Tesla Motors Inc.

Case Synopsis

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[Edited]

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Firm history

Background

Tesla Motors, Inc. is an American company that was founded in 2003 by a group of brilliant and innovative Silicon Valley engineers. These engineers proved that electric vehicles could be an awesome substitute of the gasoline powered cars. Tesla not only designs, produces and markets electric cars, but it also provides advance electric vehicle powertrain components to other automakers including Daimler and Toyota. (Tesla Motors) Tesla headquarters is located in Palo Alto, California, and it has wholly-owned subsidiaries in North America, Europe and Asia. At present, Tesla has more than 2000 employees. It has 31 stores and service locations spread worldwide, and more stores are expected to be opened in the future. In 2012, Tesla opened its first store in Toronto as the first step to enter the Canadian market (Tesla Motors).

Tesla aims to offer high-performance and electrically powered vehicle at a price affordable to the average consumer. In 2008, Tesla first gained widespread attention by producing the Tesla Roadster, a solely electric operated sports car. Tesla then expanded its technological advantage to the luxury sedan market. Model S, a zero emission and sustainable luxury sedan, was then introduced as their second vehicle to the electric vehicle in 2012. The third model named Tesla model X is scheduled to be delivered to the market in 2014. Thus, Tesla is the only automaker that sells zero-emission sports cars in serial production at present (Mangram, 2012).

Mission Statement

To accelerate the advent of sustainable transport by bringing compelling mass market electric cars to market as soon as possible.

Tesla’s goal is to accelerate the world’s transition from gasoline powered vehicles to electric mobility with increasingly affordable electric cars. Tesla’s CEO, Elon Musk, claims on the website that “we're catalyzing change in the industry. Tesla vehicles and EVs powered by Tesla are fun to drive and environmentally responsible” (Musk, 2013). To make the charging station more convenient for the EVs users, Tesla aims to develop more stations spread in the world and make continuous improvements on their battery technologies.
**Financial performance**

Tesla Motors is a public company that trades on the NASDAQ stock exchange under the symbol TSLA. From the figures below, it showed that Tesla had a net loss in 2012. It was until the first quarter of 2013 that Tesla finally posted profits for the first time in its ten year history. Tesla suffered significant losses and invested approximately $709.2 million of cash in operations through December 31, 2012. They reported $201.9 million in cash and cash equivalents at the end of year 2012 (Tesla, 2013).

**Figure 1: Consolidated Statements of Operations (in thousands, except share and per share data)**

<table>
<thead>
<tr>
<th>Consolidated Statements (in 000s): December 31:</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automotive sales</td>
<td>$385,699</td>
<td>$148,568</td>
<td>$97,078</td>
</tr>
<tr>
<td>Development services</td>
<td>27,557</td>
<td>55,674</td>
<td>19,666</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td>413,256</td>
<td>204,242</td>
<td>116,744</td>
</tr>
<tr>
<td><strong>Cost of revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automotive sales</td>
<td>371,658</td>
<td>115,482</td>
<td>79,982</td>
</tr>
<tr>
<td>Development services</td>
<td>11,531</td>
<td>27,165</td>
<td>6,031</td>
</tr>
<tr>
<td><strong>Total cost of revenues</strong></td>
<td>383,189</td>
<td>142,647</td>
<td>86,013</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>30,067</td>
<td>61,595</td>
<td>30,731</td>
</tr>
<tr>
<td><strong>Operating expenses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and development</td>
<td>273,978</td>
<td>208,981</td>
<td>92,996</td>
</tr>
<tr>
<td>Selling, general and administrative</td>
<td>150,372</td>
<td>104,102</td>
<td>84,573</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td>424,350</td>
<td>313,083</td>
<td>177,569</td>
</tr>
<tr>
<td><strong>Loss from operations</strong></td>
<td>(394,283)</td>
<td>(251,488)</td>
<td>(146,838)</td>
</tr>
<tr>
<td>Interest income</td>
<td>288</td>
<td>255</td>
<td>258</td>
</tr>
<tr>
<td>Interest expense</td>
<td>(254)</td>
<td>(43)</td>
<td>(992)</td>
</tr>
<tr>
<td>Other expense, net</td>
<td>(1,828)</td>
<td>(2,646)</td>
<td>(6,583)</td>
</tr>
<tr>
<td><strong>Loss before income taxes</strong></td>
<td>(396,077)</td>
<td>(253,922)</td>
<td>(154,155)</td>
</tr>
<tr>
<td>Provision for income taxes</td>
<td>136</td>
<td>489</td>
<td>173</td>
</tr>
<tr>
<td><strong>Net loss</strong></td>
<td>$ (396,213)</td>
<td>$ (254,411)</td>
<td>$ (154,328)</td>
</tr>
<tr>
<td>Net loss per share of common stock, basic and diluted</td>
<td>$ (3.69)</td>
<td>$ (2.53)</td>
<td>$ (3.04)</td>
</tr>
<tr>
<td>Weighted average shares used in computing net loss per share of common stock, basic and diluted</td>
<td>107,349,188</td>
<td>100,388,815</td>
<td>50,718,302</td>
</tr>
</tbody>
</table>


