

Problems Faced by Automobile Industries: Case Study on Tesla

**Shelly Bhardwaj¹, Rudresh Pandey², Shobha Sharma³, Shivani Sejal⁴, Ganesh
Iyer⁵, Shivam Sharma⁶, Ranjith P.V⁷, Swati Kulkarni⁸**

ABES Engineering College^{1,2,3,6}

Campus -1, 19th KM Stone, NH 24, Ghaziabad, Uttar Pradesh 201009, India

CMS Business School^{4,7}

No.17, Seshadri Rd, Gandhi Nagar, Bengaluru, Karnataka 560009, India

SIES College of Management Studies^{5,8}

Sri Chandrasekarendra Saraswati Vidyapuram, Plot 1-E, Sector 5, Nerul, Navi Mumbai,
Maharashtra 400706, India

Correspondence Email: rudreshpandey@gmail.com

ABSTRACT

The study is being done on the problems faced by Automobile Industries while launching Electric Cars. The problems are common for all the automobile industries which had launched the EV, are launching or will launch them. But here the research is done specifically in respect to Tesla. Tesla Motors Inc. is an American automotive and energy company that was founded in 2003 is based in Palo Alto, California. The company specializes in electric car manufacturing, SolarCity subsidiary and solar panel manufacturing. The company is well known for its exclusive models like Model S, Model 3, Model X and the newest one Model Y. Tesla Motors released its first electric car in 2008 that was called The Roadster. Roadster achieved 245 miles (394 km) on a single charge. Since 2008, Tesla sold approximately 2,450 Roadster in over 30 countries through December 2012. Tesla faced many problems while launching the very first EV not only with the model but with its marketing too. So, this Project Report is being prepared by researching the problems faced by the Tesla regarding its first EV and its marketing. There are some particular solutions that are recognized by our team for the respective problems which will be useful for the automobile industries to overcome certain problems. These solutions will open the doors for the industries that are going to launch EV by referring the past data analysis of Tesla which is studied and prepared by our team in this Research Project.

Keywords: Automobile, Industry, Marketing, Problem, Tesla

INTRODUCTION

Tesla, Inc. (formerly Tesla Motors, Inc.) is an American automotive and energy company based in Palo Alto, California. The company specializes in electric car manufacturing and, through its SolarCity subsidiary, solar panel manufacturing.^[1] It operates multiple production and assembly plants, notably Gigafactory 1 near Reno, Nevada, and its main vehicle manufacturing facility at Tesla Factory in Fremont, California. As of March 2019, Tesla sells Model S, Model X, and Model 3 cars. It is accepting reservations for the Model Y,

Roadster (2020), and semi vehicles. Tesla also sells Powerwall, Powerpack, and Megapack batteries, solar panels, solar roof tiles and some related products.

Tesla was founded in July 2003, under the name Tesla Motors. The company's name is a tribute to engineer Nikola Tesla. In early Series A funding, Tesla Motors was joined by Elon Musk, J.B Straubel and Ian Wright, all of whom are retroactively allowed to call themselves co-founders of the company. Musk, who formerly served as chairman and is the current chief executive officer, said that he envisioned Tesla Motors as a technology company and independent automaker, aimed at eventually offering electric cars at prices affordable to the average consumer. Tesla Motors shortened its name to Tesla in February 2017.

After 10 years in the market, Tesla ranked as the world's bestselling plug-in passenger car manufacturer in 2018, both as a brand and by automotive group, with 245,240 units delivered and a market share of 12% of the plug-in segment sales.^{[2][3][4]} Tesla vehicle sales in the U.S. increased by 280% from 48,000 in 2017 to 182,400 in 2018^[5], and globally were up by 138% from 2017.^[6]

Tesla Motors was incorporated in July 2003 by Martin Eberhard and Marc Tarpenning who financed the company until the Series A round of funding.^[7] The founders were influenced to start the company after GM recalled all its EV1 electric cars in 2003 and then destroyed them. Elon Musk led the Series A round of investment in February 2004, joining Tesla's board of directors as its chairman. Tesla's primary goal was to commercialize electric vehicles, starting with a premium sports car aimed at early adopters and then moving into more mainstream vehicles, including sedans and affordable compacts.^[8]

