A

Project Report

On

"The Study of Tesla. Inc"

Submitted to:

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Under the Guidance & Supervision

Of

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Summer Assignment Project

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College Certificate

This is to certify that Mr. Jayanth Kumar Podila student of AMITY GLOBAL BUSINESS SCHOOL Hyderabad, Semester 2 Class of BBA (2019-2022) has completed the Summer Assignment Project under my guidance has worked sincerely for the partial fulfilment of Bachelor of Business Administration for the year 2019 to 2022 to the best of my knowledge and wish him/her success for the future endeavours.

Prof D. Surekha Thakur
AGBS Hyderabad

Date: -
Place: - Hyderabad

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DECLARATION

I Jayanth Kumar, Student of Amity Global Business School, Hyderabad hereby declare that the Project titled "Tesla. Inc" is the record of authentic work done by me for submission of the Summer Assignment Project as a partial fulfilment and has not been submitted in any other university or Institute for the award of any other Degree.

An attempt has been made by me to provide all relevant and important details regarding the topic to support the theoretical aspect and practical evidence related to the topic.

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EXECUTIVE SUMMARY

To study the progress is very important. Through this study, organization can recognize its strengths and weaknesses, so that they can be properly analyzed. Marketing analytic tools helps marketers measure and manage marketing performance, Profitability analysis helps to the organization to identify whether investment is sufficient or not, management is capable or not, organization has efficient workers or not. Finally, organization can identify its progress, profits and growth. Profit is important for any business. For surviving, growth, expansion and diversification it is necessary. Profit is import ant to satisfy the investors, to repay the debt or loans, to pay wages salaries to staff and other day-to- day expenses. Profit is the most useful measure of overall efficiency of a business. This study aims at analyzing the overall marketing and financial study of the Tesla Motors by using various tools. The study is based on the accounting information of Tesla Motors. The data of the past five years are taken into account for the study. The performance is compared with in those periods.

About Tesla:

Tesla was founded in 2003 by a group of engineers who wanted to prove that people did not need to compromise to drive electric – that electric vehicles can be better, quicker and more fun to drive than gasoline cars. Today, Tesla builds not only all-electric vehicles but also infinitely scalable clean energy generation and storage products. Tesla believes the faster the world stops relying on fossil fuels and moves towards a zero-emission future, the better.

Launched in 2008, the Roadster unveiled Tesla's cutting-edge battery technology and electric powertrain. From there, Tesla designed the world's first ever premium all-electric sedan from the ground up – Model S – which has become the best car in its class in every category. Combining safety, performance, and efficiency, Model S has reset the world's expectations for the car of the 21st century with the longest range of any electric vehicle, over-the-air software updates that make it better over

time, and a record 0-60 mph acceleration time of 2.28 seconds as measured by Motor Trend.

In 2015, Tesla expanded its product line with Model X, the safest, quickest and most capable sport utility vehicle in history that holds 5-star safety ratings across every category from the National Highway Traffic Safety Administration. Completing CEO Elon Musk's "Secret Master Plan," in 2016

Tesla unveiled the safest, most comfortable truck ever – Tesla Semi – which is designed to save owners at least $200,000 over a million miles based on fuel costs alone. In 2019, Tesla unveiled Model Y, a mid-size SUV, with seating for up to seven, and Cyber truck, which will have better utility than a traditional truck and more performance than a sports car.

Tesla vehicles are produced at its factory in Fremont, California, and Gigafactory Shanghai. To achieve our goal of having the safest factories in the world, Tesla is taking a proactive approach to safety, requiring production employees to participate in a multi-day training program before ever setting foot on the factory floor.

To create an entire sustainable energy ecosystem, Tesla also manufactures a unique set of energy solutions, Powerwall, Powerpack and Solar Roof, enabling homeowners, businesses, and utilities to manage renewable energy generation, storage, and consumption. Supporting Tesla's automotive and energy products is Gigafactory 1 – a facility designed to significantly reduce battery cell costs.

And this is just the beginning. With Tesla building its most affordable car yet, Tesla continues to make products accessible and affordable to more and more people, ultimately accelerating the advent of clean transport and clean energy production. Electric cars, batteries, and renewable energy generation and storage already exist

independently, but when combined, they become even more powerful – that is the future we want.

Mission



"To accelerate the advent of sustainable transport and electric technology." At the unveiling conference of the Gigafactory, Musk said that was the original intention of the establishing. And he makes it.

As a world leader in innovation, Tesla Motors is pushing the boundaries of automotive revolution again and again – firstly proving that electric cars could be better than gasoline-powered cars and now introducing cleaner mobility to a growing consumer market.

TESLA

Vision: "***to create the most compelling car company of the 21st century by driving the world's transition to electric vehicles.***"

Mission: "***to accelerate the world's transition to sustainable energy.***"

Tesla is not just an automaker, but also a technology and design company with a focus on energy innovation.

OBJECTIVES OF THE STUDY

• Build a theory framework to understand how a leading company does systemic innovating on a disruptive technology.

1) To understand the market potential of Tesla Motors.
2) To interpret the most effective marketing strategy.
3) To understand the financial viability or the pricing strategy of Tesla.
4) To interpret business operations.
5) To have a comparative study of electric and gasoline vehicles.

RESEARCH METHODOLOGY

Collection of Data

In the dealing with any problem it is often found that data are inappropriate, and so it becomes necessary to collect data which is appropriate. These are several ways of collecting the suitable data, in context of time and other resources.

Here for the purpose of study two modes of data will be used.

- Primary Data
- Secondary Data

Primary Data

It is not recorded data. It is collected personally interviewing the respondents through experience, observation and survey methods. It is collected specially for

a particular purpose with certain objectives in mind.

Secondary Data

It is already collected and recorded data by some other person for some purpose and is available for present study.

1. Literature survey

2. Case study research

3. Online research

Research instruments

Questionnaire

Questionnaire refers to a device for securing answer to a formally arranged list of question by using a term, which the respondents fill in himself / herself.

TECHNIQUES OF INTERPRETATION AND ANALYSIS

- Bar, pie diagrams had been used for better presentation and better understanding data.
- The information collected is calculated in the forms of percentage to make interpretation be easy.

- Percentage method has been used to analyze the effect of brands on respondents.

Limitations

Considering this research's background in management, managers need to be able to master multiple areas in relation to a company. Therefore, as the focus of this research was wide, at the same time no particular area of the research was examined in an in depth manner. Nevertheless, the wide focus was a requisite since all the parts were connected to each other and created a larger whole - as a system does. In practice this meant that when I found more literature regarding how Tesla had advanced EVs, at 25the same time I began understanding what the larger implications of this would be. I believe one of the limiting factors regarding this research was the important use of the term "system". Since system can be seen as a large whole with interconnecting parts, also the gathered data needed to reflect how the parts were connected. Additionally, the focus was to find aspects that showed both systemic and innovative attributes. adjustments in a business system are needed for systemic innovation, but some of the smaller adjustments were left out of the research if they did not contain enough of systemic or innovative elements. One of the challenges in focusing mainly on Tesla was the fact that I did not have any access to Tesla as a company. As the theory suggests, a company's capability to innovate depends on five factors. Especially the pyramid framework's levels of "project teams" and "internal factors" were difficult to include into the research without direct access to this information. Also, as Tesla is such a new company, the previous research done on it is limited. The focus used in this research regarding the innovation factors were Tesla's CEO Musk. Regarding the focus of management in this research, it seemed fitting to examine

what has been the role of Musk in Tesla's success. Understanding Musk helped me in understanding Tesla's actions thus far.

Even though Musk can be seen as one of the most knowledgeable person in EVs, some of his statements could be biased towards getting more attention or sales for Tesla. Also, some of the representatives of media could have pro-environmental traits and see some of the efforts of Tesla more positively than others. Therefore, I had to focus on constructing the most objective data regarding Tesla. I have aimed to both gather and analyze data conservatively as not to give a too optimistic assessment of

CHAPTER-1

INTRODUCTION

Abstract

This study is about Tesla, Inc., which was founded in 2003 by a group of engineers in Silicon Valley whose objective was to create zero-emission electric cars better than gasoline automobiles and to accelerate the advent of sustainable transport by providing
compelling, mass-market electric cars as soon as possible. Tesla is not just an automaker. It is also a technology company with a focus on energy innovation. Its CEO
is American's most well-known entrepreneur, Elon Musk.