**Current situation**

**Product variety**

Tesla Motor manufactures and sells not only electric cars but also electric vehicle powertrain components, such as Lithium-ion battery packs. The Tesla Roadster is the first highway-capable and all-electric sports
vehicle produced by Tesla in 2008. “This high-performance BEV, with a range of up to 250 miles, uses a proprietary lithium-ion Polymer battery pack that stores as much as twice the energy” (Mangram, 2012). Furthermore, it is “capable of acceleration from zero to 60 mph in less than four seconds, with a self-limited top speed of 125 mph” (Mangram, 2012). Tesla’s Model S sedan targets mid-level customers, with a lower price around $57,000 compared to the Roadster. “Tesla’s longer-term product objectives include the development of a $30,000 sedan by 2015 (codename ‘BlueStar’), as well as a crossover/SUV-type vehicle (codename ‘Model X’).” (Mangram, 2012). Tesla is expected to deliver Model X by the end of 2014. “Model X is designed from the ground up to blend the best of an SUV with the benefits of a minivan, as only an electric car can” (Tesla Motor, 2014).

Current Strategy

- **Business level Strategy:** A focused differentiation strategy because their customers are mainly from middle and upper income levels, and Tesla focuses on providing high performance and creative electric cars.

- **Corporate Level Strategy** is market penetration strategy and Related Constrained.

  Tesla intends to enhance their influence on the current markets with their current products. They also market their electric powertrain components to other automakers.

- **International level strategy:** Transnational strategy.

  Tesla focuses on the domestic markets but is also continuously expanding their global markets. They are seeking to achieve both goal efficiency and local responsiveness.

- **Cooperative Strategy:** Strategic Alliance.

  Tesla Motors formed partnerships with many firms. “The R&D departments of Tesla Motors and Panasonic cooperate for the developing of more efficient batteries” (Karamitsios, 2013). Besides, Tesla Motors cooperates with some OEM manufacturers like Toyota and Daimler. Tesla and Toyota intended to cooperate on the development of electric vehicles, parts, and production system and engineering support.
External Environment

General Environment

Demographic Segment

Tesla targets the upper middle class, who has a higher income (“Tesla Motor Company”, 2009). According to World Income Inequity, the world income distribution is becoming more unequal and around 42 per cent of the total world income goes to those the wealthy group, which is only 10 per cent of the world’s population. The unequal income distribution makes it harder for Tesla to enter developing countries where general income level is relatively lower than developed countries.

Economic Segment

According to “The Great Recession” in The States of Working America, the rate of unemployment rate was high in recent years and people were more conservative on spending during the last few years. The demand of high priced luxuries including Tesla decreased under the economic environment. Yet, interestingly enough, the increasing price for gasoline from the recession and foreseeable limited natural resources makes electric power more appealing to customers.

Political/Legal Segment

Governments around the world are fairly positive towards electric vehicles and encourage electric vehicle adoption as an alternative transportation technology (Mangram, 2012). Policies are usually in forms of government subsidies for electric vehicle producers and consumer price incentives. These policies give motivation to experts to work on the technological development as well as manufacturers to produce the vehicles for public. On the other hand, other countries, including European Union, have policies, which focus on other sides such as setting vehicle carbon emissions standards. Government’s involvement makes electric vehicles more appealing and encouraged in people’s lives (Mangram, 2012).

