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Strategic Change and Organisations

BUSINESS REPORT ON INEOS

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Executive Summary

This report has focused on the business report of Ineos Company which is a chemical company. This report mainly includes the findings of the company and the strategies. In the first part, the analysis of internal strategies and external strategies are discussed in this study. Internal strategies include resources based view, value chain analysis, VRIO, Mckinsey 7s model, internal factor evaluation matrix and financial analysis. The external factors include the evaluation matrix, PESTLE analysis, and porters five force model and others. Companies like Ineos find it a major challenge as the entire Organisation run on fossil fuels to control their adverse effect on the climate. Running on innovation, Ineos has invested a billion in developing Indian River County BioEnergy Centre near Florida, acting as the first commercial plant on a global platform, capable of altering a huge waste into bioethanol. This initiation would power up 1400 residence in the area. Apart from the USA and France, Ineos got to continuously optimize their energy efficiency in the UK where the cost of energy is comparatively high. The report explores the possibilities for the company to expand in the UK, channelling its other resources for producing ethyl that would contribute to the company's revenue growth.

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Introduction

INEOS is a multinational chemical company which is under private ownership. The headquarters are located at London, UK (ineos.com, 2018). It is among the top 10 companies among the leading chemical industries and has the revenue of about \$60 billion. The main professional employees working here are experts in the oil and chemical industries. The CEO of the company is Sir Jim Ratcliffe who holds about 60% of the shares in the company. The company produces raw materials which are required for the manufacturing of plastics, textiles, medicines and paints. The company always strives to implement new technologies in its ventures.

Background of the company

In 2017, the total revenue of the company was 15210 million Euros and the gross profit was 2686 million Euros. The growth of the company had increased manifolds after gaining business advantages from alliance companies such as BP, ICI and BASF. The company is one of the lead producers in many of the petrochemical products and several other packaging materials. It also produces certain medicinal products such as solvents for insulin and several antibiotics. Ineos holds a good name among the blue-chip chemical industry. Many of its divisions earlier belong to well-known chemical companies such as Dow Chemicals and UCB.

Ineos manufactures products for many markets, the majority of which belongs to the Fuel and lubricants sector. The major portion of the earnings of Ineos is from developed nations such as Germany, the USA and the UK. The company is also associated with renewable energy and is a leading name in producing sustainable and clean energy from waste products.

Vision mission and customer orientation of the company

The vision of Ineos is to be a company which focuses on the needs of the customers and be a leading supplier of raw materials to various companies. The main mission of the company is providing a healthy working environment for the workers and to provide excellent customer services to meet up to their expectations (ineos.com, 2018). The company also encourages innovation and invites entrepreneurship from the alliances to expand their business.

Ineos aims to reach out to various customers as well as gives utmost importance to its existing ones. In order to be a prominent name in the competitive market, the company focuses on its

customer services wing and ensures proper product deliverability and quality to the esteemed customers. The company orients its procedures and policies in such a way that tries to minimize the customer credit risk. This is done to ensure that the customers do not face financial shortcomings such as bankruptcy and liquidation. The company values the fact that any significant and unwanted change in a customer relationship or even the financial condition of the customer can drastically affect the business ventures and limit the resources available to the customer. Ineos takes routine feedbacks from the customers and tries to analyze if the customers face problems regarding the prices of the raw materials or regarding discrepancies in their services. Ineos considers customer contracts and relationships as its valued assets and estimated the cash flow through them.

Customer orientation to the company

Customers play the main role in a company as it utilizes the product that is manufactured by a firm or a business. Ineos Company is a very customer oriented Organisation as it knows the importance of it. The management of the company aligns their employees with the individual objects of the team by satisfying and retaining customers. The trained and empowered staff of the company also helps to satisfy and retain customers. The efforts that are made for the customer orientation strategies should have some training components that would play important roles in the business. A better customer service also helps to retain genuine customers to the company.

Part A

Analysis

Strategic internal analysis

Value chain analysis (VCA)

It is the process through which a company identifies its primary and secondary activities. It mainly added up the value to the manufactured final product for the analysis of increased differentiation and cost reduction. It also represents the activities of the company that is Ineos limited in the process of transformation of inputs and outputs. The internal activities of the firm are mainly analyzed with this strategy. The value chain of Ineos limited represents the activities that are

involved in the process of production of goods and services. Value chain adds the value to the final product and also supports the activities that are related to it.

The value chain of Ineos consists of five chains which are inbound logistics and operations and on the other hand, it includes outbound logistics, marketing and sales and also services. As per Blackwell and Eppler (2014), inbound logistics is the part where the materials act as inputs to the company such as chemical products and other accessories. Operations are the process where the targeted product is being manufactured or operated. Raw materials are transformed into the desired product by Ineos limited which also includes other expenses such as overheads and others. The next is the outbound logistics which is the process of transferring the products to the storehouses or storage facilities. It is also an important process as it mainly carries the finished product to the storage facilities and all the normal and abnormal losses happens in this chain. Marketing is the chain where the products are being marketed for better sales to the people. It is also an important and expensive process where it adds value to the product. As per de Assis *et al.* 2017), the last chain is the sales and service chain where the manufactured products are being sold and service is being provided after the sales process. In this case, Ineos should have the better marketing and selling strategies for better generation of revenues than the rival companies (***Refer to Appendix***).