The landscape of the automotive industry is in the midst of a dramatic change. With gas prices on a constant incline and growing environmental concerns over carbon emissions, the automotive industry is looking towards more sustainable means of transportation. Numerous automakers have taken on the challenge of designing electric and hybrid vehicles with Tesla, Nissan and Chevrolet leading the industry. Upon close inspection of electric and internal combustion vehicles it's easy to spot the gaps in development, with electric lagging. Unlike electric vehicles (EV's), internal combustion vehicles have been able to enjoy nearly a century of sustained interest and trillions of dollars in investment. Competing against this established monarch would undoubtedly be difficult but necessary.

Innovation within the EV sector has been largely limited due to repeat phases of disinterest. Given the current state of global affairs with regards to transport, interest has been renewed and EV's have a great opportunity to finally penetrate the market permanently. Of all the automakers, Tesla is best poised to take the lead. They have been able to challenge EV limitations with flare and established themselves as a globally recognizable brand. Their success so far can largely be attributed to their mission. Unlike their competitors, they are solely dedicated to bringing compelling mass-market electric cars to market, and focus exclusively on the manufacture of EV's Mass production will be the key to widespread adoption, and Tesla is the only automaker even close to achieving this crucial milestone.

With the need for sustainable transport more urgent than ever, both public and private sectors must push for more widespread adoption through investment in R&D, infrastructure, and marketing. Electric vehicles are the future of the automotive industry, but the world cannot wait for a century to pass for EV's to achieve the same results as internal combustion engines. With Tesla at the forefront they may expedite this process bringing sustainable transportation to light, however the push for mass-market electric cars needs to be joint effort between the public, governments

and automakers to ensure that once they hit market they remain a fixture, unlike in the past

The latest view of climate change and its devastating effect on the environment has scientists, politicians, and the business community worried about the contribution of human activities to the production of greenhouse gases such as the carbon dioxide emitted by cars (*Transportation's Role in Climate Change*, 2016). The Intergovernmental Panel on Climate Change (IPCC), which includes more than 1,300 scientists from the United States and other countries, has forecasted a temperature rise of 2.5 to 10 degrees Fahrenheit over the next century (*The consequences of climate change*, 2016).Furthermore, the spectacular increase in the production of industrial output in China, just like other industrial production centres such as Germany and the USA, has accelerated the depletion of global oil reserves (*The structure of China's oil industry*, 2016). The explosion of industrial output is driven by the attempt to satisfy the voracious consumption and the increasing demand for consumer goods around the world. Rapid oil depletion has increased the call for renewable and diversified sources of energy given the unsustainability of oil-dependent economic development. Hence, in 2014, a resolution by the UN General Assembly declared 2014-2024 the United Nations Decade of Sustainable Energy for All (*Sustainable development*, 2016). Elton Musk, CEO of Tesla, Inc. (formerly Tesla Motors) believes that in the future solar and wind farms can provide electric power when the sun is not shining and when the wind is not blowing by storing electricity generated when the sun is shining or the wind is blowing in new types of batteries. He is encouraged by market readiness and public policies' willingness to explore alternative sources of energy.

Musk and his team claim that the owner of a small sedan being driven 15,000 miles annually will spend an average of $6,957 on gasoline (*Driving cost per mile*, 2014). In contrast, the owner of an electric car running the same annual mileage will spend $540

(Moloughney, 2016). In addition, an electric car's maintenance cost is 35% less than for a gasoline-powered car (Ingram, 2016). It is based on this analysis that electric-powered vehicles became commercially viable.

Directly competing with Tesla is the Chevrolet Bolt. Other potential competing EVs are in development. Currently Tesla has the high-end market to itself. One advantage of EVs over vehicles with gasoline engines is the lack of a drive shaft that makes for a more roomy interior.

South African native Musk, who studied economics and physics in college, is co founder, CEO, and product architect of Tesla; the founder, CEO and CTO of SpaceX; cofounder and chairman of Open AL; co-founder of Zip2; and founder of X.com which, after merging with Confinity, took the name PayPal.

SCOPE OF THE STUDY

• To quickly identify, contact, attract and acquire new customers.

• To obtain a better understanding of the customers, and their wants and needs.

• To define appropriate product and service offering and match it to the customers Unique needs.

• To identify cross selling and up-selling opportunities.

• To increase retention of existing customers through improved after sales, service, & support.

1) To understand the market potential of Tesla Motors.
2) To interpret the most effective marketing strategy.
3) To understand the financial viability or the pricing strategy of Tesla.
4) To interpret business operations.
5) To have a comparative study of electric and gasoline vehicles.

NEED OF THE STUDY

• Companies have to increasingly pursue a customer centric competitive strategy

rather

than a product centric one.

• Customers demand constant access, immediate response & a personalized touch.

• Focus is shifting from supply chain to demand chain effectiveness.

• Better understanding & intelligent management of customer relationship is essential

for

Horizontal Analysis:

Comparison of two or more year's financial data is known as horizontal analysis or trend analysis. Horizontal is facilitated by showing changes between years in both dollar and percentage form.

Vertical Analysis:

Vertical analysis is the procedure of preparing and presenting common size statements, Common size statements is one that shows the items appearing on it in percentage form

us well as in dollar form. Each item is stated as a percentage of some total of which that item is apart. Key financial changes and trends can be highlighted using common size statements.

Ratio Analysis:

The ratios analysis is the most powerful tool of financial statement analysis. Ratios simply mean one number expressed in terms of another ratio is a statistical yardstick by means of which relationship between two or various figures can be compared or measured. Ratios can be found out by dividing one number by another number. Ratios show how one number is related to another.

Current Customer Value:

Reliability: Report on customer's view says customer feels that Tesla is more reliable than any of its competitor in market who are offering hybrid cars. Onsite Service with minimal or no efforts win the goodwill to brand Tesla.

Owner Satisfaction: Targeted segment owner found their satisfaction level highest by owning the Tesla Cars which are advance in technology and eco friendly

Financial Analysis:

Financial ratio analysis involves calculating certain standardized relationship between figures appearing in the financial statements and then using those relationships called ratios to analyze the business financial position and financial performance Due to varying size of businesses different comparison of two businesses is not possible.

Certain techniques need to be implemented in simplifying the financial statements and making them comparable. These induce financial ratio analysis and common-size financial statements. Ratios are divided into different categories such as liquidity ratios, profitability ratios, etc.

General purpose financial statements are designed to meet the needs of many diverse users, particularly Present and potential owners, shareholders, and creditors. Financial statements result from simplifying, condensing, and aggregating masses of data obtained primarily from the financial system. They are an output of the accounting system. Companies release financial statements at least once a year for their accounting period.

Purpose of Financial Statement Analysis:

Financial statements are prepared to meet external reporting obligations and also for decision making purposes. They play dominant role in setting the framework of managerial decisions. But the information provided in the financial statements is not an end in itself as no meaningful conclusions can be drawn from this statement alone However, the information provided in the financial statements is of immense use in making Decisions through analysis and interpretation of financial statements. Few numbers appearing on financial statements may not have much significance standing by themselves is the relationship of one figure to another and the amount and direction of change overtime that are important in financial statement analysis. How does the analyst key in on significant relationship, how does the analyst dig out the important trends and changes in company? Three analytical Techniques are widely used: Dollar and percentage changes on statement, common size statements and financial ratios and formulas.

Advantages of Financial Statement Analysis:

The different advantages of financial statement analysis are listed below

- The most important benefit if financial statement analyze is that it provides an idea to the investors about deciding on investing their funds in a specific company
- Merits of financial ratio analysis are another advantage of financial statement analysis is that regulatory authorities can ensure the company following the required accounting standards or not.
- Financial statement analysis is helpful to the government agencies analyzing the taxation owed to the firm.
- Financial statements analysis can help the government agencies to analyze the taxation due to the company.
- Above all, company can analyze its own performance over the period through financial statements analysis. Through financial statement analysis you can determine and identify financial strengths, weaknesses and relationships that exist in a company.
- Comparing the financial statement analysis numbers over time to spot trends and changes that affect company business.

Marketing Analysis

A marketing analysis is a study of the dynamism of the market. It is the attractiveness of a special market in a specific industry. Marketing analysis is basically a business plan that presents information regarding the market in which you are operating in. It deals with various factors.

A marketing analysis is done so that you can formulate a strategy on how to run your business. By taking into consideration certain factors, you will know how to operate your business.