In addition to his daily operational roles, Musk was the controlling investor in Tesla from the first financing round, funding \$6.5M the Series A capital investment round of US\$7.5 million with personal funds. Musk later led Tesla Motors' Series B, \$9M of US\$13 million, and co-led the third, \$12M of US\$40 million round in May 2006. Tesla's third round included investment from prominent entrepreneurs including Google co-founders Sergey Brin & Larry Page, former eBay President Jeff Skoll, Hyatt heir Nick Pritzker and added the VC firms Drape Fisher Juvetson, Capricorn Management and The Bay Area Equity Fund managed by JP Morgan Chase.^[9]

Tesla's business strategy is to emulate typical technological product life cycles and initially target affluent buyers, and then move into larger markets at lower price points.^{[10][11]} The battery and electric drivetrain technology for each model would be developed and partially paid for through the sales of earlier models.^{[12][13]} The Roadster was low-volume and priced at US\$109,000. Model S and Model X targeted the broader luxury market. Model 3 and the model Y is aimed at a higher-volume segment.^{[14][15]} This business strategy is common in the technology industry. According to a Musk blog post, "New technology in any field takes a few versions to optimize before reaching the mass market, and in this case, it is competing with 150 years and trillions of dollars spent on gasoline cars."

Tesla's sales strategy is to sell its vehicles online and in company-owned showrooms rather than through a conventional dealer network. Moving towards an e-commerce strategy, customers are able to customize and order their vehicles online.^{[16][17]}

Tesla's technology strategy focuses on pure-electric propulsion technology, and transferring other approaches from the technology industry to transportation, such as online software updates.^[18] Tesla allows its technology patents to be used by anyone in good faith.^[19] Licensing agreements include provisions whereby the recipient agrees

not to file patent suits against Tesla, or to copy its designs directly.^[20] Tesla retained control of its other intellectual property, such as trademarks and trade secrets to prevent direct copying of its technology.^[21]

Tesla's production strategy includes a high degree of vertical integration, which includes component production and proprietary charging infrastructure. The company operates large factories to capture economies of scale. Tesla builds electric powertrain components for vehicles from other automakers.

Background of the Idea

Product/Service

Model S is built from the ground up as an electric vehicle, with high-strength architecture and a floor-mounted battery pack allowing for incredible impact protection. Autopilot advanced safety and convenience features are available. Advanced noise engineering creates sound dynamics comparable to a recording studio, while the standard Glass Roof provides a spacious interior experience for every passenger. It was designed for speed and endurance with incredible aerodynamics, ludicrous performance and uncompromised aesthetics, automatic door handles, etc.

Model 3 has its most important feature as safety. The metal structure is a combination of aluminium and steel, for maximum strength in every area. In a roof-crush test, Model 3 resisted four times its own mass, even with an all-glass roof. Autopilot advanced safety and convenience features are designed to assist you with the most burdensome parts of driving.

Model X is the safest SUV ever. Built from the ground up as an electric vehicle, the body, chassis, restraints and battery technology provide a very low probability of occupant injury. Autopilot advanced safety and convenience features are designed to assist you with the most burdensome parts of driving.

Model Y is designed to be the safest vehicle in its class. The low center of gravity, rigid body structure and large crumple zones provide unparalleled protection. Model Y is fully electric. They currently have over 14,000 Superchargers worldwide, with six new locations opening every week. All new Tesla cars come standard with emergency braking, collision warning, blind-spot monitoring and more. It will have Full Self-Driving capability, enabling automatic driving on city streets and highways pending regulatory approval, as well as the ability to come find you anywhere in a parking lot.^[22]

RESEARCH METHOD

Market Opportunity Analysis

The electric vehicles are powered either by a collector system through electricity from charging station deployments or can be charged by self-charging devices such as regenerative braking systems, turbochargers, and others. According to the Norwegian Road Federation, a public road infrastructure administration in Norway, pure electric cars and hybrid cars in Norway accounted for 52% of all new car sales in 2017 as against 40% in 2016. Norway's parliament has set a resolution goal that by 2025 all cars sold should be zero emissions.

China is a potential market for electric vehicles, as it has the maximum number of electric vehicles manufacturing industries. According to Forbes, Chinese automakers

churned out 680,000 all-electric cars, buses, and trucks in 2017, more than the rest of the world combined.