Firm infrastructure: It can be seen to be in possession of a potentially hostile environment for carrying out shipping activities. This, in turn, assists it to trade the chemicals manufactured on its part in an efficient manner.

Human resource management: Ineos mostly hire employees who previously are skilled and expertise in the petrochemical industry. This enables it to utilise all of its available resources optimally (Blackwell and Eppler, 2014).

Technology development: Ineos is known to be a world-class producer of polymers, catalysts, additives and coatings. Other than these, Ineos also provides technical services and has auto-thermal cracking technologies. The technical solution provided by the company is used as troubleshooting assistance for plant performance.

Procurement of resource: Ineos has expanded their feedstock procurement activity and trading in Europe. Naphtha used at cologne site is the sole feedstock that supplies two ethylene production. Ineos has been predicted to be Europe's largest buyer of petrochemical

naphtha. Improving the company's presence in the feedstock trading industry will largely contribute to the sustained delivery of commercial value of the company's assets.

Inbound logistics The firm can be seen to indulge itself in the trading and marketing of natural gas both within the economy itself as well as abroad.	Operations It has been one of the largest chemical manufacturing businesses within the economy of UK.	Outbound logistics Ineos team is responsible for safe waterborne transportation of chemical products and cracker feedstocks on an international platform. A few years back the company signed a contract with three US companies for drilling, liquefying, shipping and distribution of ethane to Ineos Grangemouth	Marketing and sales Ineos teams are responsible for the safe waterborne transportation of cracker feedstocks and chemical products on a global scale	Service It tries its best to provide good quality services to customers targeted by it at large in order to earn profit level as per the level expected on its part.
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Table 1: Value Chain Analysis of Ineos

(Source: Ineos, 2018)

Internal Factor Evaluation (IFE) Matrix

It is the strategic tool that is used determines the internal environment of an Organisation for noticing its strengths and weaknesses. Both of it should be utilized in the process of evaluation of key factors and it also to be evaluated that the rival should not use the same factors as of the company. The weakness of Ineos limited can be advantageous to the rival companies as these are the fields where the company would lags and face some difficulties in meeting the challenges. Therefore the weakness should be mitigated as soon as possible and the focus should be on the strengths of the company. Hassan (2017) mentioned that the factors have the allocated weights and rating for the performances and are divided among the opportunities and threats that are faced by the company that is Ineos limited.

As Ineos limited is a chemical manufacturing company there should be many difficulties that are to be faced by the company during its course of business. The weight and rating should be multiplied for the evaluation of the weighted score which is beneficial for the company. This kind of matrix is easy to understand and easy to use in the same way. It does not require and expert advice for its operation. It also focuses on the internal factors and identifies all activities of the company. It is a multipurpose tool as it evaluates the strength of Ineos in the targeted market as well as the weakness of the company.

Strengths of Ineos	Weight	Rating	Weighted Score
Most of the employees that the company hires are mostly from oil or chemical industry.	15 (out of 20)	6	6

Highly skilled and experienced employees	14 (out of 20)	5	5
Employees from BASF, BP, Bayer, ICI come to work for	16 (out of 20)	6	6

Table 2: Internal Factor Evaluation Matrix of Ineos

(Source: Ineos, 2018)

Financial Analysis

It is the analysis of the financial information for achieving the decision of the business that is provided by the company. As per Johnson *et al.* (2015), the statements that are financial in nature should be analyzed for the better purpose of the investors and also for investment decisions. A statement such as the income statement of Ineos limited is mainly used to determine the profit or loss that is incurred or gained by the company. The annual report of Ineos limited has been disclosed by the company and the amount of profit or loss is mentioned in the report. The amount of revenue is around €15210 and €12610 for the year 2017 and 2016 respectively. This increase in amount can be the increase in sales and also reduction in expenses that are incurred during its course of business. The expenses that are incurred during the business process should be deducted with the amount of revenue that has been generated to evaluate the amount of profit before tax which is around €2300 and €1574 for the year 2017 and 2016 respectively. The amount of tax should be deducted to determine the amount of net profit after tax which is around €302 and €340. Therefore the amount of net profit is around €1998 and €1233 for the year 2017 and 2016 respectively.

The balance sheet of Ineos limited has also been disclosed by the company. In the viewpoint of Kallala *et al.* (2015), it is the state where the assets and liabilities of the company are recorded and also shows the financial position of the company. Assets are the investment that is mainly required to run the business smoothly and also to paid off any kind of debts that are faced by the company.

Ineos Company has the total assets of around €11048 and €11358 for the year 2017 and 2016 respectively. This states that the company has spent some of its assets for paying some debts in the current years. Liabilities are mainly the burden of the company and also to be adjusted with the available assets. The total amount of liabilities is around €9351 and €10928 for the year 2017 and 2016 respectively. The amount has decreased which means the company has paid off some of it and thus helps the company to reduce its burden.