Factors of Marketing Analysis

The most common factors are the SWOT, which is an acronym for, Strengths, Weaknesses, Opportunities, and Threats. By assessing the company's strengths and weaknesses, you can make a strategy on which factors to focus upon. If you have a good labour force, ample investment, and good advertising experts then you are going to make your marketing strategy focusing on those things. Similarly, if your technology is comparatively poorer and you lack online presence then you are going to avoid those things. You also look at external factors like situations which may provide you with an opportunity or threat. Economic factors, political instabilities or even social changes can give you opportunities which you can seize and do better.

They can also create threats which are going to hamper your business dealings. Considering all these factors will give you a marketing analysis from which you can implement your decisions.

Dimensions of Marketing Analysis

There are certain dimensions which help us to perform a marketing analysis. These things help us understand the market we operate in better. These dimensions include.

- Market Size
- Growth rate of the market
- Market trends
- Market profitability
- Key success factors
- Distribution channels
- Industry cost structure

Market Size – The size of the market is a key factor in a marketing analysis. The bigger the market the more competitors you are likely to have. For a big market, you need to make sure your products and services stand out. Otherwise, the customers can easily switch to a rival product. Not only that, a bigger market makes you rethink your pricing policy. Set your price too high then you are going to lose your customer base to other competitors. Set it too low and people will think that you are just providing cheaper poor-quality goods. If the market size is small, then you can get away with

charging a high price. All these facts are kept in the marketing analysis. Based on that you go ahead with your marketing plan.

Growth rate of the market – The market growth rate is a huge factor in any sort of marketing analysis. This is because you get the idea of how long the said market will last. Before you make an investment, you need to analyze the market's growth rate. If it is likely to grow over time, then you can invest more in it. If it has no growth, then you are likely to be discouraged from investing anything at all. How much time and importance you give to the market depends on its growth rate.

Market Trends

Market trends are a significant part of the marketing analysis. Having knowledge about the trends help you to decide what kind of product you are going to sell. When you are starting off a business you need to know what the current trend is. What is the thing that the customers like? How much they are willing to spend? What other trends may capture their attention? These are the sort of things which will go on your analysis. On the other hand, market trends can change any day. This can turn out to be an opportunity for your business. If that's the case then you can seize it and make the most of it. Changes in trend can also be a threat for you. If you are comfortable producing one kind of good then a market trend change will affect you the most.

Market Profitability

Most companies' motive to get into the business is to make a profit. In other words, they are profit-motive businesses. So before getting into a business you need to analyze the profitability of the market. If the market has a good profitability, then only you are going to invest heavily. Otherwise, it would be a waste of your time and capital.

To calculate the profitability of the market, there are a few things one has to consider. These things include buyer power, supplier power, barriers to entry and so on.

Key Success Factors – The key success factors are those elements which help the business to achieve great success in the market. Such elements are required to stand out among the rest of the competition. These are things which you did well that have enabled you to produce great results. Key success factors include.

1. Technology progress
2. Economies of scale
3. Efficient utilization of resources

Distribution Channels – Distribution channels are very important for a business. Without those, you will not be able to get your products to your customers. So, it becomes a big factor in a marketing analysis. This is because you need to assess how well the channels are. If the existing ones are good enough or you need to develop newer ones. Sometimes you come up with brand new channels like online marketing.

Industry Cost Structure – The industry cost structure is a significant factor while running a business. It basically sees how much cost is required to get your products for sale. Sometimes firms can come up with ways to decrease that cost and thereby make a bigger profit without increasing the market price. Doing a marketing analysis will help you to come up with newer ways to reduce cost. At the same time, it helps to create strategies for developing a competitive advantage of your rivals.

Supply and Demand

Supply and demand for products, currencies and other investments creates a push-pull dynamic in prices. Prices and rates change as supply or demand changes. If something is in demand and supply begins to shrink, prices will rise. If supply increases beyond current demand, prices will fall. If supply is relatively stable, prices can fluctuate higher and lower as demand increases or decreases.

1. **Demographics**—how will the composition of your market change and what opportunities or hurdles will this create? How will population and housing demand evolve?

2. **Current and projected economic conditions**—How will inflation, employment, taxes, and other economic factors effect supply, demand, and pricing?
3. **Size, growth potential, and prosperity of the market**—will the size of your market continue to support current business and/or allow the opportunity for business growth? What are the growth options for housing availability in your market? Is there vacant land available? Are there geographic limitations on growth (a mountain range)? Is there zoning, use fees, and other restrictions that might fuel or limit growth?
4. **Market potential**—Strengths and weakness of major competitors. How can you capitalize on a competitor's weakness?
5. **Market share**—what percentage of current transactions in your market is handled by your company and what factors could change that percentage either positively or negatively?
6. **Present customer composition**—how do factors such education, buying frequency, age, income level, occupations and hobbies affect the level of future demand among existing customers?

Importance of Market Potential

Your potential is a unique way to present your value proposition. It includes what top talent can provide within a role in the workplace and the proof of past performance that promises those results.

The key question, then, to discovering your potential is, "What do I want my career to be about and what makes credible sense for my next move?"

Once you have identified the answer to this question, then you have created a message that you can promote and a direction for your next move.

Outlining your potential, then, is to define a method that will cull out those opportunities that do not meet your next move. This method should not only assist you in determining which approach you should use to find your next opportunity but it galvanizes your with an inner philosophy and standard that fits well within target companies, identified you and for whom you want to work.

Defining your market potential also answers the question of whether you are seeking a position that helps you find meaning and motivation in your next role. Situations cannot and will not provide these key components.

No amount of leadership challenge can fulfil the inner desires of an executive expect when personal standards and ethics are identified for oneself. Many today do not have this all-important answer that creates a pleasantly full life including balance, meaning and purpose.

Lastly, discovering your potential gives you a theme that communicates your personal legacy for your next employer or within your current organization. The outcomes of laying out your potential helps you crystallize what you will pass on to the next generation of leaders before you decide to leave, move up into that next role through promotion, or retire.

Competitive analysis

A competitive analysis helps you learn the ins and outs of how your competition works. It also helps you identify what they are doing right and opportunities where you can easily one-up them by using a strategy, they haven't taken advantage of.

Every brand can benefit from regular competitor analysis. By performing a competitor analysis, you will be able to:

- Identify gaps in the market
- Develop new products and services
- Uncover market trends
- Market and sell more effectively

- Once you identify your true competition, you will need to determine what metrics you'll be comparing across the board. Below, we will give nine specific factors to compare and tips on how to identify this competition in the first place.

How to do a Competitive Analysis

1. Determine who your competitors are.
2. Determine what products your competitors offer.
3. Research your competitors' sales tactics and results.
4. Analyze how your competitors market their products.
5. Take note of your competition's content strategy.
6. Analyze the level of engagement on your competitor's content.
7. Observe how they promote marketing content.
8. Look at their social media presence, strategies, and go-to platforms
9. Perform a SWOT Analysis to learn their strengths, weaknesses, opportunities, and threats.

CHAPTER-2

TESLA MOTORS-DETAILED PROFILE

Founded in 2003, the company designs, manufactures, and markets high-performance, technologically advanced electric cars and solar energy generation and energy storage products. Tesla sells three fully electric models: The Model S sedan and the Model X SUV, and the Model 3 sedan, which is among the world's top-selling electric cars. The fuel-efficient, fully electric vehicles recharge their lithium-ion batteries from an outlet. Tesla's Autopilot self-driving technology hardware has been available on all Tesla models since late 2016. US customers generate about 70% of Tesla’s sales. CEO Elon Musk founded PayPal and runs SpaceX.

Operations

Tesla designs, makes, and sells the Model S, Model X, and Model 3 electric vehicles. The company also offers leasing and services. The automotive segment generates just under 95% of sales. The division's operations also include an international network of company-owned stores and used car sales. Tesla's network of Supercharger and

Destination Charging stations in North America, Europe, and Asia provides fast, convenient charging locations for Tesla owners to recharge their vehicles.

The company's energy generation and storage segment (just over 5% of revenue) makes and sells stationary energy storage products and solar energy systems to residential and small commercial customers. Its Powerwall 2 lithium-ion battery system is designed to store electricity for use as backup power in the event of an outage and to optimize self-consumption of solar power generation. Tesla's commercial and utility offering, Powerpack 2, is an energy storage system that offers features like peak shaving, load shifting, emergency backup, and self-consumption of solar generation.