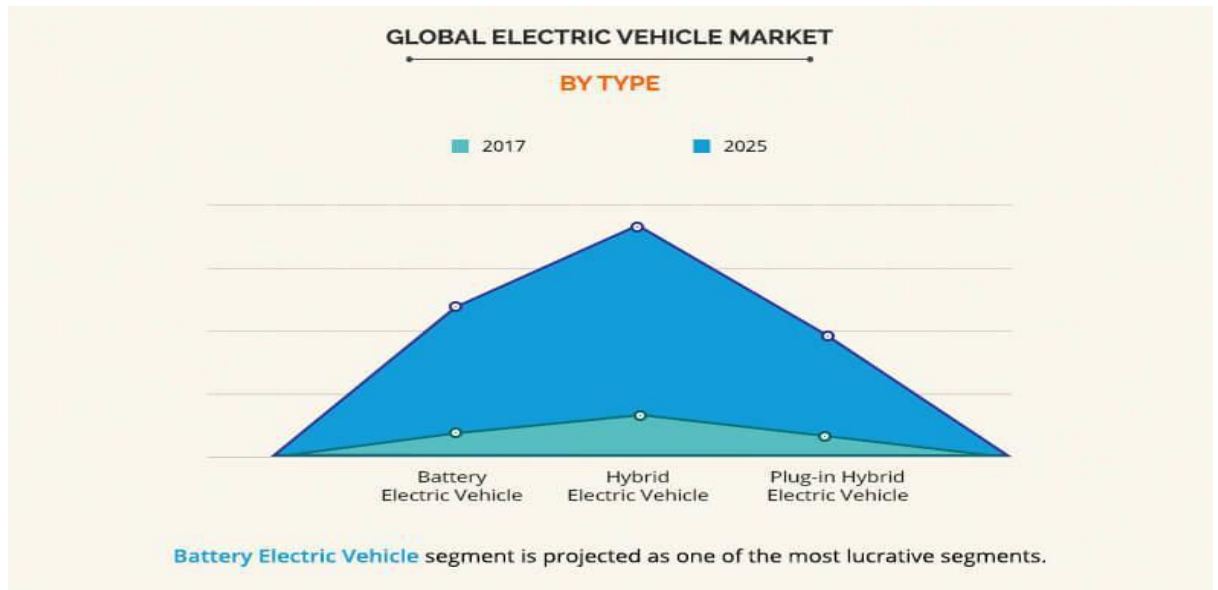


Figure 1: Global electric vehicle market by type

The demand for electric vehicles is governed by increase in demand for fuel-efficient, high-performance, and low-emission vehicles. In addition, the trend of reduction in vehicular emission due to stringent rules & regulations in several countries and growth of public charging infrastructure in China, France, Norway, and the other developed countries is fuelling the market growth.