The next statement is the cash flow statement which mainly records the inflow and outflow of cash from the company. Kosinova *et al.* (2016) stated that this statement mainly consists of three activities through which inflow and outflow are divided. The first activity is about the operation which includes the receipts and payments of equivalents and receivables. Therefore the amount that is generated from this activity is around €2187 and €2278 for the year 2017 and 2016 respectively. This shows that the company has more activity in operation in the previous year than the current year. The next activity is from investing in the company. It mainly includes the sale and purchase of assets and any kind of loans and others. The amount of cash that flows out are around €745 and €724 which is almost the same for both of the years. This amount is to be deducted from the above activity to evaluate the net amount. The last activity is from financing which mainly consists of redemption and issue of securities that are available in the company. Ineos Company has used cash in this activity which is around €2143 and €1087 for the year 2017 and 2016 respectively. In this case, the amount has also increases which mean the company has incurred some amount in this activity. These three amounts have to be adjusted among each other for the amount of cash at the end of the period which is around €1366 and €2204. Financial activities have been performed by the company and for that reason the amount of cash has been decreased which denotes that the company has the lower capability of paying any kind of financial crisis. Financial ratios are used to analyze the current position of the firm.

Financial ratios are used to analyze the current position of the firm in which a quick indication is also shown from key financial areas. There is various type of ratio in which solvency ratio and profitability ratio are most important. It also consists of other two ratios which are also important for the company that are current ratio and solvency ratio. Current ratio can be evaluated by dividing current assets and current liabilities which is around $(4326 / 2202) = 1.96$. It represents that assets are most effective on the current position of Ineos.

Gross margin ratio has also increase which is 17.6% in the year 2017 and 19.5% in the year 2016. It can also be evaluated by the following formula:

Gross margin ratio = (Total Revenue - Cost of goods sold) / total revenue

Acid test ratio can also be calculated by the following formula:

Acid test ratio = (Current assets - Inventories) / Current liabilities

It has also been evaluated for the year 2017 which is 1.39 and 2.08 which is a huge change and increase in current assets can be a reason for its overall increase. Financial performance can also be determined by ratios in which it has been prepared by considering financial statements.

Strategic external analysis

PESTLE Analysis

It is the business analysis tool and mainly used to determine the factors that are affecting the business of the company. The factors that are included in the analysis are a political, economic and social factor. On the other hand, technological, legal and environmental factors are also included. In the context of Ineos Company, the analysis has been made in the following table

Political	It mainly influenced by the government of the country of operation. Imposing new tax and duties might hamper the general trend of the business. The economy of the UK is mainly a constitutional monarchy largely influenced by a parliamentary system. It is said to be a stable and fair country. The economy is in possession of a proactive government and is politically stable.
Economic	It is the factors which mainly affect the performance of the economy on which the

	company depends on. The economy of the UK can be seen to be in possession of a strong economic position in relation to other economies of the world. It is a diversified economy with a high rate of GDP.
Social	It mainly analyzes the social environment of the targeted market. The factors that affect the company are the culture, demography and others. There are different staffs and employees of the company that might affect the cultural trends of the company. This, in turn, enables it to get access to the increased amount of foreign direct investment.
Technological	This is one of the important factors on which the company is focused on. The concerned economy of the UK does not have good access to technological advancement. However, there is the presence of acute internal competition for stimulating its growth level.
Legal	The concerned labour law of EU specifies a period of 48 hours as the maximum duration of working hours. Its Employment Act of 2002 eradicates discrimination on grounds of religion, race, disability and sex at the time of providing employment opportunities.
Environmental	The government of the UK can be seen to play an integral role in developing the European Standards. This includes an adequate focus on

	amending various policies of EU as per requirement from time to time.
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Table 3: PESTLE Analysis of Ineos Company

(Source: Rigamonti *et al.* 2015, p.535)

Porters five force analysis

As the chemical industry of the UK is very strong so the threat of new entry is very low. Any new entry in the chemical industry would face the maximum problem as there are many giant companies which are already present. The threat of substitution is also low as there are few entry and cost of change also takes place. Supplier power would be high as there is a number of suppliers and also their ability to change. As per Rigamonti *et al.* (2015), buyer power would also be high as a number of customers would also increase and also its sensitivity of price. Therefore the competitive rivalry would be more for an increase in a number of competitors and customer loyalties.

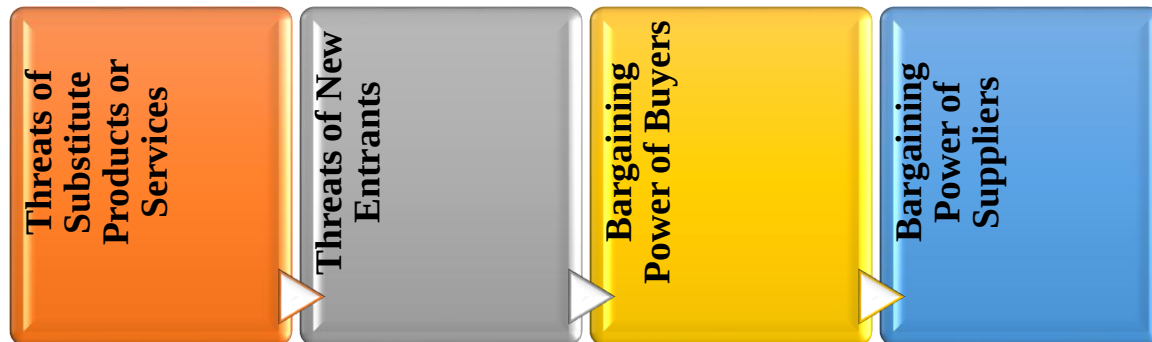


Figure 3: Porters five force analysis

(Source: Yoder *et al.* 2015, p.664)