Social-cultural Segment

Global warming has been one of the biggest environmental concerns to the world in 20th century (“Ten most important”, 2013). As we all know, fuel gas emission is one of the major reasons to cause this environment
issue. Ever since the 1970s, automakers have been trying to put different specific-designed parts into cars as attempts to reduce harms to the environment caused by greenhouse gases (“Ten most important”, 2013). The trend for motor vehicles is gradually changing as being more environmentally friendly.

**Technological Segment**

Electric vehicle charging station infrastructure came into the market around 2011. A major electric vehicle rental business with charging infrastructure and associated amenities is headquartered in Naha, Okinawa, Japan. The operation has 220 Nissan Leaf rental cars and a charging infrastructure consisting of 27 chargers in 18 locations (Electric Vehicle Rental Application, 2012). The availability of recharging stations has provided a unique market environment for the development of Tesla.

**Industry Environment**

**Bargaining power of Suppliers**

The bargaining power of suppliers is high because suppliers’ goods are not of a commodity type. Tesla needs supplies from different suppliers to maintain its manufacturing level. According to Supplier Business, there are up to 33 suppliers investing into 2013 Tesla Model S. If Tesla is not willing to pay certain amount of money to specific supplier, the manufacturing procedure will be influenced due to the lack of a supplier. Therefore, suppliers can set up the prices according to their own interests without considering Tesla’s willingness to pay.

**Bargaining power of Buyers**

The bargaining power of buyers is low. Tesla is positioned as high priced and luxury vehicle because of its relatively high cost for its advanced technology. The market price will not be affected much by market demand. Sometimes, Tesla even needs to raise its price in order to cover its costs to make profits.

**Threat of Entry**

Threat of entry is low. Entering into an electric vehicle market requires high capital investment due to its demanding new technology. Additional, customers think about the quality of the cars before making the purchase decision. Therefore, reputation plays an important role in this case. Newcomers lack reputation
within the industry and hence it is hard for them to outcompete others who have gained significantly customer loyalties.

**Threats from Substitute Products**

Threats from substitute products are low. Tesla currently is the only vehicle manufacturer selling zero-emission sports cars (Mangram, 2012). For those environmentally concerned people who are sports car lovers with high income will perceive Tesla as their only option to meet all of their needs.

**Industry Rivalry**

Industry rivalry is high. Even though Tesla presently is the only automaker that produces only EV models, other automakers are gradually investing R&D on EVs to follow this trend.

**Internal environment**

**Resources**

**Tangible**

1. Tesla has access to financial resources. Accordingly to Tesla's 2012 financial report, the company generated over $400 million from the issuance of shares and long-term debt. This includes approximately $50 million in stock issued to Toyota and $30 million in stock issued to Panasonic (Tesla, 2013).

2. Having more than 150 suppliers around the world that provides over 2000 parts to Tesla.

3. First to market with luxury zero emission vehicle that gives them the advantage to be well ahead of the competition.

**Intangible**

1. Excellent upper management team selected from top automotive and technology firms led by the Product Architect and CEO Elon Musk.

2. Widely recognized brand by the visual appeal of the company’s offering and enormous marketing effort.

3. Innovative technology and patents of drivetrain and battery that keep Tesla well ahead of competitors.
Capabilities

1. Developed ability to apply commoditized small cylindrical lithium cells, which are generally used in consumer electronics, to cars through good proprietary power management.

2. Empowering and self-driven employee that promotes company’s development.

3. Great partnerships with Toyota, Daimler AG, and Panasonic supported Tesla battery technology research and development, as well as future innovations.

Core competences

1. The low cost of Tesla’s battery pack, allowing Tesla to sell the Model S at a reasonable price with a 300 mile range when it is still a combination that other electric vehicles in the industry have yet to deliver; this is provided by Tesla's superior battery technology which gives it an advantage over other manufacturers.

2. Having 40 patents awarded and over 200 patent application pending technology to supply all its future models. This will aid them in complying with their emphasis on zero emissions, the performance and aesthetics of their cars.

