Consultant report for london taxis international limited

This report is being produced to investigate whether a move towards electric vehicles will be beneficial to London Taxi International limited. This report has focused on PESTEL analysis, Political, Environmental, Social, Technological, Economical and Legal regions using SWOT (Strengths, weaknesses, Opportunities and threats) methods to analyse each of these regions.

The political aspects to focus upon on making a change to electric vehicles are the implantations of the laws that benefit electric vehicles. One of the main regions these taxis operate around is London and the main disadvantage of driving in London is congestion charge the government has implemented a law that states that for electric vehicles congestion charges are to be scrapped. Generally per vehicle congestion charges implemented by " transport of London" is £10 for the day and from the " London Black cabs" figures there is an assumption of 17000 licensed cabs on the road. Therefore within a year this company will be saving approximately in the region of thousands of pounds and making a profit on the electric vehicles they produce and sell as they are more attractive to purchasers. Continuing with the money this change would account for savings as an electric vehicle is immune from paying road tax because its emissions are below 100g/km under the new lows, this is one of the ways to promote electric cars to more people, and in addition to that the electric vehicle is immune from the raising taxes put on petrol.

The reason for rising the issue of Carbon emissions is due to new laws that are due to come into effect. The car currently being produced by London Taxi International limited would become obsolete as the TX4 is producing "

CO2 emissions of 233g/km”. Therefore even if the switch to electric is not made a new car concept that produces less pollution will have to be considered.

Finally as the government are constantly introducing new schemes to promote the electric vehicle they have offered grants for purchasing electric cars. The latest innovative idea by the government is to offer £5000 towards the price of the electric vehicle. Therefore if we are producing electric vehicles consumers are more likely to purchase the electric vehicle over the existing model as along with the road tax, free parking and other schemes the government are offering will be saving a great deal more money in both the short and long term.

Referring back to the SWOT method with the political aspects however laws in other countries consider electric vehicles as a hazard due to the fact they create no artificial noise. These countries have implemented a law that says all vehicles must make some noise for safety reasons. This makes cause a problem when approaching these companies with our new electric design.

Considering threats to the political aspects of this report times are changing. Therefore at the moment the government are happy to promote electric vehicles in a positive light. However once the switch over happens, the reaction to electric vehicles may change as there may be an advancement that could show them to be hazardous.

One of the biggest issues in the motoring these days is the environment which is being destroyed day by day. One of the main reasons for this destruction is co2 which as we know comes mainly from the use of fossil fuel

in motor vehicles. There are new legislations concerning co2 emissions from vehicles and the European commission has issued emission standard known as euro 1, 2, 3, 4, 5, 6, and the Mayor of London has introduced a taxi emission strategy that requires all London taxis to meet at least euro 3.

There is no debate on how electric vehicles help the economy and save money; but electric cars don’t just protect your wallet. They also stop oil companies from drilling offshore or in environmentally protected areas. Offshore drilling is very hazards to the environment for example the Gulf of Mexico spill , and spills from ships such as the Exxon Valdez oil spill in Alaska, and the Torrey Canyon in the UK have illustrated the harm oil spills can cause to ocean-based ecosystems.

Most people may not understand exactly how these alternative vehicles contribute to save the planet. One of the main problems to the environment is produced by using vehicles that depend mainly on fossil fuel. Not only that, there are other hazards materials that can harm the environment, like the batteries of the vehicle which after it’s been used fully it bosses a high risk to the environment and it has to be disposed of properly. LTI has been trying to reduce the use of hazardous substances to levels lower than those demanded by new European Legislation and the recyclability targets which came into force in 2006 are comfortably met. A number of components in LTI vehicles are already produced from recycled material and LTI’s policy of promoting increased use of these materials will ensure the impact of their vehicles on the environment will be reduced. Also LTI has been thinking of a way to dispose of the hazards materials by using modern disposal facilitates that will do this in an environmentally friendly manner.

LTI Vehicles has partnered with Auto green Ltd. Auto green, will take charge of disposing off disused LTI vehicles, and they will provide a contracted network of “ take back” and “ Authorised Treatment Facilities” (ATFs) throughout the United Kingdom. This process ensures that re-use, recovery and recycling targets are met.