Porters five force analysis

Forces	Ineos	Competitor 1 ICI	Competitor 2 BP
Competitive rivalry	Being a leading petrochemical industry and also being young compared to other chemical companies, Ineos has set a stage for competition for pre-existing companies. Ineos has adequate technologies for	ICI that was once a leading international chemical company merged into Akzo Nobel recently. ICI has upgraded their existing technologies, enhancing their CSR policies for reducing carbon emission from	Being a multinational gas company is also the 12th largest revenue collector, setting tough competition for other chemical industries in the UK. The company has several major environmental and

	curtailing environmental pollution	their plants across the UK	safety incidents that have caused the death of a number of employees
Supplier Power	The company has their own supply chain management, keeping their materials in high confidentiality	Since postwar the companies suppliers have remained the same, increasing the brand's loyalty	BP has their materials supplied mostly from Ohio and Gulf, benefiting the company from saving taxes compared to that of Europe.
Buyer Power	Being always in news for its collaboration with the UK government for the betterment of the environment, it also increases the brand's image as a reflection of their CSR policies, improving their buyer power.	As one of the most traditional chemical company that has a large section of customers already been acquainted with the brand's name has higher buyer power than any company that has made a recent entry in the market.	Having a high range of suppliers, BP has expanded not in Europe or the western countries but also across the Gulf.
Threat of Substitution	The company faces threat about their product being too simplistic to be copied by other company.	Having stayed over decades in the market, ICI does not face any such challenge.	BP does not face the threat of substitution because of its vast expansion.

The threat of new entry	Ineos has the threat of new entry.	ICI does not face the threat of new entry.	BP does not face the threat of new entry.
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Table 4: Porter's 5 Point analysis of the company

(Source: Ineos, 2018)

Part B

Change management that needs to be brought in Ineos:

Advising Ineos on strategic options as per evolutionary approach

The evolutionary approach is the most suitable change management approach for the company. Some of the global leading chemical companies have recently taken remarkable initiatives on a global issue of preserving natural resources by implementing change management within organisations. For companies like Ineos, it is a major challenge when the Organisation relies solely on fossil fuels to control their adverse effect on the climate. It took over twenty years for the company in perfecting their technologies to turn household waste into advanced biofuel and renewable energy. Unlike some biofuels that depends much on vegetable oil, corn or sugarcane, Ineos technology does not claim land or resources that would affect food crops (Carnall, 2007). However it is inevitable that even Ineos has dealt efficiently with recycling and reducing waste, there will always be a part of waste as an existing infrastructure that needs to be sent to the

biorefinery. Ineos needs to emphasize on their patented technology that can refine the left out waste products, contributing to lowering carbon emission.

As the company runs on innovation, Ineos has already invested a billion in developing Indian River County BioEnergy Centre near Florida where it would act as the first commercial plant on a global platform that is capable of altering a huge waste into bioethanol. In that case, the company needs to produce electricity in order to run the plant located in Vero Beach. This initiation would power up and lit almost 1400 residence in the area. Considering the fact the UK is one of the most expensive places for making chemicals, Ineos being an energy-intensive Organisation needs to develop an innovative plan to stay in the business. Apart from the USA and France, Ineos got to continuously optimize their energy efficiency in the UK where the cost of energy is comparatively high. The task of maximizing energy efficiency was not a big deal for the company in America or Asia but to create the same in the UK or Europe has got the company in a difficult position for which it needs to adapt to some changes in management (Micelotta, Lounsbury and Greenwood, 2017).

With the acquiring of Lavera site that was second handedly bought by Ineos from BP, rose the shale gas boom which reduced the cost of energy for Ineos competitors. In order to sustain the competition, the company needs to adopt the evolutionary change. Analyzing Ineos ways of working, it is evident that the company is resistance to change which is a crucial element in change management. In the evolutionary approach, the management must communicate about the Organisational changes to the employees and seek their active participation in planning for the change. In this particular approach for further growth of Ineos, the change management can be categorized in a three-stage model that has three distinct phases to address the change. The first phase is unfreezing the Organisation, the second step is to move and the third phase is to refreeze (Senior and Swailes, 2010). Following the second phase, Ineos needs to move the Organisation where it needs to be in the era of global competition. Finally, adopting the new model is a very lofty approach in addressing Organisational change. In order to implement change management, it requires a humanistic approach regarding control of carbon emission, affecting the environment (Kalnæs and Jelle, 2015). For such case, Ineos is required to move their focus to Technology Adoption Model or TAM/TAM2 for producing renewable energy which would significantly benefit their technology.