Tesla's solar energy systems include solar panels, inverters, and rack systems. The company's Solar Roof gathers solar energy from glass tiles that aim to be more architecturally pleasing than traditional roof-mounted solar panels.

Geographic Reach

Tesla operates vehicle manufacturing facilities in Fremont, and Lathrop, California; Tilburg, the Netherlands; and its Gigafactory 1 near Reno, Nevada. Energy storage products are manufactured at its Gigafactory 1. Solar products are made primarily at Tesla's Gigafactory 2 site in Buffalo, New York. The US accounts for about 70% of sales. Other markets for which the company breaks out sales include China (about 10% of sales) and Norway (about 5%).

Sales and Marketing

Tesla markets and sells cars directly to consumers through an international network of company-owned stores and galleries. Tesla is notable in that it does not use dealerships (due, in some states, to legal restrictions).

The company's solar energy and storage products are typically sold directly to residential customers through the company's stores and galleries, and through channel partners. An international sales organization markets Powerpack 2 systems and residential energy storage products outside the US.

Financial Performance

Tesla's revenue growth has accelerated like its first car, the Roadster sportscar (0-60 in 1.9 seconds), driven by the rising number of vehicles sold each year. Between 2014 and 2018 sales have grown a whopping 570%. The company, however, has posted a string of net losses as it pours money into research and development and manufacturing. Tesla's revenue jumped 83% to $21.5 billion in 2018 driven by an 87% increase in automotive revenue. The number of vehicles sold in 2018 rose 138% to about 245,500 compared to 2017. Automotive sales revenue rose 107% but leasing revenue was down 20% in 2018. Service revenue increased about 39%. The energy generation and storage segment contributed about 5% of total revenue.

As fast as the company's sales are moving forward, its bottom line is stuck in reverse. The company lost about $976 million in 2018, which was an improvement

Over the nearly $2 billion lost in 2017. The cost of automotive revenue rose 91% in 2018. However, the rise in unit sales is outpacing production cost growth, which may indicate manufacturing is becoming more efficient. Tesla also had higher expenses for R&D, sales, general, and administrative, and interest in 2018, but these expenses grew at a slower pace than in 2017.

Cash at the end of 2018 was $4.3 billion, an increase of about $300 million from the prior year. Cash from operations contributed $2.1 billion to the coffers, while investing activities used $2.3 billion, mainly for capital expenditures. Financing activities used $573.8 million, primarily in the form debt repayments.

Strategy

Tesla's Model 3 was the US's top-selling luxury car in 2018, the first full year of its production. But production has still struggled to keep pace with demand. During 2018 the company managed to turn out about 7,000 Model 3 vehicles per week. Tesla hopes to accelerate production to 10,000 Model 3s per week by early 2020.

To help meet that goal and ramp up sales in overseas markets, Tesla's Gigafactory 3 in Shanghai, China broke ground in early 2019. Gigafactory 3 passed a government inspection that was necessary to begin production in September 2019 and full production is expected to soon follow. Model 3s rolling out of Gigafactory 3 is pivotal to Tesla's play in the world's largest electric car market and will help it gain ground in China while avoiding import tariffs.

Tesla is also busy advancing its autonomous car technology. The company's Autopilot driver assist system includes auto-steering, traffic-aware cruise control, automated lane changing and other features that together offer a complete self-driving experience while keeping the driver in ultimate control of the car.

Electricity is not just for cars as far as Tesla is concerned. The company is developing Tesla Semi, an electric version of diesel-powered semis, built for hauling heavy payloads. The company said it will have a 500-mile battery range. Tesla intends to use the truck for its own logistics, but PepsiCo, Anheuser Busch, J.B. Hunt, UPS, and FedEx have placed orders for the trucks. Tesla plans to begin production of the Semi in 2020.

While most automakers have generated armies of suppliers providing parts, Tesla tries to handle as much manufacturing as it can in-house, including batteries and drive trains. The company spreads production costs for batteries across its energy and

storage unit, but the costs of funding such manufacturing operations eat up a lot of cash.

Tesla pioneered the electric car market of the 21st century, but other automakers are appearing bigger in the rear-view mirror. Companies such as Honda, Toyota, Ford, GM, Nissan, BMW, Daimler are investing in development programs designed to shift large parts, in some cases all, of their fleets to electric power in the coming years. Tesla has delivered highly ranked vehicles so far, but traditional automakers can call on deep resources, extensive supply chains, and global markets in developing and selling their vehicles.

Mergers and Acquisitions

Late in 2019, Tesla acquired Canada-based Hibar Systems, a manufacturer of battery systems for electric automobiles, laptops, and other products. Industry watchers believe the deal is part of Tesla's strategy to reduce its dependence on its third-party battery partners. Around the same time Tesla bought computer vision start-up Deep Scale. The purchase of Deep Scale is expected to accelerate Tesla's autonomous driving technology efforts.

Earlier in 2019, Tesla acquired energy technology company Maxwell Technologies in an all-stock deal valued at more than $200 million. Maxwell develops and makes ultracapacitors, devices that can store and quickly deliver surges of energy. Tesla would use the technology to increase battery capacity while reducing weight in its vehicles.

Segment:

Tesla is targeting individuals who are upper middle-class baby boomers with typical incomes of

over $100,000 which is based on 77% of our buyers falling into this particular segment. The majority of the segment is predominantly male.

SNAPSHOT OF TESLA

COMPANY OVERVIEW

- **FOUNDED:** In July 1, 2003
- **HEADQUARTERS:** Palo Alto, California, US
- **INDUSTRY SEGMENTS:** Automotive, and Energy generation and storage
- **AUTOMOTIVE SEGMENT:** Design, development, manufacturing, and sales of electric vehicles
- **ENERGY GENERATION AND STORAGE SEGMENT:** Design, manufacture, installation, and sale or lease of stationary energy storage products and solar energy
- **PRODUCE AND SELL:**
  - Model S sedan delivered first in June 2012
  - Model X sport utility vehicle ("SUV") delivered third quarter of 2015
  - Model 3 sedan delivered first quarter of 2016
  - Introduced new version of the Tesla Roadster an all-electric supercar
  - A home powered by tesla combine solar panels and a powerwall battery
- **MANUFACTURING PLANTS/FACTORIES:**
  - Fremont - California
  - Lathrop - California
  - Tilburg - Netherlands
  - Gigafactory 1 near Reno, Nevada
  - Buffalo, New York (Gigafactory 2)
- **NUMBER OF EMPLOYEES:** As of December 31, 2017, Tesla, Inc. had 37,543 full-time employees
- **KEY PEOPLE/MANAGEMENT:**
  - Elon Musk - Chairman, Product Architect and CEO
  - JB Straubel - CTO
  - Deepak Ahuja - CFO

KEY FINANCIAL GROWTH STRATEGIES

- Company reported revenues of US$11,759 million for the fiscal year ended December 2017, an increase of 68% over FY2016
- Company reported assets of US$27,271 million for the fiscal year ended December 2017, an increase of 26% over FY2016
- Company reported revenues of US$3,409 million for the first quarter ended March 2018, an increase of 3.7% over the previous quarter

COMPETETIORS

- Waymo is an autonomous car development company
- NIO specializes in designing and developing high-performance EV's
- Honda is a Japanese public multinational corporation primarily known as a manufacturer of automobiles, motorcycles and power equipment
- Toyota Motor Corporation is a multinational automotive manufacturer
- General Motors is an American multinational corporation, that designs, manufactures, markets and distributes vehicles and vehicle parts and sells financial services
- Ford Motor Company is a global automotive and mobility company which develops, manufactures, and distributes vehicles, parts, and accessories worldwide

TESLA'S MODEL S MATERIAL USAGE DETAILS



TESLA'S MODEL S & MODEL 3 MATERIALS SUMMARY

MODEL S

Application	Materials
Interior	Rare earth metals
	Petrochemical-based plastic
	Leather
	Carbon fiber
	Silicon
	Copper wire
Induction Motor	Steel
	Copper
Body + chassis	Bauxite aluminum
	Titanium
	Boron steel
Wheels	Natural rubber
	Bauxite
Battery	Cathode - nickel, cobalt, aluminum, and lithium
	Anode - silicone and synthetic graphite
	Electrolyte - lithium mined