The economic factors include consideration of economic growth for the company, interest rates affecting cost of capital, exchange rates of exporting goods and finally inflation rates. All these factors affect how the company will operate and what decisions it will make.

As we propose to the London Taxi Company a new electric engine concept for their taxis, we have to bear in mind what effects this will have on the company economically if they decide to go ahead with our idea.

The advantages of our idea include that there is a small but stable market for the electric engine concept so large sale or purchases of supplies won’t cause major changes; also the product is attractive to the company as it will cut down their running costs and hopefully increase profits. London Taxi Company has relationships with partners all over the world – international relations. This is an advantage to the taxi company as the production rate of taxis will remain high as they supply electric taxis across the world to countries such as Egypt, Ghana, Kosovo and Lebanon. The company also has a number of European partners with plans to introduce the iconic London taxi to Rome, Milan and Istanbul. These all increase the company’s economic growth.

As London Taxi Limited already has international relations, they would need to keep ahead of their competition. If this is done, they would appeal more to customers for their greener vehicles and because the electric cars costs less to run. The taxi firms would also want the electric cars as they cost less to run than petrol vehicles. This means London Taxi Limited would sell even more electric taxis and therefore boost their capital and profit levels.

Also when new laws on green house gases and co2 emission are introduced in the different countries, (such as America, South East Asia and Australasia) London Taxi Limited will appeal more to the taxi firms. This will give them a new business opportunity, especially if they have electric taxis that are known to be reliable. So London Taxi Limited would be the first choice for taxi production from taxi firms.

The disadvantages with this proposition consist of costs of research and development, funding during conversion of petrol to electric engines and exchange rates affecting the cost of importing goods and the supply of exported goods to the international and European cities. As a result inflation rates could have either beneficial or detrimental effects in the long term. As the market for electric cars is fairly young, research and development into new and more efficient ideas is still being done which the London Taxi Company would be interested in doing to improve their electric engines generally. Concerning the conversion to electric for the whole production line, complete factories would need to be adapted to suit the installation of electric engines into the taxi cars. This process would be quite costly and might require borrowing of money to fund it. As exchange rates are fluctuating all the time, importing and exporting costs might have an effect

on the business. The inflation rates depend on the country that is involved in business with London Taxi Company where, at the moment, inflation rates are highest in Ghana at 15 – 25 %.

In short term, the process might be quite costly, yet if we look at the long run, these costs will only pay off eventually due to no fuel or running costs.

The social aspect upon making this decision to change to electric is extremely important as the image is what will encourage both the public and consumers to change to or use electric vehicles. One of the main reasons LTI should convert their cabs to electric power is because although they do have a world renown image, that image is of a loud, expensive, heavily polluting vehicle. Converting their vehicles to electric power will hugely improve this image, reduce running costs and make them much quieter for running in tight residential areas, making taxi companies more likely to buy the taxis.

For most emerging electric cars, such as the Nissan Leaf, the government provides subsidies to consumers who want to buy the electric car. If LTI are quick to enter the market, then this government subsidy may be offered to consumers wanting to buy the new LTI electric car. This would be hugely beneficial because taxi companies looking to buy taxis would see this and hopefully take action to get the reduced price while they can.

The larger the city, the more pollution occurs due to more vehicles and industries emitting co2. If the taxis that run in the cities were powered by batteries, then a large chunk of these pollutants will be diminished, as well as setting the standard for the rest of public transport. Other companies will be demanding LTI to provide them with the cleaner taxis if they are the first

to enter this niche market, which gives an excellent foothold for LTI to establish them in this growing industry. Also, if LTI have battery powered cabs, then they may attract the attention of environmental enthusiasts that would otherwise prefer to use other modes of transport, such as cycling or walking, thus creating a much larger customer base and hence higher revenue.

Most people wanting a taxi in London will always choose black cabs over any other taxi model as London is largely associated with Black cabs; because black cabs an are large brand image of London. Therefore consumers will have a bigger market of not only tourists but environmentally friendly people may convert to using their service and therefore will increase LTI's production demand.

However, the number of cities you see LTI's black cabs in isn't great. It tends to only be larger cities that have them so only a small percentage of people will get to use them on a regular basis. Smaller cities and towns will miss out, unless of course, LTI expand to more cities, which will be easily done with the reduced running costs of converting to battery power.