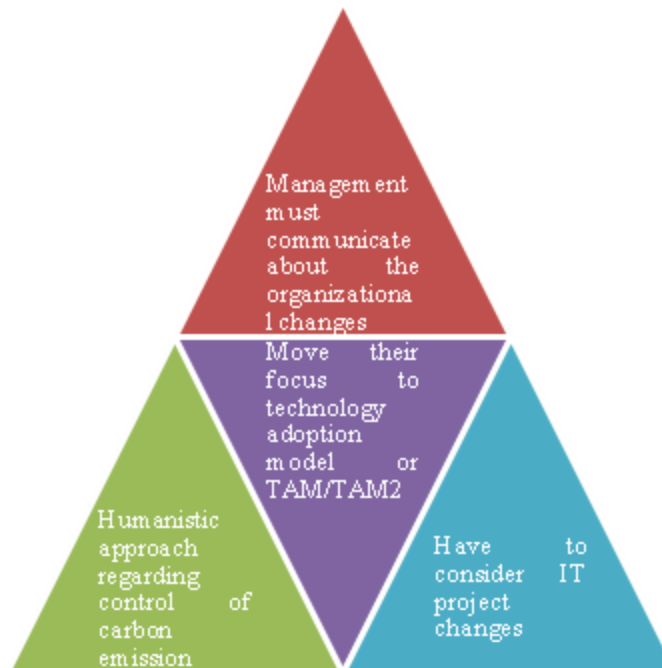


Figure 4: strategic options as per the evolutionary change

(Source: Senior and Swailes, 2010, p.11)

Developing of bioethanol as discussed above needs to serve in the use of biofuels, for having a better solution for dealing with waste. In the process of developing technology, Ineos management has to consider IT project changes that comprise two primary factors which would lead to successful changes in technology adoption. The first factor understands that technology change must be easy to access and simple and the second factor is that the change should be useful to the end-user (Eriksson, 2016). As in accomplishing most projects, Ineos have been dependent much on the government and partnering with them for broader commercialization. Governmental bodies in such cases are often faced with challenges to improve operations where they believe in storing carbon, creating lower carbon economy. In contrary to it some industries are sceptical where the cost of production of the technology and operation is perceived to be too high and thus leading to the prevalence of unwanted gas in the atmosphere (Balogun and Hope Hailey, 2008). Ineos produces carbon dioxide as a byproduct of their products and processes has mostly affected sites in Norway, Germany and Grangemouth. In order to curtail their negative impact on the environment, the company needs to go through an Organisational transformation. This transformation inclusive to evolutionary change must implement change in their leadership behaviours for extracting positive results of their efforts (Balogun and Hope Hailey, 2008).

Even though before Ineos many chemical companies have tried to implement strategies to improve their efficiency but have failed in the long run. This is mostly because those organisations had not addressed internal functions and Organisational culture in their strategic initiative. If the company does not stick to its root or origin then neither the leaders, not the projects led by them would be able to improve, creating a massive impact on the outcome of the company (Hayes, 2018). As Ineos should adapt to evolutionary change, it is required to emphasize on a molecular theory which involves the behaviour of the workers and employees surrounding the change. In order to facilitate progress through evolutionary change management, it would require the top leaders to commit for sticking with the initiative extensively and sustainably (Conger and Kanungo, 1998). Awareness training is required to be provided throughout the Organisation about the strategies that are to be undertaken by the leaders. The linking of Organisational goal with that of internal stakeholders would help Ineos to reach their strategic goals. After the framework has been carried out, all managers should be held accountable for respective departments within the Organisation (Al-Haddad and Kotnour, 2015). It has been observed that though the company prior to their current difficulty in waste management had supported new initiatives but has shifted their attention to more on market share and profitability rather than their very origin which consisted of the mission of reducing greenhouse gas emissions from human activities.

PDSA approach for the change management

Plan: The objective of Ineos is to provide safety to the employees and be excellent in environmental performance. In order to achieve the objective, the company needs to modernize the site building new import terminal for the vessels can install at least three pipelines for transporting the gas to an ethane storage tank. This initiative on the part of Ineos would be transformational and setting example for other existing chemical companies of the world that are maximizing not at the cost of health and the environment. The developing of the plant would guarantee hundreds of job in UK and parts of Scotland which parallel will let the shale gas help to halt the declining of manufacturing on UK soil. The tankers would be able to build a virtual pipeline between the UK and US, forging every one from the company to come under one roof by building a new block.

Do: In order to carry out the plan efficiently Ineos first needs to bring a closure to the olefins plant that has already been incurring a huge loss due to a shortage of North Sea gas that was once used

by Ineos as one of the essential feedstock. The closing of the petrochemical complex would result in the end of the refinery. This would produce a massive number of fuels which will also contribute to the increase in Scotland's GDP by 3%. Thus the company's investment in the development of shale would directly impact on the country's employment growth. The plan for building a virtual pipeline would play a major role in building the region's economy. However, with Britain's exit from EU, the company would be able to accelerate its profit after their multi-million investment in the plan.

