

# Tesla the electric car research paper samples

[Business](#), [Marketing](#)



## **Introduction**

Tesla Motors is an American car company founded in 2003 by a group of brilliant innovators known as Silicon Valley engineers. An entrepreneur Elon Musk named it in honor of a remarkable man Serbian inventor and electrical engineer Nikola Tesla (1856-1943). The late 1880s saw the realization of Tesla's signal accomplishment of his AC motor. Its success was based on a series of inventions as well as patents for using two sources of alternating current which were out of phase with one another. Tesla realized that his inventions created a rotating magnetic field which could eventually make a motor that could navigate over the earth surface (McCray 2013).

The engineers who started this company had proved that electric vehicles could be used in the place of the gasoline powered cars. Tesla provides a variety of services among them; designing, production and marketing of electric cars as well as provision of advanced vehicle powertrain components to other automakers like Daimler and Toyota. Its headquarters is in Palo Alto, California with wholly owned subsidiaries in North America, Europe and Asia.

## **Objectives of Tesla Motors**

- It aims to offer high-performance and electrically powered vehicle at an affordable price to the average consumer.
- It also intends to provide vehicles that can accelerate the advent of sustainable transport all over the world.

## **Features and working of the car**

This electric car contains some of the most advanced driving controls ever known. These include traction, navigation, 3D imaging, night and thermal

vision, communication, fuel/energy consumption as well as media controls that are standard in that new feature can be upgrade.

The cars contain features such as the internal electrical and modular controls which the users can download and install in the car like the smart phones app.

## **The electric car model is as shown in the diagrams below;**

### Types of Tesla car Models

This company has discovered two different models of cars, that is, Model S and Model X.

Tesla model S, is a zero and sustainable luxury sedan which was introduced in 2012. The strengths of this model are that it requires minimal running costs, excellent driving character as well as luxury appointments that enable it to deliver over -the- air updates to its cabin electronics. A trip planner is yet to be released to help the drivers manage its electricity consumption. It is purposed to make the car drivers aware of the juice that they have remained with after they are at their destinations. With this information, they are able to know the frequency of charging and at what times while on transit.

This model is ready as soon as the driver gets in with all the needful lights lighting from the word go. To facilitate how this model sleeps, Tesla has come up with techniques such as putting the sleep mode feature of processors which enables the computers to make them awake quickly after they are in sleep mode. Losses are to be avoided as far as electricity consumption is concerned. It has led to Tesla as a company to work on ways

of minimizing electric consumption when the car is parked and ensuring that the balance is perfected between mainly the car to be ready instantly.

**The advantage of Model S sedan is that targets middle-level consumers with a lower price around \$57, 000 compared to the Roadster.**

Tesla model X, on the other hand is scheduled to be delivered to the market in 2014. With regards to this, Tesla is the only automaker that produces and sells zero-emission sports cars in serial production at present. This model is designed from the ground up to the blend of being the best of an SUV with the benefits of a minivan, as only an electric car can (Tesla Motor, 2014). . To facilitate how this model sleeps, Tesla has come up with techniques such as putting the processors into the sleep mode which draws enough power to make them quickly awake. Losses are to be avoided as far as electricity consumption is concerned. It has led to Tesla as a company to work on ways of minimizing electric consumption when the car is parked and perfecting the balance when making the car instantly ready. Tesla provides a variety of services among them; designing, production and marketing of electric cars as well as provision of advanced vehicle powertrain components to other automakers like Daimler and Toyota.

**Financial Performance**

As a public company, Tesla motors trade on the NASDAQ stock exchange under the symbol TSLA. As illustrated in the table below, it clear that Tesla encountered a net loss in the year 2012. The first quarter of the year 2013 saw Tesla’s posting profits for the first time since its ten-year history. It suffered significant losses and invested approximately \$709. 2 million in

cash in operations through December 31, 2012. As a result they reported \$201. 9million in cash and cah equivalents at the end of the year 2012 (Tesla 2013).