MODEL 3

Application	Materials
Rear end	Aluminium
Outer covering on Doors	Mild Steel
Base/Bottom	High-Strength steel
Car casing/frame	Ultra High-Strength Steel

SUPPLIERS OF TESLA – SUMMARY OF MATERIALS AND APPLICATIONS

SUPPLIER	APPLICATION	MATERIALS	URL
BASF	• Automotive coating (Primer, Clear coat, E-coat)	• **R-M ONYX-HD waterborne paint** • Cathoguard 800® e-coat	• http://www.rmpaint.com/int/r-m-gains-approval-tesla • http://www.basf-coatings.com/global/ecweb/en/content/press/coatings-partner-magazine/archive/automotive-oem-coatings/eine-starke-partnerschaft
Plastomer Corporation	• HVAC Duct insulation	• Lok Cel®, an ether-based **urethane foam**	• http://www.plastomer.com/wp-content/uploads/2016/06/LokCel_Plastomer.pdf
Valeo	• Front wiper system & Top column module	• AquaBlade® **glass fibers impregnated with resin**	• https://www.valeo.com/en/aquablade/ https://www.valeo.com/wp-content/uploads/2017/09/20170904_Press-Kit-IAA-2017_ENG_FINAL-2.pdf
Dow Automotive	• Structural adhesives • Glass bonding system	• BETAMATE™ one- and two component **epoxy structural adhesives** • BETASEAL™ **urethane adhesives**	• http://msdssearch.dow.com/PublishedLiteratureDOWCOM/dh_096d/0901b8038096d475.pdf?filepath=automotive/pdfs/noreg/299-51904.pdf&fromPage=GetDoc • http://msdssearch.dow.com/PublishedLiteratureDOWCOM/dh_094a/0901b8038094a043.pdf?filepath=automotive/pdfs/noreg/299-52331.pdf&fromPage=GetDoc
Metokote Corporation (PPG Industries)	• Electrocoat [covers]	• Cathodic **epoxy** electrocoat	• http://www.ppgautocoatings.com/Products/Electrocoat.aspx
Magna international	• Chassis subframes [front and rear]	• **Aluminum, Steel** • **Carbon fiber reinforced vinyl ester resin composite** system	• https://www.magna.com/products/body-exteriors-structures/product/chassis-subframes

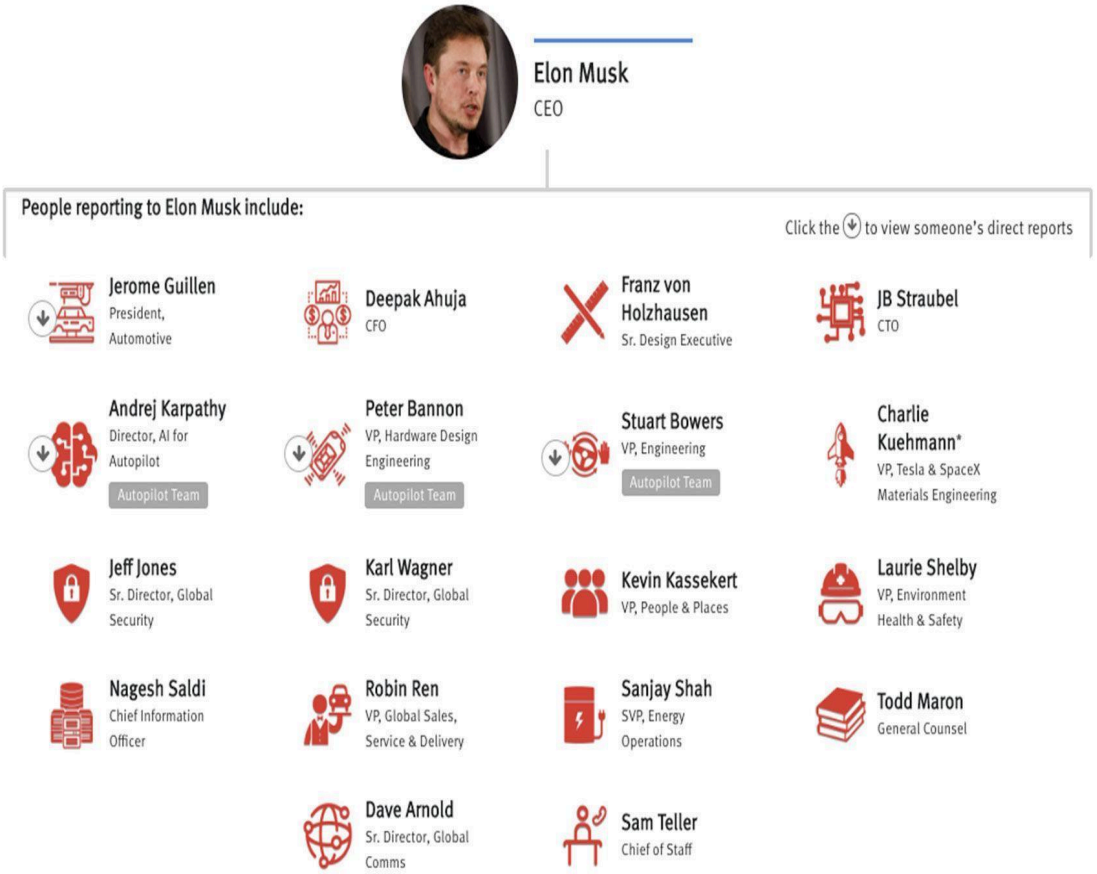
SUPPLIERS OF TESLA – SUMMARY OF MATERIALS AND APPLICATIONS (cont'd)

SUPPLIER	APPLICATION	MATERIALS	URL
Zanini Auto	• Wheel cap [aluminum wheels]	• **Acrylic** clear coat	• https://zanini.com/en/technologies/aluminium-overlays/
Novem Car Interior Design GmbH	• Interior Trim	• **Wood, Aluminium, Carbon, Premium Synthetics, Leather**	• http://www.novem.de/en/products/materials#1
Bader GmbH & Co. KG	• Leather interior	• **Leather**	• http://bader-leather.com/en/competencies/automotive-leather
Semblex	• Fasteners	• **Carbon Steel, Alloy Steel, Stainless Steel, Copper, Brass, Bronze, Aluminum**	• https://www.semblex.com/products/miniature-fasteners/ • https://www.semblex.com/default/assets/file/fastener-assemblies.pdf
Thyssenkrupp	• Stabilizer bars [front and rear]	• 34MnB5 steel-**Alloy steel with low carbon content**	• http://www.imim.pl/files/archiwum/Vol4_2015/04.pdf
Strattec	• Hood latch	• **High-grade zinc, brass, magnesium, aluminum, steel and plastic resins**	• https://strattec.gcs-web.com/static-files/44e1b311-d7dd-44a1-a10a-b10850c55050
SKF	• Ball bearings [electric powertrain] • Wheel hub bearing unit	• **Steel** • NitroMax steel (**high-nitrogen stainless steel**) • **Ceramics**	• http://www.skf.com/in/products/bearings-units-housings/super-precision-bearings/principles/bearing-specifics/materials/materials-for-bearing-rings-and-rolling-elements/index.html
Koyo	• Electric motor bearings	• **Steel** • **Ceramics**	• https://koyo.jtekt.co.jp/en/assets/file/pdf/catb2001e_d.pdf
Kiekert	• Side door locking system	• **Advanced High Strength Steel (AHSS)**	• US20170152684A1