Strategic challenges

Guarantee sufficient battery supply

With the sharp increase in customers’ demand, Tesla Motor’s further expansion might be hindered by the huge shortage of lithium-ion cells. Two main factors that restricted the adaptation of battery electric vehicles are the battery range limitation and high battery cost (Mangram, 2012). Even though Tesla has already partnered with Panasonic, its main battery provider, for its battery manufacturing, the cell shortage challenge has yet to be solved. Tesla is aiming to produce 40,000 cars annually by late 2014, and each Tesla Model S battery pack uses more than 7,000 cylindrical 18650 cells. The Model S might soak up nearly 40% of global cylindrical battery production (Motavalli, 2013). What’s more, Lithium-ion batteries occupy 50% of the cost of BEV, with current price has already reached to around $15,000 (Ramsey, 2010).
In order to support the production of electric vehicles, battery innovation is inevitable. Firstly, the new battery factories should be built to provide enough cells for the third-generation car. The investment is valuable because if electric vehicles are the future of automotive markets, more automakers will be searching for batteries and this will put upward pressure on prices. Tesla might be better served in using flat prismatic cells instead of the cylindrical alternative to reduce cost (Motavalli, 2013), or Tesla could cooperative with more battery suppliers including Panasonic to obtain resources.

**Globally expand the business**

Tesla Motors is the market leader for green technology and is formulating an aggressive plan to open car dealerships in 25 countries within 24 months. However, the tight timeline and resources limit the implementation of this plan. Tesla’s small number of employees in many countries aggravates the challenge, and the important concern is how to preserve its culture when recruiting employees in other countries. Tesla needs providers that could meet its strict deadlines while infusing the company culture into the hiring process. Also, Tesla needs a reputation of a model employer in every country ("Case study: Tesla,").

Aiming to successfully in this global market, Tesla should have a single source partner, such as High Street Partner, who can help unify the hiring process and provide consistent answers to the their teams to keep pace of growth. The single source partner should be able to create locally compliant employment contracts, employee handbooks and country specific benefits packages. The partner should also assist Tesla with an in-depth stock option analysis and contract suggestions for each expansion country. As a result, Tesla Motors’ international expansion could be a huge success and achieve the aggressive revenue targets. Tesla could also strengthen its reputation as an excellent employer who provides a consistent, attractive employment package across multiple countries.

**Infrastructure development**

In order for Tesla to gain significant global market share, the development of charging station infrastructure is necessary for the convenient use of electric vehicles (Hardester, 2010). The lack of charging stations and long charging hours will diminish consumers’ interest to electric cars and thus
inhibits the sales of electric vehicles. Fueling stations are extraordinary accessible to people everywhere, locally and globally, however charging stations are not nearly as accessible. It is inconvenient for BEV to be charged whenever and wherever when necessary.

To overcome the challenge, Tesla should focus on the development of charging station infrastructure. In the last few years, Tesla already has 79 supercharging stations in North America and 14 stations in Europe (“Supercharging,” n.d.). However, supercharging stations need to be more easily accessible for more population globally, especially in Europe. Besides regular charging stations, there are a number of charging options that could efficiently used by customers: the availability of plug-ins in parking garages, restaurants and other commercial establishments, as well as the rapid evolution of workplace charging facilities would be of great help (Ashtiani, 2011).

**Maintain brand loyalty**

Tesla is called as the “Apple of automakers” because Tesla is an unique, high-tech, attractive, reliable alternative for forward thinking customers (Mangram, 2012). Branding is important for Tesla to expand its market share and help differentiate products in a concrete manner. As a relatively new brand, building a firm’s brand identity is vital to Tesla’s future. Taking the successful model of Apple’s highly branding strategy, Tesla still has a huge challenge to be as successful as Apple.

To maintain brand loyalty, Tesla needs to continuously make innovative products and promote novel vehicle models that attract more customers to consume Tesla’s BEVs. On the other hand, advertising is important for a new product. Through media applications, Tesla could be well known all over the world more quickly. Lastly, after-sale service is a key cue for clients to judge a company, so Tesla should also strengthen the after-sale services to meet customers’ expectations.
References