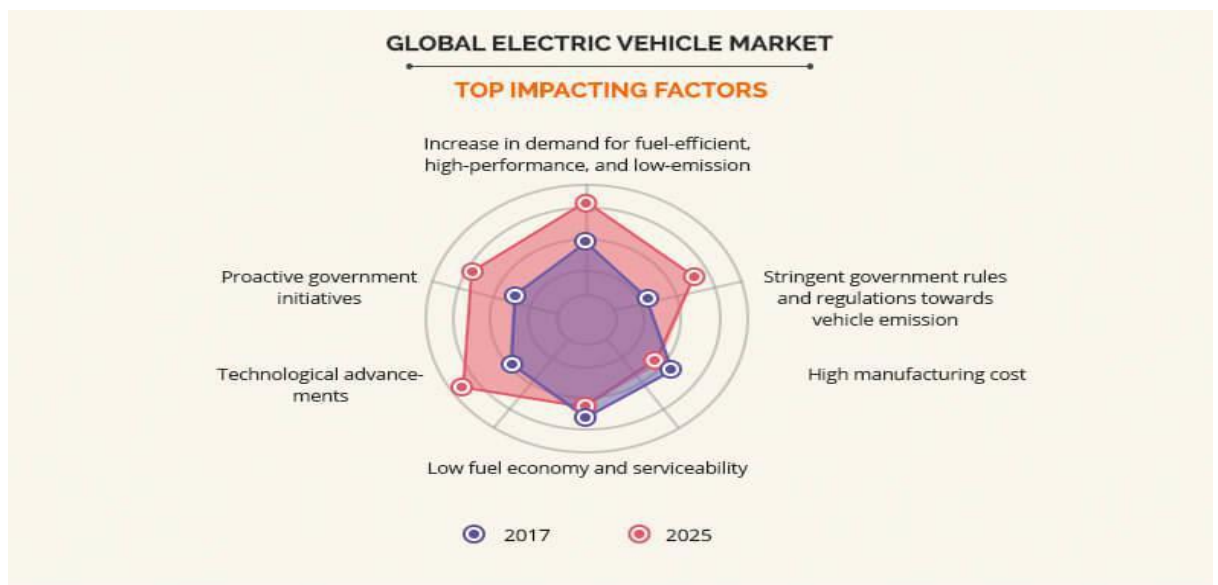


Figure 2: Global electric vehicle market, top impacting factors

Moreover, technological advancements in electric vehicles and proactive government initiatives are expected to unfold various opportunities for the growth of the stakeholders of the electric vehicle market, such as system integrators, vehicle manufacturers, engine manufactures, and component providers, in future.^[23]

Political Environment, Economic Environment, Social and Technology Environment

Political

Political factors describe how governments interfere in the economy. Politics can have a significant impact on developments of industries. For the e-car industry the environment politics and infrastructure politics are of high importance. If the government in a country has high environmental standards, the more likely the citizens buy e-cars. For e-cars new infrastructure investments are necessary due to the need for charger. Therefore, supporting infrastructure politics are essential for the electric car industry and governments need to invest in the infrastructure (Mackenzie, 1994). Next to the infrastructure, R&D incentives from the governmental side can also foster the industry and have a positive effect on technology.

Economic

Economic the costs of the electric vehicle, the energy consumption and its resulting costs are essential. Also, the emerging costs for new infrastructure facilities like charging stations are vital.

Social

Social factors can affect the demand for products. In the e-car industry mobility habits and trends are decisive. Due to the massive and growing need for mobility are basic requirements given. The space density enlarges the need for mobility differentiations and flexible vehicle concepts.

Technological

At the present time the technologies for electric cars are not utterly well-engineered. The challenge is to find sustainable and economic competitive technologies. New technologies like the lithium ion accumulator can mean a breakthrough for the e-car industry. Another new technology is the carbon body. In account of the weight of the battery, other parts of the vehicle must be lighter to compensate it.^[24]

RESULTS AND DISCUSSION

Justification of Idea

The idea is to research and find respective solutions for the problems faced by Tesla in launching EVs regarding model and its marketing. The justification of the idea can only be given by going through the following challenges faced by Tesla.

Challenges faced by Tesla

- 1) Make infrastructure available for EV cars:** Electric cars hit a new global sales record in 2017 — 1 million cars sold, with more than half of that in China — but there may be a hitch to mass adoption: the number of adequate charging stations available. Before consumers take the plunge on a new electric car, they need to know that they can charge it. The number of electric charging stations in the US is small but growing. As of September 2018, there are an estimated

22,000 public charging stations in the US and Canada that are classified as level 2 and DC fast charging. (Typically, fast-charging stations supply 60 to 80 miles of range for every 20 minutes of charging.) By comparison, there are seven times more gas stations: about 168,000, according to FuelEconomy.gov.

- 2) **Build more cars:** Fluctuating raw material prices, and bugs in current models have to be monitored, and based on that new and more efficient cars have to be developed and mass produced.
- 3) **Become Profitable:** Compensation for sales people, making charging stations available, and marketing costs are required for people to understand the importance of EVs and for sales to occur. Tesla has cut the prices of its vehicles multiple times this year, but followed its latest round of cuts with price increases for all vehicles aside from the \$35,000 entry-level Model 3 and the Model Y.
- 4) **Deal with investors and lawsuits:** Various petitions have been against Tesla, and it has to go through each one of them, and appoint expensive lawyers in order to get the favorable decision. This also adversely affects the funding, as the share prices may go down with each lawsuit.
- 5) **Establish trust on Wall Street:** Tesla has grown fast because of the investors and the money they give to grow the company. But after initial excitement, market has shown deep investor doubts, and this has to be worked on to keep working on innovation.
- 6) **Concerns about demand:** If proper infrastructure is not available, and prices do not match regular cars, demand generation is a huge concern. Model 3 sales plummeted at the beginning of 2019 falling from 18,650 in November and 25,250 in December to 6,500 in January and 5,750 in February, according to Inside EVs

While total US auto sales also fell at the beginning of this year, the drop in Model 3 sales led Vertical Group analyst and Tesla bear Gordon Johnson to say Tesla was in "demand hell. "After the Model Y's March 14 unveiling, some Wall Street analysts said the Model Y could cut into demand for the Model 3."Likely to cannibalize the Model 3, in our opinion," Morgan Stanley wrote in a note to investors after the Model Y reveal.