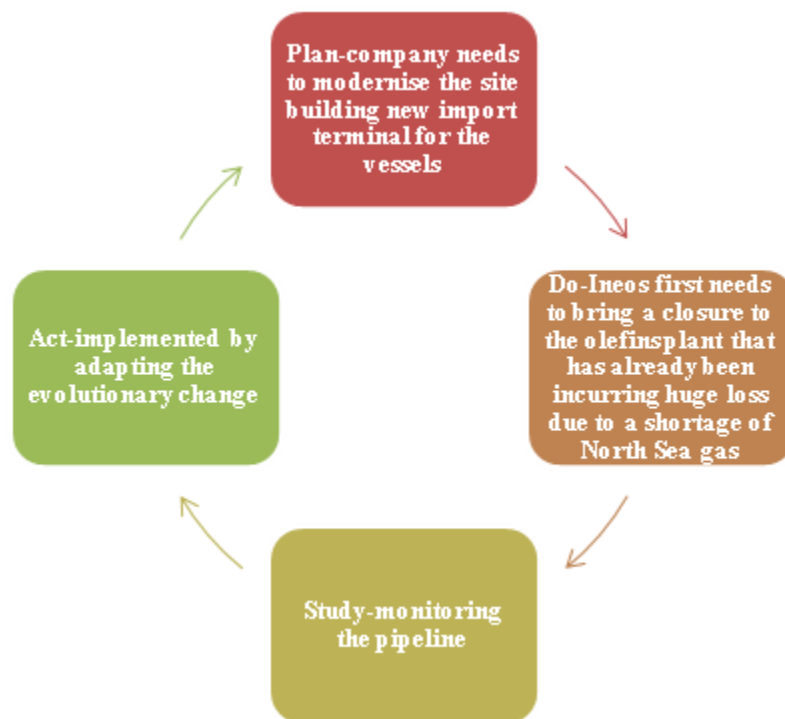


Figure 5: PDSA for Ineos

(Ineos, 2018)

Study: Focusing on the expansion of Ineos, it would require the company to be the leading producer of ethyl in Europe and the UK. The pipeline that is about to connect the UK and US would carry ethylene to the manufacturing plant. Ethyl which is currently in huge demand for its extensive use in pharmaceuticals, flexible packaging, inks and cosmetics would accelerate the company's profit.

Act: The change can be implemented by adapting the evolutionary change where the management is aware of market demand and supply alongside contemporary companies of the similar industry growing or shrinking (influenced by Al-Haddad and Kotnour, 2015). A thorough market research is to be conducted regarding recent technologies and consumption patterns while implementing

the change management by focusing on the selection process. Ineos that already have own strategy of selecting employees based on their skills and expertise are mostly hired from the contemporary competitors that would contribute to the company's market growth giving them a competitive edge for not only implementing the plan but also guaranteeing it a success.

Barriers in change management process and in pdsa

The main barrier to the implementation of Evolutionary strategic change in Ineos will be lack of understanding about the impact of the change. The upfront of the change is very risky and there is a high likelihood that stakeholders and the employees might not cooperate with the change. Evolutionary change such as the installation of virtual pipelines by the Ineos will involve changes in small steps and it has to be brought about over a long period of time. Moreover, it is difficult to build and hold onto the momentum of the change (Wirtz *et al.* 2016). The time constraint might become problematic for several business ventures and may result in losses. Moreover, any policy or procedures might go wrong which might add on to the losses. This kind of strategic change involves the unity of the whole management system along with the employees and gives less importance to senior leadership values.

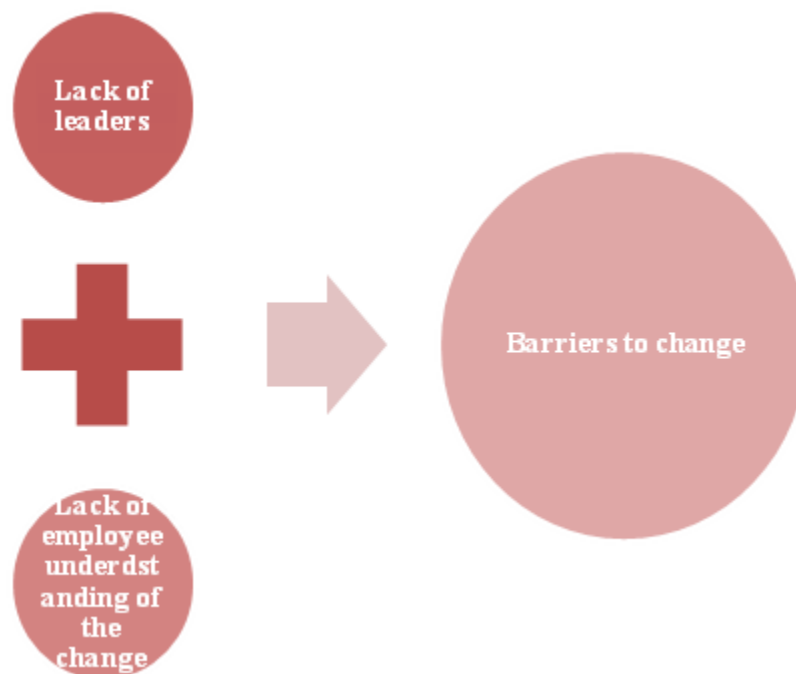


Figure 6: Barriers to change management

(Source: Wirtz *et al.* 2016, p.49)

Thus there is a high possibility that in absence of a proper leader various decisions and proceedings regarding the changes might be wrong and may not serve the purpose of moving the business forward. It requires highly skilled professionals to plan and implement evolutionary change within the business because it will require cooperation and synchronized function until and unless the proposed objective is achieved. In addition, a meticulous evaluation of the current situation and planning of the changes to be brought has to be done in case of Ineos. Another barrier which can be faced in evolutionary change is the lack of motivation among the employees. In absence of a proper leader, the employees are not directed well and lose the track of their working protocols.

The main issues of diversification that the company might face are the decrease in the marginal benefits of the investors. This leads to the attraction of the investors towards the mutual funds.

The main barrier in the application of the PDSA by the Ineos will be that although it identifies the main opportunities within the business ventures it does not provide any information about the time savings and cost-effective strategies (Mintzberg, Ahlstrand and Lampel). This might have a serious impact on the other units of the company. PDSA identifies certain changes which when implemented might not conform to the company's current vision and might prove a hurdle to its future undertakings. This also interferes with the management vision and incurs losses for the company.