## **Consolidated Statements (in 000s): December 31: 2012 2011 2010**

### Revenues

Automotive sales \$ 385, 699 \$ 148, 568 \$ 97, 078

Development services 27, 557 55, 674 19, 666

Total revenues 413, 256 204, 242 116, 744

### Cost of revenues

Automotive sales 371, 658 115, 482 79, 982

Development services 11, 531 27, 165 6, 031

Total cost of revenues 383, 189 142, 647 86, 013

Gross profit 30, 067 61, 595 30, 731

### Operating expenses

Research and development 273, 978 208, 981 92, 996

Selling, general and administrative 150, 372 104, 102 84, 573

Total operating expenses 424, 350 313, 083 177, 569

Loss from operations (394, 283 ) (251, 488 ) (146, 838 )

Interest income 288 255 258

Interest expense (254 ) (43 ) (992 )

Other expense, net (1, 828 ) (2, 646 ) (6, 583 )

Loss before income taxes (396, 077 ) (253, 922 ) (154, 155 )

Provision for income taxes 136 489 173

Net loss \$ (396, 213 ) \$ (254, 411 ) \$ (154, 328 )

Net loss per share of common stock,

basic and diluted \$ (3.69) \$ (2.53) \$ (3.04)

### **Weighted average shares used in computing net loss**

Per share of common stock, basic and diluted 107,349,188 100,388,815  
50,718,302

Source: Tesla 10K Annual Report. <http://ir.teslamotors.com/secfiling.cfm?filingID=1193125-13-96241&CIK=1318605> (page 64), Accessed March 17, 2014

### **Strategies of Tesla Motors**

Tesla motors have got strategies to enhance the quality of their products.

These include;

Business level strategy is a focused differentiation strategy since their customers are mainly from middle and upper-class levels. It puts Tesla on the run to ensure that they provide high-performance and creative electric car.

International level strategy is a transnational strategy which Tesla focuses on the domestic markets but is also continuously expanding their global markets. Tesla is seeking to achieve both goal efficiency and local responsiveness.

Cooperative strategy: It is a strategic alliance in which Tesla motors forms partnerships with several firms such as OEM manufacturers like Toyota and Dailmer. It intended to cooperate on the development of electric vehicle, parts and production systems and engineering support.

## **Challenges facing Tesla motors**

Tesla has financial difficulties according to the World Income Inequity. It has shown that the world income distribution is becoming unequal with around 42% of the total world income goes to those wealthy groups that accounts to only 10% of the world's population. It makes it hard for Tesla to enter developing countries where general income level is relatively lower than developed countries. International level strategy is a transnational strategy which Tesla focuses on the domestic markets but is also continuously expanding their global markets. Tesla is seeking to achieve both goal efficiency and local responsiveness.

It also faces industrial rivalry from other automakers who are gradually investing R & D on electronic vehicles to follow this trend even though Tesla is the only automaker that produces EVs models.

Tesla needs to ensure that there are sufficient lithium-ion cells to realize its further expansion. It calls for inevitability of battery innovation whereby battery factories should be built to provide enough cells for the third generation.

## **Conclusion**

As a company, its future seems to focus on accelerating the world's transition from gasoline powered vehicles to electric mobility increasingly affordable cars. It aims at producing 40, 000 cars annually by late 2014. It will to a greater extent boost the transportation sector making in terms of saving on the fuel costs and maintenance costs. If these cars are implemented worldwide for use, life could be less costly and affordable if the prices will be friendly to almost all individuals.

## Works Cited

Brown, Steve. "Tesla Will Release the Worlds First 'Upgradeable' Car." TECHNOLOGY(2013).

Jager, Wander, Marco Janssen, and Marija Bockarjova. "Diffusion Dynamics of Electric Cars and Adaptive Policy: Towards an Empirically Based Simulation." *Advances in Social Simulation*. Springer Berlin Heidelberg, 2014. 259-270.

Liu, Yafeng Elsie, et al. "Tesla Motors Inc. Case Synopsis." (2014).

Matthew Rimmer. 2014. "Tesla Motors' Open Source Revolution: Intellectual Property and the Carbon Crisis" *Medium*

McCray, W. Patrick. "Physics: The mind electric." *Nature* 497. 7451 (2013): 562-563.