- 7) **The timing's wrong:** In Tesla's home market the full federal EV tax credit, of up to \$7,500, is available until the end of the quarter after the one in which the company hits its 200,000th sale. Thereafter the tax credit is halved after another two quarters to \$3,750, then it's halved again to \$1,875 for a couple more quarters, before falling away completely.

This means that the arrival of competitive EVs coincides with the phasing out of Tesla's incentives, potentially making the newcomers more attractive to consumers looking to experience an EV for the first time.

- 8) **Sales and service build the brand:** Tesla "feels" big because it has a \$50 Billion equity value and massive media presence. But Tesla has sold fewer than 500,000 cars. It has little experience in repair, used sales, recycling, scrap

and waste. It is not near scale or profit on any of these other parts of the business.

In contrast, Ford also has a total equity value around \$50 billion, but sell and service about 6.5 million vehicles per year; worldwide. As Tesla ramps up its Fremont factory to escape what Elon Musk called “production hell” with the Model3, some customers are enduring their own state of suffering trying to get Tesla’s serviced.

Justification of the Idea

The above mentioned are the problems faced by Tesla respectively. So, here are the ideas that can be applied to solve the above problems. The idea can only be justified by focusing on the given key points;

- Brand
- Customer experience
- Production strategy
- Talent- Invest in expertise
- Business model- Build and expand the ecosystem

On focusing the above-mentioned points, company can overcome the respective problems as these are the core points that should be analysed and focused. The ideas can only be justified on going through its implications and applications in the next chapter.

Idea Application

Brand – Build a recognisable EV-dedicated brand

One of the greatest strengths an existing OEM has is their established customer base and the ability to access markets across the world. In addition, many OEMs have the advantage of having built trust among customers over a number of years. Such advantages pose a major challenge to new entrants. Brands in the automotive market rely heavily on their personal safety credentials and this is not expected to change as EVs become more popular. Indeed, there is a substantial gap between OEMs that can boast excellent safety records and new entrants that have no history of car manufacturing.

However, relying on an existing brand name and reputation has its risks. Environmental sustainability is a key selling point for EVs, and OEMs without credible green credentials – especially those that have had negative press in the last few years over emissions testing – may want their EV products to be viewed separately from their core brands. OEMs aiming for success in the EV market will have to assess carefully the value of their existing brand in the context of the EV market. If their green credentials are not considered satisfactory, persevering with an existing brand strategy may end up being a waste of time, money and effort.

Understanding brand positioning is also key for new entrants. Some will be fortunate enough to have built up a strong brand image and reputation in other industries, putting the customer at ease and building trust quickly. For those lacking such credentials, focusing on the core selling points of EVs such as sustainability, technology innovation and safety will be key to building a successful brand.

Customer experience – Capitalise on aftersales credentials

Customer experience has been, and will continue to be, a key differentiator in the automotive market, whether during the sales process, the in-car driving experience or the aftersales market. The competition between EV manufacturers to deliver the latest in car technology will likely follow the same patterns as found in ICE vehicles.

While BEVs are technologically simpler and need less frequent maintenance than ICE vehicles, the maintenance and repair infrastructure required is actually more complex, safety critical and expensive than for ICEs. The complexity of servicing an EV creates an immediate barrier for new entrants, who have no experience or existing investment in servicing customers. One strategy for new entrants, who may not have the experience, capability or appetite to setup dealer agreements, could include partnering with existing third-party mechanics or garages. However, even third-party mechanics may struggle with the cost and complexities of servicing future EVs, leaving OEMs with large dealer networks at a clear advantage.

Production strategy

Build powerful battery partnerships in all production regions While the manufacture of EVs requires fewer mechanical parts it does require a large number of new electric and electronic components, and a battery – the most expensive part of the vehicle. If an OEM does not produce its own battery cells, successful EV production will require strong and advantageous partnerships – particularly with battery cell manufacturers. Without these partnerships, OEMs will be forced to accept 'off-the-shelf' specifications for their vehicle batteries. This could impact critical elements of their EV design and performance and, ultimately, their market offering. Battery packs are challenging to transport, necessitating their production close to vehicle assembly. However, today the bulk of cell production is located in Asia. As a result, OEMs will increasingly rely on Asian battery manufacturers and the establishment of advantageous and well negotiated supplier arrangements.