In a company like Ineos where the CEO holds about 60% of the major shares, any problems within the management board can severely hamper the policies and undertaking ventures of the business. For implementing PDSA Ineos will require continued working employees and long working hours which is against its vision of providing a healthy working environment for the employees. This will also cause a decrease in human resource values. There has been a history of unsustainable initiatives such as Unite the nations schemes in 2008 by Ineos in past which will also form a barrier to the implementation of PDSA models.

Thus, application of Evolutionary change and PDSA model does have some barriers for implementation in a well profitable company like Ineos. Lack of management body and high-end goals compromise with the company's well functioning and may result in losses in near future.

Strategies for overcoming the barriers:

An initiative on part of Ineos to modify the chemical properties and transport facilities adopted by it from time to time in order to provide finished goods or services to customers targeted at large can be regarded as the most effective strategies on its part. Such strategies might enable it to capture a greater market share in turn. Billions of pounds that Ineos directly contribute to Europe economy being a petrochemical industry at present have faced a great challenge both within and outside the company. The first barrier to the company's experimentation with chemicals is Europe's environmental policies. The governmental policies that have aimed to decarbonize the Earth even by the mean of own resources in order to bring the cost of energy down. The Middle East which is considered to be the richest region is perceived to be cheaper than the UK or Europe for the sustenance of a petrochemical industry. However, as discussed exploitation of shale gas in Ineos planning strategy, America seems to be a better place for establishing chemical manufacturing plants. Europe is the least profitable unit for the company has itself become a challenging factor in the company's growth. In such case Ineos should plan their further project in the USA, pinpointing the niche market to yield maximum benefit. Apart from this, the company should conduct research on the countries that do not have carbon taxes on the chemical companies. For managing of the resources and information, the company also needs to appoint a leader for situational adversities, especially during a tornado or other natural adversities.

For instance, America, China and the Middle East have energy policies that abide well with the company's way of working. The second barrier is seen by following the company's objective of emphasizing employee safety, Ineos needs to get rid of the allegations on employee's reported injuries. This is one of the major loopholes that can mar the company's reputation (Hamel, 2012). In order to overcome the barrier, the safety of the employees should not be taken for granted and must be considered as a top priority of Ineos. The fixed strategy of the management regarding the company's legal compliances needs to be changed by providing the workers with an indication of the way Ineos looked like before and after OSHA guidelines.

The company would be able to clear its hands of the incident of firefighters where five of them were exposed to a much higher level of sound than normal decibel by modifying its legal compliances and strict regulations. However, in order to thrive in the European market, the company that has previously complained about the demography and environmental policies being too expensive for the chemical experimentations also needs to work on projects that cut the

company's energy bills. The barrier of the cost of energy can be overcome by including a steam balance tool across the refinery for analyzing the steam consumption. Apart from this, another reason for concern which is hindering the company's activity is the combustion of liquid fuel building deposits in the furnace, restricting Ineos global efficiency. In order to fight this obstacle, the management needs to improve the ability of the unit where more money can be saved by less fuel burned and reduced air emission (Gratton, 2007).

With the reduction of carbon emission, the company would also be able to cut their cost on carbon taxes which is any business's main aim to reduce company expense. The building of the steam balance tool would help Ineos cut the amount of sulphur dioxide emitted every year. Finally, being a 'blue chip' chemical company Ineos should maximize business opportunities by encouraging employees to come up with innovative and smart solutions on the technical, financial and commercial sphere by thinking outside the box. This can be achieved by breaking the barrier of following hierarchy and giving employees the freedom and flexibility to work efficiently.

Recommendation for Ineos (SMART):

Specific	Measurable	Achievable	Result	Time-bound
To build up steam balance tool	Reduced carbon and sulphur emission	It is attainable by building for every refinery	This would serve the company by reducing carbon taxes	3 months
To optimize energy efficiency	This would lessen the cost of energy produced	It is achievable by building sites near sea	This would culminate in the maximum production of ethylene	1 month
To increase Ineos global efficiency	It would save money	It is achieved by limiting the combustion of liquid fuels	Air emission would be reduced	1 month

To increase the use of high technology (Micelotta, Lounsbury and Greenwood, 2017)	This can be measured by the constant and fixed cost of production	This can be achieved by hiring efficient engineers, especially from the contemporary competitors	First deliverance of a project can be ensured	2 months
To expertise in licensing technology	It can be measured by meeting the climatic challenges (Hamel, 2012)	This is attainable by generating more biofuels with government aid	This would result in the proper tackling of a waste issue even during havoc weather disrupts	1 month
To lower carbon emission and improve energy security	This can be measured by OSHA's report	It is achievable by more usage of Methoxy Polyethylene Glycol	It would result in the lessened emission of greenhouse gas	2 months
To expand	It is measured by the company's revenue	This Is attainable by appointing an efficient leader, implementing transformational leadership within the Organisation	This would result in huge employee retainment, enhancing company reputation	1 month

Table 2: SMART of Ineos

(Source: Ineos, 2018)

In order to stay in the global competition, the company must cut their energy bills. Projects that would include steam balance tool in the refineries for analyzing steam consumption needs to be

executed by company management. As currently, the crude oil distillation unit runs on gas and liquid where the later has often turned out to be expensive and insufficient, Ineos implementation of the tool would help in 20% reduction of steam leaks by implementing gas instead of liquid. By improving unit efficiency, less fuel will be burned as a result would save the company's money as well as reduced air emission. This will too improve the efficiency of the refineries and further lessen carbon emission. With the help of the project, it would also reduce the emitting of sulphur dioxide that is perceived to be hazardous for health and the environment.

