
- Reliability of provided services
- Meeting requirements and expectations.

2. Values Stream:

Identify the Value stream/ eliminate waste

The value stream can be mapped using a flow chart, below is an example for a manufacturing system



(Pusca, 2016)

The mapping process can be adapted to suit all aspects of engineering and production. Creating a value stream from start to finish points on a continued loop.

3. Flow:

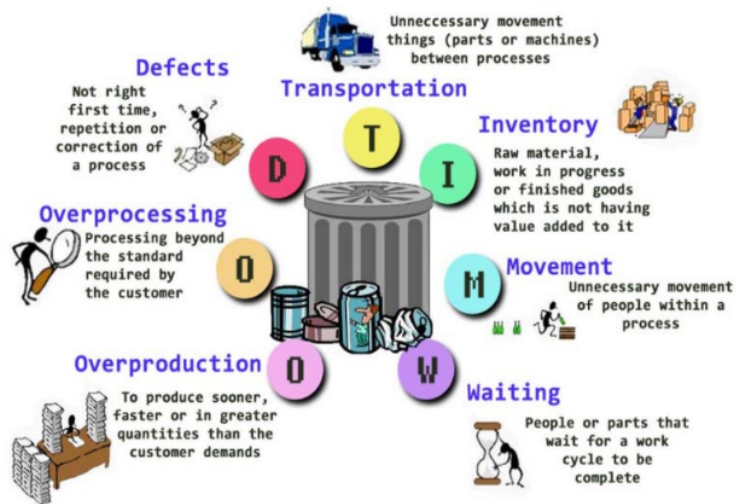
Create a constant flow

Flow is the progress through the mapped stream. There can be several identified flows of manufacturing.

- The flow of raw materials
- The flow of work-in-progress
- The flow of finished goods
- The flow of operators
- The flow of machines
- The flow of information
- The flow of engineering

(Global, 2018)

The flow stage is where all waste needs to be removed. Below are the seven key waste elements



4. Pull:

Produce based on demand

The purpose of implementing a pull system is to create a workflow only on demand.

This allows companies to eliminate waste activities to optimize resources and reduce overstocking. A production model produced from pull systems is “just-in-time” where products are delivered to meet demand.

5. Perfection:

Continuous Improvement

Lean manufacturing relies on the concept of continuously striving for perfection. This involved eliminating all waste. This is always monitored and the whole process circle begins all over again.

There are many essential 'lean' tools available that can aid industry and companies in relevant areas.

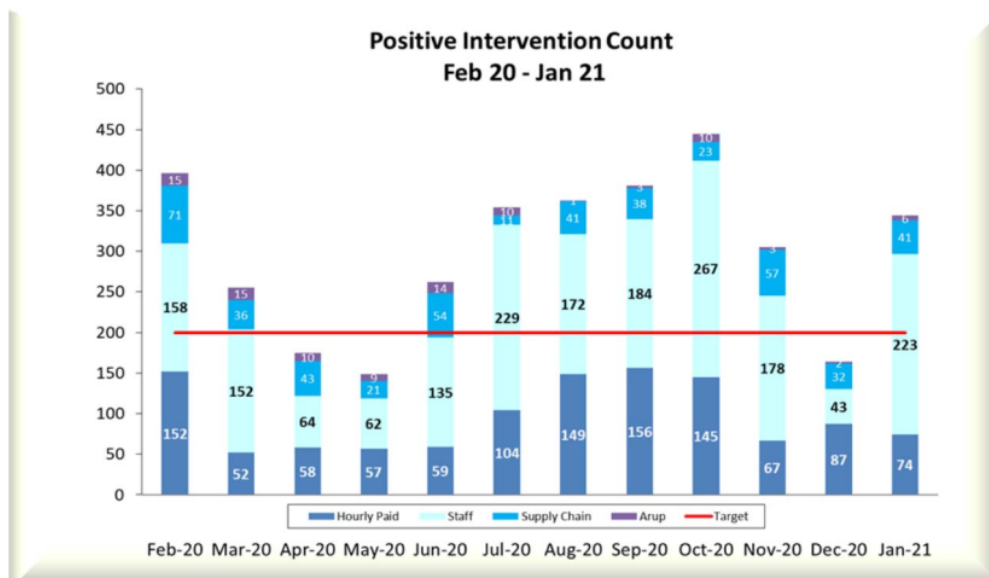
Listed below are some examples.