Anyone looking to enter the EV market needs to consider the mandated costs of disposing, reusing or recycling batteries at the end of their life. While some organisations will be able to absorb the costs, the majority of manufacturers will have to consider creating further partnerships to give battery packs a 'second life'. A second life for an EV battery could include industrial on/off grid energy storage or grid services, domestic energy storage or remanufacturing. For both OEMs and new entrants, the current battery cell production and end-of-life landscape mean that it is critical to form deep and strong relationships with battery cell suppliers as well as organisations that can assist with second life utilisation. Although this will be costly, it will ultimately offer better integration with their vehicles and extend their power over the entire value chain.

Talent – Invest in expertise

The shift to EV manufacturing will require a substantial investment in talent from both OEMs and new entrants. In the race for talent, OEMs are struggling to maintain their existing advantages associated with the industry knowledge of their workforce as new entrants, and start-ups in particular, attempt to 'steal' top executives away from OEMs because of their experience.

Despite increased efficiencies resulting from automation, the manufacture of cars remains a labour-intensive process. In Europe, the automotive sector currently employs 3.4 million people in high-skilled jobs – 11.3 per cent of the EU's manufacturing employment¹⁰.

Despite the number of highly-skilled workers currently employed in the industry, the design and manufacture of EVs will require a substantial investment in new talent. Working with battery packs instead of ICEs requires OEMs to increase both the breadth and depth of knowledge within their pool of engineers. The shift to EVs means that multi-skilled engineers, who are as comfortable with chemistry as they are with electrical and mechanical engineering, are required. This is a challenge as multi-skilled engineers are scarce and as such, they generally demand higher wages. Building the workforce of the future becomes even more challenging for OEMs when the best and the brightest science, technology, engineering and mathematics (STEM) graduates are increasingly drawn to start-ups.

Business model – Build and expand the ecosystem

Evolving customer needs and wants are necessitating a shift away from traditional business models. Customers are increasingly seeking mobility solutions that offer greater flexibility, convenience and cost effectiveness than before, for example 'usership' over ownership. New entrants to the automotive market hold an advantage in this area over their traditionally less agile OEM rivals.

Although new entrants might have an initial advantage in this area, innovative customer focused business models will be key to success in the EV market. There is an opportunity for both OEMs (if they can be more agile) and start-ups (if they can gain market credibility) to create an advantage by acknowledging specific customer 'pain points' and barriers to EV uptake and offering innovative solutions. For example, a new business model that is formed by a partnership or alliance between an EV auto player and a utility company could see custom electricity tariffs bundled into the purchase of an EV.

Considering how the automotive industry is changing, the shift to EVs affords everyone in the industry the opportunity to test and refine new ownership models that will be utilised in the future. Many customers that are currently buying EVs can be considered early adopters of technology. Using early adopters as a test market for future ownership models will provide valuable insight that can be used to inform the design and implementation of future business models.^[25]

CONCLUSIONS

- Tesla needs to follow a business model in order to reach to the customers in all the means possible and provide better service.
- It has to concentrate on providing sufficient charging points for its EV vehicles and Tie up with government for making charging facilities available.
- The marketing strategies are to be on point regarding the benefits and they can even focus on environment friendly strategies in order to boost the growth of EV sales.
- The focus should also be in terms of expanding the EV vehicles worldwide in order have a huge customer base before the competitors take a step forward.
- The EV model S issues are to be sorted out which is mainly suspension problems and need to achieve reliability.
- Expand operations in foreign markets to exploit the global growth of the renewable energy industry.
- Diversify the supply chain to reduce supply-side risks.

- Be less transparent about things that do not matter much and Be transparent about things that matter a lot, to re-establish investor confidence.
- Continue or increase investments for product innovation.
- Work along with people, and take their feedback to involve them in the product development process.
- Penetration pricing is recommended for lower variants so that they compete with vehicles that run on gas.
- They should increase CUSTOMER VALUE by focusing on customer value triad (qsp).
- Providing sufficient benefits in respect to the price of the product.