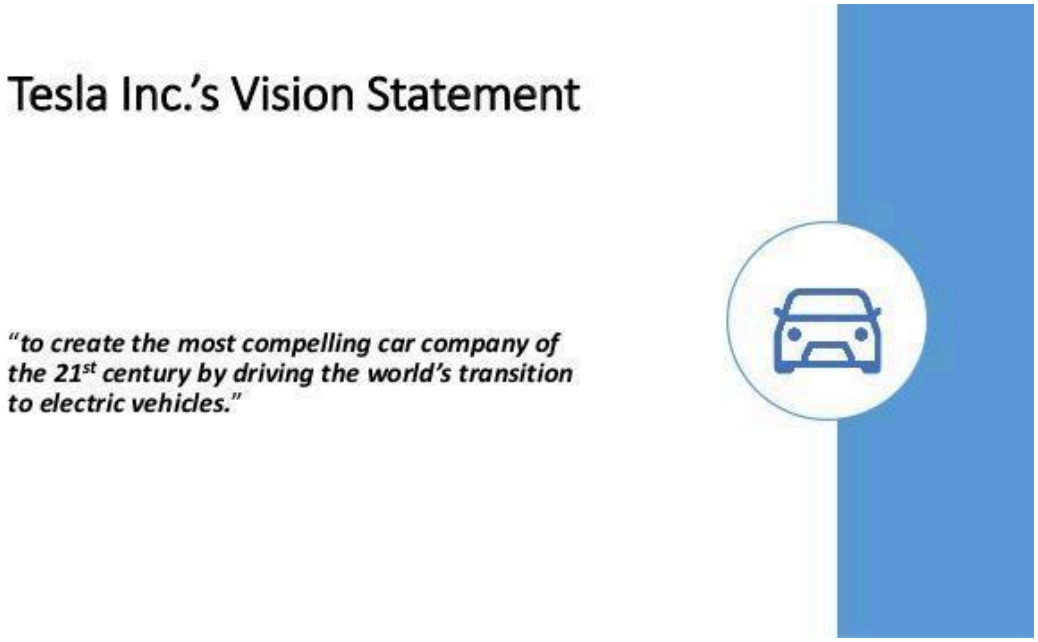
SUPPLIERS OF TESLA – SUMMARY OF MATERIALS AND APPLICATIONS (cont'd)

SUPPLIER	APPLICATION	MATERIALS	URL
Hellermann Tyton	• Wire harness adhesive mounts	• **Polyetheretherketone (PEEK), Polyamide 4.6 (PA46), Ethylene/Tetrafluoroethylene (E/TFE)**	• http://www.hellermanntyton.co.in/competences/cable-management-high-temperature-solutions
Inteva	• Window lift module	• Advanced plastics	• http://www.intevaproducts.com/capabilities/closure-systems/door-systems
AGC Automotive	• Glass appliques	• NA	• http://www.agc-automotive.com/en/our-products/glazing-systems/glass-applique/

KEY EXECUTIVES OF TESLA.INC



Vision of Tesla. Inc



Mission of Tesla. Inc



SWOT ANALYSIS

Internal Analysis

Strengths:

- Top Employer Company
- Top Automotive Company
- Leading in-class Electric Cars
- Dominates the U.S Electric Vehicle Sales
- Innovative Company
- Cross-sell and Diversification
- Distribution channel
- Monopoly
- Ability to R&D vehicle and manufacture the vehicles within the company.
- Supplies other organizations with parts.
- Developed the first full electric car.
- Technologically superior in drive train, transmission, and electrical technology
- Leading-edge proprietary technologies (vehicle design, powertrain technology, battery technology)
- Superior products in terms of exceptional vehicle performance (i.e. vehicle range capabilities) and unique/attractive vehicle designs
- Forward-thinking corporate leadership.
- BEV market ‘first mover’ advantage
- Solid brand name foundation
- Good reputation among customers and positive reviews from press
- Unique business model and innovative distribution/sales network
- Solid capital base and strong access to capital markets (public, private and government

Weaknesses:

- Complications in Manufacturing Process
- Failing to Meet Demand
- Lack of High-Volume Production
- Shortage of Batteries
- Poor Liquidity
- Poor Customer Awareness
- Limited Market Presence
- High Prices
- Burning Cash with no profit in view
- Relatively high cost structure due to lack of significant economies of scale
- Immature industry focus (nascent nature of electric vehicle market in general)
- Growing but limited brand name recognition within the mass-market consumer segment
- Possible component supply problems if demand increases significantly
- Potential production output problems if consumer demand in targeted luxury sedan market
- Increases significantly (current manufacturer, Lotus has limited production capacity)
- Consumer concerns over electric vehicle market infrastructure (‘range anxiety’, limited number of charging stations, limited other available charging options, etc.)

Opportunities:

- Sales Expansion in Untapped Market
- Affordable Car Models
- Introduce Battery Production technology in-house
- Diversification
- Momentous advances in vehicle battery technology (led by Tesla)
- Significant barriers to entry in the BEV market which serves to limit the number of viable new entrants
- Rising consumer awareness of cost and environmental benefits of BEV ownership.
- Substantial increases in the price of gasoline, driving producers and consumers to look to alternative sources of power
- Global ‘peak oil’-related pressures
- Increasing governmental focus on infrastructures necessary to support widespread BEV adoption
- Mounting anxieties about environmental pollution and global warming
- Swelling global concerns over energy security and fossil fuel dependencies
- Growing number of government mandates and regulations favourable toward BEV adoption (i.e. electric vehicle subsidies, phase-out of fossil fuels subsidies, etc.)
- Increasing number of government incentives worldwide in support of electric vehicle adoption (e.g. rebates, tax breaks, low-interest loans, grants, etc.)
- Certain market sectors are ‘niche’ and largely untouched (i.e. electric vehicle sectors within the premium sports vehicles and luxury sedan markets)

Threats:

- Product Liability Claims
- Competition
- Product Defects
- Long term confidence
- Shortage of Materials
- Customer Acceptance
- Dealership Regulations
- Lack of Self Driving Regulations
- Significant increase in the number of direct BEV competitors
- Growing number of substitutes for BEVs (i.e. plug-in hybrids, gasoline-powered hybrids, natural gas vehicles, ethanol-fueled vehicles, more fuel-efficient nonelectric vehicles)
- Entry of large automobile companies into the BEV market with greater economies of scale capabilities
- Possible breakthrough by competitor(s) in vehicle battery technologies that could diminish Tesla's current BEV technology advantages
- Potential breakthrough by competitor(s) of related alternative energy technologies such as hydrogen powered vehicles
- Resurgent consumer apathy driven by historically demonstrated 'status quo' attitudes when upwards gasoline pricing pressures are eased in the short term
- Possible dramatic short-term decreases in the price of oil that could discourage consumer adoption of BEVs as a substitute to gasoline powered vehicles.

SWOT ANALYSIS

EXTERNAL ANALYSIS

Strengths:	Opportunity:
• Innovative culture • Financial Strength	• New full electric car segment • International expansion

• Innovation in technology • Customer Loyalty • Brand awareness	• Innovative New products • Growth of economy • Demand increase of luxury vehicles.
Weaknesses:	**Threats:**
• Weak customer service • High cost of production	• Intense competition • Gas prices • Change in taste • Increase in cost of raw materials • Technology problems

MARKETING

Tesla Spends Zero $ On Ads.

How does Tesla make it work?

"Strong brands are able to command high engagement even without a robust digital ad spend," said Leibovich. "In Tesla's case, we see their engagement numbers are high compared to other auto brands allocating spend in their digital campaigns. This may be a result of Tesla's fans already being engaged and active users on Twitter and other platforms. The brand doesn't feel the need to spend on paid social media marketing when their organic reach is so strong."

1. First and Fast Mover Advantage:

In 2006, Elon Musk announced that Tesla Motors is going to launch the first-ever electric car. At that time, all the professionals started making jokes on Elon Musk because any other company was not able to build a high-quality electric car. It was a very difficult task. In 2008, Musk launched Tesla's first electric car (Tesla Roadster) and it became a successful launch. That is how the company created the new automobile market that is electric cars. After this launch, the company started boosting their work on research and development and manufacturing more and more cars. This is how the company became not only the first mover but also the fast mover.

2. Design:

After the successful launch of many Tesla cars, other automobile companies also started spending more on research and development for making their own electric cars. However, most of the companies are able to make their own electric cars. But they were not able to match the quality standard and design of Tesla. Today consumers know that Tesla provides the best design of cars.

3. Elon Musk: The Name is Enough:

The founder and CEO of Tesla Motors Elon Musk is so popular that the company does not require to spend money on marketing. The brand equity of Elon Musk is helping a lot to Tesla. Because of this reason, when people hear about the electric car, the first name come in the mind is Tesla Motors and then Elon Musk.

4. Targeting the Right Consumer:

In the beginning of Tesla Motors, their target audience was fixed! The RICH CLASS. By doing this, it started becoming a social symbol for RICH people just like Apple. Slowly, the company started producing cars with a comparatively lower price. Now, middle class and higher middle-class people also have started buying the cars of Tesla in order to get social status.

5. Consistent Growth:

Most of the automobile companies in the world have been struggling for the last 3 years. On the other hand, Tesla has been maintaining consistent growth in car sales.