1. 5s – Sort, Set in order, Shine, Standardize, Sustain.
2. Gemba - A philosophy that reminds us to get out of our offices and spend time on the plant floor the place where real action occurs.
3. Hoshin Kanri (Policy Deployment) - Align the goals of the company (Strategy), with the plans of middle management (Tactics) and the work performed on the plant floor (Action).
4. Kaizen (Continuous Improvement) -A strategy where employees work together proactively to achieve regular, incremental improvements in the manufacturing process.
5. KPIs (Key Performance Indicators) - Metrics designed to track and encourage progress towards critical goals of the organization. Strongly promoted KPIs can be extremely powerful drivers of behaviour – so it is important to carefully select KPIs that will drive desired behaviour.

Hornbill has adapted to use one tool of lean manufacturing to date and that is KPIs. As the company doesn't produce a manufactured product as such, KPIs are used as key performance indicators for work activities which are listed below.

1. Safety performance – how many near-misses, accidents have occurred each month.
2. Man, hours worked
3. Customer complaints
4. Company employee training
5. Tracking of positive interventions- achieving 100% safe.

All the data is collected and statistic as graph representation are posted for all employees to see achievements. Example KPI graph below.



KPIs are reviewed every month to monitor and set new goals.

5.0 Recommendations

*business plan
not found*

After conducting a strategic review of the company's **business plan**, there seems to be areas for improvement. SWOT analysis identified a lot of areas of weakness surrounding internal factor and External threats. Increasing demand from government sanctions and more competition within the sectors is going to make things harder if the company doesn't act sooner rather than later. Over the next year the company needs to implement tools to try and improve these factors. After researching 'Lean manufacturing' and getting a better understanding of how it can make areas of industry successful. I recommend that that 'Lean' tools like 5S can make a big impact to the company's weaknesses.

6.0 Vision and mission statement

Maintain Hornbill's success and recognition in the provision of specialist services in the field of process control, instrumentation, electrical systems, high voltage, and training.

Continuously review, improve, and excel in all aspects of the company

Develop sustainable organic growth to the benefit of all

Always be first choice

The vision statement maps how the company should be and should remain the same. To achieve and keep this vision systems need to be implemented.



*Arguments
justifying
this should
be made*

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1910607-A1-Engineering Management

GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

Instructor

47 / 100

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PAGE 4

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PAGE 19

CARL JONES**47****1. ENGAGEMENT WITH LITERATURE**

Research and use of the wider literature relevant to the assignment tasks. The work uses graphics from research well. A satisfactory range of web sites has been used to research the topic.

06**2. KNOWLEDGE AND UNDERSTANDING**

Display of knowledge of the subject, awareness of current thinking Strategic planning This has been conducted to a good standard. The analysis is relevant and well done. However, not having completed a Porter's analysis means that the level of competition, the power of suppliers and customers and threats of new entrants has not been fully evaluated. CSR The review would have benefitted from consideration of the triple bottom line thinking under the CSR heading. It is not clear if the analysis is what the company is actually doing or a vision as to what it should do. Quotations from company web site, annual reports to support the analysis would have been good. Also, actual examples of what the company has done could have been included. Lean

13

manufacturing The explanation of lean is satisfactory. Whilst the lean tools have come from a volume manufacturing environment there are many applications for them in other industries. A brief explanation of the wastes and some of the lean th

3. COGNITIVE AND INTELLECTUAL



Critical thinking and analysis of the topic. Grasp of the broader topic A satisfactory level of analyses and critical thinking is demonstrated in the report. Whilst a reasonable job has been made of some of the subject knowledge there is little in the way of what is done well in the company by giving actual examples and what could be done better.

09

4. PRACTICAL APPLICATION



How well the strategic management planning and evaluation tools been applied. The recommendations and outputs from the analysis lack depth and detail.

12

5. TRANSFERABLE SKILLS



Communication skills. How well has the report been written considering report structure and language. A well laid out report that has a reasonable flow to it. Good use of graphics has been made.

07