REFERENCES

- "BMW sells over 140,000 plug-in cars throughout 2018". electricdrive.com. January 10, 2019. Retrieved January 14, 2019. The global share of plug-in electric cars by brand in 2018 was led by Tesla with 12%, followed by BYD with 11%, BMW with 9%, BAIC with 6%, and Roewe and Nissan, both with 5%*
- "Elon Musk Envisions Tesla Electric Car as Low as \$20K: Cleantech News". Gigaom.com. September 17, 2008. Archived from the original on March 12, 2015. Retrieved October 3, 2010.
- "FCA, Honda, Nissan Dec. sales rise; GM, Ford, Toyota slip". *Automotive News*. January 3, 2019. Retrieved January 3, 2019.
- "National solar installation numbers down after Tesla purchase". *Las Vegas Review*. USA. December 27, 2017. Retrieved October 16, 2019.
- "Press Releases" (Press release). Tesla Motors. June 4, 2009. Archived from the original on June 11, 2009. Retrieved August 1, 2009.
- Borroz, Tony (February 19, 2010). "Tesla CEO Honored for 'Enlightened Vision'". *Wired*. Retrieved April 12, 2015.
- Burns, Matt (October 8, 2014). "A Brief History of Tesla". *TechCrunch*. Retrieved June 11, 2015. Tesla was founded not by Elon Musk, but rather by Martin Eberhard and Marc Tarpenning in July 2003. The two bootstrapped the fledgling auto company until Elon Musk provided \$6.5M of the company's US\$7.5M Series A financing round in February 2004.
- Eric Blattberg (June 14, 2014). "Here's what Tesla's 'good faith' patent stance actually means". *VentureBeat*. Retrieved April 12, 2015.
- https://essay.utwente.nl/65344/1/Debye_BA_MB.pdf
- <https://www.alliedmarketresearch.com/electric-vehicle-market>
- <https://www.tesla.com>
- <https://www2.deloitte.com>
- Jeff John Roberts (June 14, 2014). "What Elon Musk did – and did not – do when he "opened" Tesla's patents". GigaOm. Retrieved April 12, 2015.
- Jose, Pontes (February 3, 2019). "2018 Global Sales by OEM". *EVSales.com*. Retrieved February 3, 2019. "Tesla led plug-in car sales among automotive groups in 2018, with 245,240 units delivered, followed by BYD with 229,338, and the Renault-Nissan Alliance with 192,711."
- Jose, Pontes (January 31, 2019). "Global Top 20 - December 2018". *EVSales.com*. Retrieved February 2, 2019. "Global sales totaled 2,018,247 plug-in passenger cars in 2018, with a BEV:PHEV ratio of 69:31, and a market share of 2.1%. The world's top selling plug-in car was the Tesla Model 3, and Tesla was the top selling manufacturer of plug-in passenger cars in 2018, followed by BYD."
- Kane, Mark (January 2, 2019). "Tesla Production And Deliveries Graphed Through Q4 2018". *InsideEVs.com*. Retrieved January 5, 2019.

- Martin Eberhard (August 7, 2007). "Martin Eberhard of Tesla Motors speaks to the Motor Press Guild"(Flash video). Retrieved June 22, 2008.
- Musk, Elon (August 2, 2006). "The Secret Tesla Motors Master Plan (just between you and me) No. 124". Tesla Motors. Archived from the original on August 2, 2010. Retrieved October 3, 2010.
- Musk, Elon (August 2, 2006). "The Secret Tesla Motors Master Plan (just between you and me) No. 124". Tesla Motors. Archived from the original on August 2, 2010. Retrieved October 3, 2010.*
- Musk, Elon (August 2, 2006). "The Secret Tesla Motors Master Plan (just between you and me) No. 124". Tesla Motors. Archived from the original on August 2, 2010. Retrieved October 3, 2010.
- Musk, Elon (June 12, 2014), "All Our Patent Are Belong To You", *Tesla Motors*, retrieved June 13,2014
- Richard Read. "Terrified of Tesla, NADA Launches Campaign To Tout Benefits of Franchise Dealerships". *The Car Connection*. Retrieved July 16,2015.
- Robert Scardino (July 17, 2009). "MSNBC Calls EV Drivers 'Lunatic Fringe'". AllCarsElectric.com. Retrieved August 8, 2009.
- Vaughan, Adam (October 25, 2013). "12 interesting things we learned from Tesla's Elon Musk this week". *The Guardian*. UK. Retrieved October 26,2013.
- Welch, David (July 30, 2007). "Tesla: A Carmaker With Silicon Valley Spark". Bloomberg Businessweek. Archived from the original on September 14, 2014. Retrieved March 13, 2014.