Quarter	Cumulative production	Total production	Model S sales	Model X sales	Model 3 sales	Total sales[b]	In transit[c]	Source
Q1 2015	76,438	11,160	10,045			10,045		[69]
Q2 2015	89,245	12,807	11,532			11,532		[70]
Q3 2015	102,336	13,091	11,597	6		11,603		[71]
Q4 2015	116,373	14,037	17,272	206		17,478		[72]
Q1 2016	131,883	15,510	12,420	2,400		14,820	2,615	[73]
Q2 2016	150,228	18,345	9,764	4,638		14,402	5,150	[74][75]
Q3 2016	175,413	25,185	16,047	8,774		24,821	5,065	[76]
Q4 2016[d]	200,295	24,882	12,700	9,500		22,254	6,450	[77][78]
Q1 2017	225,713	25,418	~13,450	~11,550		25,051	~4,650	[79]
Q2 2017	251,421	25,708	~12,000	~10,000		22,026	~3,500	[80][81]
Q3 2017	276,757	25,336	14,065	11,865	222	26,137	4,820	[82][83]
Q4 2017	301,322	24,565	~15,200	~13,120	1,542	29,967	3,380	[84][85][86]
Q1 2018	335,816	34,494	11,730	10,070	8,182	29,997	6,100	[87]
Q2 2018	389,155	53,339	10,930	11,370	18,440	40,740	15,058	[88][89]
Q3 2018	469,297	80,142	14,470	13,190	56,065	83,725	11,824	[90][91]
Q4 2018	555,852	86,555	13,500	14,050	63,359	90,700	2,907	[92][93]
Q1 2019	632,952	77,100	12,100		50,900	63,000	10,600	[94]
Q2 2019	720,000	87,048	17,650		77,550	95,200	7,400	[95][96]

Auto Brands Paid Media Mix				
	Facebook	YouTube	Instagram	Twitter
Toyota	**62%**	18%	18%	2%
BMW	46%	2%	32%	**20%**
Honda	38%	33%	27%	2%
Audi	32%	**54%**	13%	1%
Ford	55%	39%	6%	<1%
Infiniti	52%	7%	**40%**	<1%
Cadillac	34%	40%	18%	8%
Porsche	14%	47%	39%	<1%
Tesla (*No paid advertising)	0%	0%	0%	0%

[30 day analysis, 3.26.19 - 4.26.19, Source: BrandTotal]

Marketing Orientation

Marketing Objectives:

The three marketing objectives for this campaign are:

1) To position the Model S as an affordable sedan in the luxury market,

2) To raise awareness and educate consumers on the Model S and Tesla Motors as a whole, and

3) To have new buyers as a significant portion of the customer base.

Advertising:

To advertise the Model S successfully the entire advertising budget will be directed towards magazine ads. We considered print media to be more cost effective and more efficient than alternative forms of advertising. Television ads reach a large audience, however at this point in time Tesla's is not ready for mass marketing. Tesla has a specific target market and television advertising will not allow Tesla to zero in on them. Furthermore, the average cost of an ad during prime time is nearly $110,000 per airing. Because Tesla is a luxury brand with limited dealerships and sales promotions, radio advertisement is not seen as an effective means of communication.

Tesla's marketing strategy, then, goes against the trend of developing TV advertisements and pushing its products onto consumers. Instead, Tesla focuses on **word of mouth advertising**, and **referrals**. Essentially, Tesla markets to its customers by not ***directly*** marketing to them. It encourages others, namely customers, to do the selling for them.

Introduction & Table of Contents

This strategy of relying on word of mouth and referrals turns Tesla's customers into its marketers. Because of this, the company has an enormous need to provide a great product, and create an amazing experience around purchasing and owning that product.

Here is a comprehensive list of what we'll cover about Tesla, organized around these topics:

- Customer Experience
    - Tesla's Referral program
    - Sales centres

  - Tesla Rangers, and Tesla servicing
  - Design and Development of the vehicles
- Spreading the word
  - Press test rides
  - SpaceX, and cross-promotion
  - CEO on Twitter
  - Exclusivity of the vehicles
- Adherence to the Company Mission
  - Marketing sustainability
  - Products outside of the vehicles
- How this plays out in Metrics
  - Sales
  - Net Promoter Score
- The Big Picture

Marketing through Customer Experience: Tesla's Referral program

Like many companies, Tesla has a referral program to encourage customers to get the word out about their cars. In exchange, customers get something they want or need, adding to their enjoyment of working with the company. In Tesla's case, what the company offers in exchange for a referral is often evolving. Before the end of October 2015, the referral program let the person referring others get $1,000 in credit towards a new Tesla, or a Tesla service or accessory, for every purchase made from their recommendation.

Sales centres

In an effort to correct what the company calls a "conflict of interest," Tesla does not have dealerships—instead, it has sales centres, which are sometimes combined with Tesla service stations, and online sales. The "conflict of interest" refers to salespeople at franchise dealerships who are incentivized, via commission structures, to upsell customers, rather than just get them the vehicle they need.

Tesla is currently shutting down many of its stores to make its sales program exist exclusively online. Service centres will still exist for the vehicles, but the goal is to make sales entirely digital, so you have little to no interaction with salespeople at all. By removing pushy salespeople egging you on to upgrade your vehicle in ugly dealerships, Tesla seriously differentiates itself from its competition. It removes some of the most annoying parts of buying a car, which certainly makes for happier customers. It also puts customers in charge of the buying experience, which further improves their experience with Tesla. They are buying this car on their terms, from salespeople that can be purely informative and helpful, or from the comfort of their own homes. What customers do not enjoy that? And happy customers are good at passing on the word to others, so Tesla has its marketing team in the form of its buyers.

Tesla Rangers, and Tesla servicing

Purchasing a car is often only the beginning of a customer's relationship with a car manufacturer. If a customer choses to go to a dealer for repairs, the relationship continues for as long as that customer has a car from that manufacturer.

Tesla knew, by being the first purely electric car on the market, they would be forcing people to use their service stations for an extended period of time. Mechanics would eventually catch up, of course, but in the meantime, customers would be obligated to return to Tesla service centers for longer than they perhaps would have otherwise chosen.

Tesla developed the Tesla Rangers, a mobile service team that can meet you where you need a repair. This can be on the road, but it can also be at your home; pretty much wherever and whenever it is convenient for you.

Marketing through Media/Social Media Attention: Press test rides

A clever way Tesla got the word out initially about the Model S was inviting members of the press to test ride the vehicle, and then write about it. Considering that test-driving a Tesla vehicle from a sale center requires a $5,000 deposit, this was a solid offer, and it let the media put Tesla's claims about the car to the test.

Following the same method for the Model 3, Tesla has gotten some positive reviews from media sources like MSN and Fox News, helping spread good word of mouth about the car to a variety of potential customers. It was a marketing move that came very low cost to Tesla—all they had to do was provide a vehicle. Or, as in the case with the Fox review, they did not even have to do that—Fox contacted a Tesla owner, who happily lent the car to a writer for an afternoon. Once again, Tesla's customers help market Tesla's products.

SpaceX, and cross-promotion

A factor that makes Tesla, Inc. unique in the automotive industry is its CEO owns and runs businesses in other fields, such as SpaceX and Solar City. Through Musk, these companies get some unique cross-promotional opportunities with each other, increasing the visibility of both companies.

The most notable cross-promotion to date was the launching of the Tesla Roadster into space. SpaceX had already showcased its reusable rockets, and industry first, in which the boosters return to earth allowing for significantly cheaper launch capabilities.

CEO on Twitter

Elon Musk's activity on Twitter is somewhat unique for a CEO, in that he's the one actively using his account, and engaging with his audience. He live tweets important events like the SpaceX rocket launches, he shares business and technology ideas, and he responds to customer suggestions, directly right on the site and often instantly rolls out a fix— many companies of Tesla's size would struggle to match this service level.

As an example, a Tesla customer tweeted at Elon Musk asking that the car automatically move back and raise the steering wheel once in park in order to keep from hitting the steering wheel repeatedly while getting out of and into the car, and wearing it down. Musk responded to the tweet within 30 minutes, and that feature was added to Tesla vehicles via a software release.

With public responses, consumers can see Musk is a CEO that wants to hear from them, which reiterates Tesla's reputation of customer-centric production and design. This is just another example which inspires loyalty from Tesla owners, and more potential sales from would be customers following the business icon.