A problem arises also when considering the current state of the economy. People and firms don't have enough money spare to take huge risks. Converting from combustion to battery is a large risk because so little is known about the market due to it being relatively new. Reliability and range are the main concerns, but also costs of a vehicle are breaking down are unknown. This uncertainty may be enough to deter consumers and result in a major loss to LTI.

We looked at the technology side of using London Taxi International Limited within the electric car market.

The first main point is that this is an innovative idea. It hasn’t been done before and therefore will mean the company would get the upper hand over their competition as well as a new image as being a cleaner and greener company from their customers. This is because the electric cars won’t be producing as much of their green house gases. Times are changing and electric cars are becoming better and more useful. So it’s a matter of time before the black cabs need to change. This will get the business a head start into it and get ahead of their competition.

If the London Taxi Company accepted our proposal, the first step would be to possibly look into borrowing some money to kick off the process of buying new engine parts and installing them to the taxis (having trained up factory staff to a suitable level to carry this out) – this would then involve interest rates which would be predetermined. Then make contact with suppliers for electric engine parts such as batteries and organise prices for shipping and handling. The third task would then be to change the taxi car production line and make all the brand new taxis electric with batteries.

The TX4 has already proven to be a reliable vehicle that has a high level of performance with few problems. Therefore a whole new concept design will not need to be considered to change to electric and we are able to keep the main body of the car and only change the drive chain. The design of the TX4 is already owned by LTI and therefore there is no cost associated with keeping this design. As the TX4’s shape and parts will still be produced and

only the engine will be changed, the machinery that is already producing that car can still function as usual and therefore a massive change will not be needed and money will be saved.

It is essential for LTI to create relations with companies that produce electric motors and are researching into the length of the battery life. This is important as the battery makes up a significant proportion of the cost of the car and will change the retailing price in which it is sold at. It wouldn’t be sensible for LTI to develop a battery itself as they don’t have the resources and experience in this field and as a small company could not invest the necessary capital. Batteries are hazardous and this will introduce new health and safety regulations in the factory which will incur the costs of retraining.

The main disadvantages that could affect consumers wanting to purchase into electric taxis is the battery life. As electric vehicles are becoming more common technology is increasing to help sustain these electric vehicles batteries. London are considering introducing new underground charging stations that while parked at lights will charge the battery to help sustain its life. As this technological advancement is being placed around London it enables LTI to promote the electric vehicle without being worried about the length of the battery life. Also stations where you just drive up to change the electric battery, which is robotically manned, are being used by America currently. So as interest increases for electric vehicles in the UK this idea will possible be introduced into the UK giving more cause for electric cars.

For private use electric cars are at a disadvantage because of their short range. This is why the electric car market is growing slowly. This is not an

issue when the vehicle is being used as a taxi because taxis are almost never used for journeys longer than 10 miles. In the end it’s the companies wish whether to take an order of a bigger distance or not. Therefore the slow affecting market for cars to change to electric will not have the same disadvantages as taxi’s changing to electric.

Research has shown that there won’t be any technological issues when putting the new drive chain (electric motor) into the current taxi models. LTI has introduced a new hydrogen and electric hybrid vehicle to support the 2012 Olympics. The car keeps the ionic shape the London black cab but uses a “ combination of a fuel cell, powered by a tank of hydrogen, and lithium polymer batteries.” This reduces LTI’s worry that the TX4’s shell would not be able to support an electric motor change.

The electric motor has less power than normal petrol/diesel motors. However this should not affect sales as the car will be brought by private companies rather than individuals who would be concerned with performance.

There are legal implications that LTI should consider when changing to electric motors. An electric car requires a special fast charging station in order to charge it fully in a matter of hours rather than days. These would require planning permission to be installed on a company’s property or if a taxi company lease the property they would need permission of the owner. There could be some safety concerns associated with such a high voltage supply which could provoke the government into bringing in new legislations regarding these charging stations

Another factor to consider when thinking about legal implications is such as problems with brake lights; one of the benefits of the electric car is that it uses the cars momentum when free-wheeling to recharge the battery. However a drawback of this is that the cars slow down a lot quicker in comparison to a regular free-wheeling car. Hence there is currently debate with regard to whether the brake lights should be on at such a time. The decisions of such laws should not affect the possibilities to use electric cars for London Taxis.