Moreover, it can also be recommended that Ineos is likely to benefit to a large extent by undertaking an initiative to diversify its business-related activities. Such an initiative might enable it to get access to a greater level of profit by attracting a greater customer base. Failure to implement such a diversification strategy might tend to curtail its market share as a result of the entry of a greater number of competitors within the existing market scenario from time to time.

Most importantly, the company's manufacturing and production cost which has increased in the UK and Europe due to recent political diversification needs to be brought down by the above-discussed implementation of the virtual pipeline between UK and USA by building up eight tankers. Production of an ethyl by Ineos must be highly emphasized due to its increased demand in cosmetics and pharmaceutical sector. This would accelerate the company's sale in the European market where it is currently facing losses. In order to thrive in UK market, the company can also take help of their cargo from America, supplying them with cheap gas, helping Ineos build up a competitive edge across (Atlantic Gratton, 2007). That the first shipment of US fracked shale gas is a good news not only for the company but also for the nation, should be conveyed to the government by elaborating the fact that it would allow the company to acquire secure and affordable energy for manufacturing at better capacity, where on the other hand it would deliver social, economical and environmental benefits for all. In order to keep on with the company and governmental policy, Ineos is required to employ a leader with proper insight on the waste problem and bioethanol technologies (Eriksson, 2016). Finally concluding with the first and foremost objective of the motto of the company to produce products with least amount of carbon emission, Ineos conventional approach to turn ethanol from corn starch should be implemented in the plant, providing jobs to local people. With the innovation of technologies generating more ethyl, the company can also contribute to conventional vehicles that run via the blending of ethyl which would increase the company's revenue in the UK market as well. Apart from ethyl, the company

should stick to the application of Methoxy Polyethylene even in the present days for being in the reputed list for carbon emission.

Conclusion

Thus it can be concluded that Ineos, in order to keep manufacturing in UK soil, it ought to link their resources to previously established plants in other countries for energy acquiring. This would reduce their cost of energy, saving company's cost of production as well as reducing carbon emission in the air. In developing products and solutions aimed by Ineos are expected to offer better solutions in dealing with the waste. For this, the company is expected to produce bioethanol for increasing the growth of biofuels in every country the company has developed a plant.

As most western countries are in desperate need to reduce their dependence on fossil fuels, Ineos is required to emphasize more on a solution for lessening the reliance on foreign oil. The government of those countries are required to work hand in hand with companies such as Ineos by formulating policies that would bound the blend of biofuels based on renewable fuel standard rather than increasing tax policies on the chemical industry.

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Books

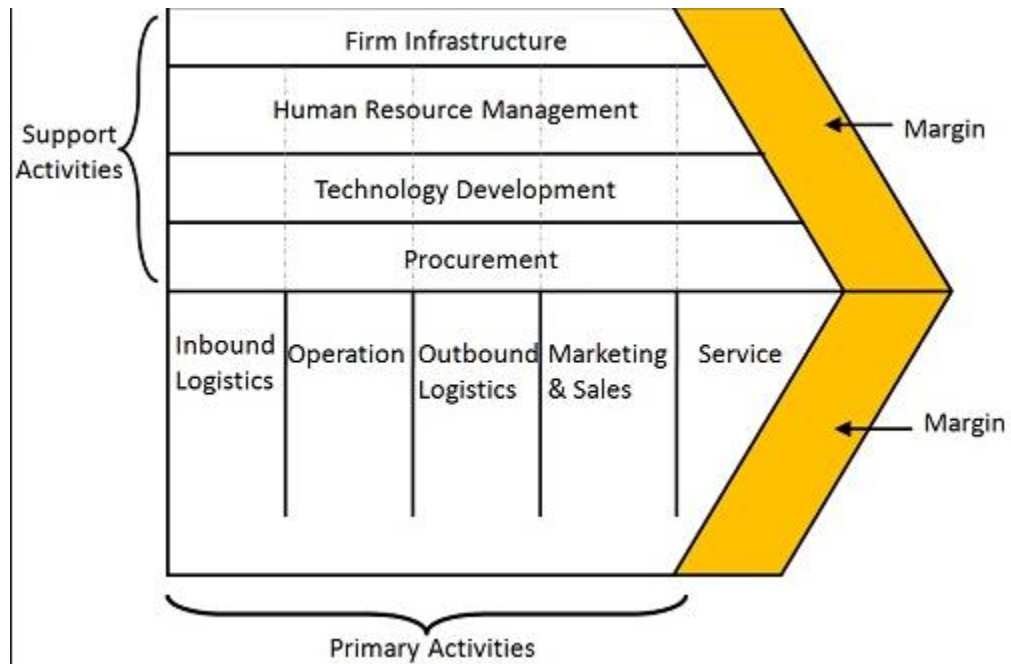
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Appendices

Appendix 1



(Source: <https://businessjargons.com/value-chain-analysis.html>)