Exclusivity and Scarcity of the vehicles

With Tesla cars being made to order across the board and the price point, we can consider the cars fairly exclusive vehicles to purchase. Add to the mix limited production, and you have a recipe for a supply and demand problem, which drives the 'un-obtainium' factor up, and the demand with it.

Marketing through a Mission: Marketing sustainability

As Tesla puts it on their website, its mission as a company "is to accelerate the world's transition to sustainable energy." In addition to being the basis for their technology development, this lofty mission aligns extremely well with their target market. Tesla is looking to sell to consumers that care about the environment, and

environmental issues. But as with its other marketing strategies, the company makes this appeal to them mostly indirectly.

Tesla's website is full of content about sustainable energy, and recently it put out its first sustainability report, documenting the company's carbon emissions, water usage, and energy expenditure in terms of its production and sales, as well as its general operations.

Metrics: Sales

Tesla, in general, has had a solid sales record, but in the early part of 2019, sales slumped 31% for Tesla vehicles. Sales for solar panels were also down, by 35%, and overall the company suffered a $702 million loss. Stock prices also went down, showing a continuing decline since its last peak in September 2017.Tesla, Inc.'s business model and production issues make its sales a bit unreliable at times, but the company is still very popular thanks to its many marketing strategies. Even with the Model 3 offering a more affordable price point, they are still proving to be slow to produce, so we will see if these metrics fluctuate further, or stabilize in the future. But Tesla has a decent shot of getting back on track, thanks to the customer and brand loyalty it is cultivated over the years.

Net Promoter Score

One of the best places we can see this customer loyalty in clear numbers is in Tesla's Net Promoter Score, or NPS. NPS measures customer satisfaction by asking customers one question: "On a scale of 0 to 10, how likely are you to recommend this company/product/service to a friend?" Based on the scores given, a company's NPS could land anywhere between -100 to 100, where anything over 0 reflects more customers being satisfied than not. A score under 0 reflects the opposite.

Tesla boasts one of the highest Net Promoter Scores in the world with a 97, an almost perfect score in customer satisfaction. Tesla's focus on customer experience has paid

off in a big way which is evident by this metric, and it is a metric that influences profit trends, as well as customer retention and customer churn. Tesla is not likely to lose customers, even with some of its current financial troubles, and that should help it weather this storm when every penny counts for them.

The Big Picture

Tesla, Inc. is a company that does not market in a traditional way. It's demonstrated it doesn't have to—by focusing on customer experience, media attention, and sustainability, Tesla has generated interest while delivering on a great product, which are all the pieces it's needed to dominate the electric car market.

In focusing on customer experience, Tesla has come to understand its average customer implicitly, and has turned its customers into marketers by appealing to them in significant ways. With media attention and good use of social media, Tesla has not needed commercials, which saves a significant amount of money on marketing while still being one of the most buzzed about car manufacturers in the world. By leading the sustainability revolution for car manufacturers, Tesla has appealed to a particular an environmentally conscious base, while also making sustainability appealing to customers that like Tesla for their sleek designs and functionality. This has helped expand faster than most other upstart car brands.

Because of how its business model must work to produce its vehicles, Tesla may always have some production and sales issues in the future. But it has certainly mastered its "$0" marketing strategy and will likely stay in the public consciousness so long as Tesla exists as a company. Tesla demonstrates you can strip back marketing to its bare essentials and become a multi-billion-dollar company in the process. All you need is the right product, the right targeting of your market and a killer company mission customers can get behind and you will thrive.

Tesla PESTLE Analysis

The pestle analysis is a **strategic tool** that will analyse the **external environment** of Tesla. What are the company opportunities and threats? How the company will compete in the automotive industry. Will Tesla be able to increase their loyal **customer base** by offing more affordable and advanced technology cars in the market?

How Political Factors Affect Tesla Inc.

Tesla Inc. can avail the opportunity for strengthening its financial performance through various incentives offered from the government. According to the Federal Government consumers can qualify for tax credit upon purchasing of an electric car. The Federal Government offers tax credit up to $7,500.

In addition to this, **political stability** of many major markets for the automobile industry makes the environment favourable for Tesla's competitive strategy as well as for its intensive growth **strategy**.

Government has taken many stances for supporting the development of hybrid and electric vehicles. The Department of Justice granted a low interest loan of $465. It amounts of loan helped to the company to expand its **product**. A Senior Analyst Michelle Krebs said, "It helped move them to the next step".

How Economic Factors Affect Tesla Inc.

Electric cars are gaining popularity day by day which is mostly connected with the global economy. Global **economic growth** is expected to remain at 3% in the year 2019 and 2020. In 2018 the electric vehicle market was $39.8 billion which is expected to reach $1.5 trillion by 2025. This economic factor is a great opportunity for Tesla to capitalize.

Another economic factor is decreasing battery costs. Battery is an important cost factor in the total cost of any electric vehicle. Tesla's Powerwall batteries

development is a great opportunity for the company. They are making it more affordable and accessible. This factor will help the company to produce more affordable EV.

How Social Factors Affect Tesla Inc.

The idea of an electric car is fascinating for most people and this is especially true for those who are more eco-friendly. An electric car eliminates the use of fuel which is better for the environment also.

Moreover, electric cars are also less expensive than those of traditional cars in terms of maintenance and running cost. Tesla automobiles are environmentally sustainable.

In this Pestle/Pestel Analysis of Tesla Inc. another **social factor** is the social status. Mostly people are judged based on what type of the car people own. Having an electric car is a good idea that will increase **social** status

How Technological Factors Affect Tesla Inc.

Technological factors are that part of pestel analysis which determine how technology affect the company macro environment.

Rapid technological change is a key factor that can affect Tesla positively and negatively as well. Technology gives tesla both opportunities and threats. For example, technology helps tesla to manage its competitive edge in the marketplace. The company effectively used technology to enhance its product portfolio. Even according to the company CEO Musk, in near future Tesla model will be equipped with fully driverless technology, which if possible, will be a great technological competitive advantage for Tesla Motors over its competitors.

With the passage of time every technology become obsolete. But the solution is always there to upgrade and updates the obsolete technology. If we think about Tesla, every Tesla EV on the road is obsolete. Being a technological company, Tesla must face positive and negative impact of technology.

How Environmental Factors Affect Tesla Inc.

In this pestle analysis framework, environmental factors are the key opportunities for Tesla since the cars are environment friendly and use electricity. Tesla Inc. vehicles are also in compliance with several environmental regulations and barely have an impact over carbon emissions in comparison to that of traditional cars.

Focusing more on the environment, the company build a strong brand image and recognized among industry leaders. From electronic vehicles to that of other energy-saving Tesla has maintained its focus on sustainability as well as saving energy. In terms of environmental impact, Tesla enjoys a good reputation and the company is working towards making its supply chain to be more energy efficient.

How Legal Factors Affect Tesla Inc.

Legal factors are that part of PESTEL analysis which find out how legal issues influence Telsa. Inc macro environment**.** For example, Tesla and Musk is facing several lawsuit and regulatory issues and investigations.

Two tesla crashes occurred in the 2019 and the National Highway Traffic Safety Administration and Transportation safety Board are investing the main causes of these crashes.

Many States temporarily blocked the Tesla Sales directly from manufacturer to consumer. According to these states' manufacturer are required the engage third party dealership. This legal requirement can affect the Tesla car delivery. Furthermore, having a dealership means more expense and less profitability.

There are other legal issues like patent rights and energy consumption regulation. Tesla must comply with law and regulations to smoothly run the business activities.

FINANCIAL OVERVIEW OF TESLA

STATEMENT OF OPERATIONS
(Unaudited)

In millions of USD or shares as applicable, except per share data	Three months ending 31-Dec-18	30-Sep-19	31-Dec-19	Year ending 31-Dec-18	31-Dec-19
REVENUES					
Automotive sales	6,074	5,132	6,143	17,632	19,952
Automotive leasing	249	221	225	883	869
Total automotive revenue	6,323	5,353	6,368	18,515	20,821
Energy generation and storage	372	402	436	1,555	1,531
Services and other	531	548	580	1,391	2,226
Total revenues	7,226	6,303	7,384	21,461	24,578
COST OF REVENUES					
Automotive sales	4,659	4,014	4,815	13,686	15,939
Automotive leasing	127	117	119	488	459
Total automotive cost of revenues	4,786	4,131	4,934	14,174	16,398
Energy generation and storage	329	314	385	1,365	1,341
Services and other	668	667	674	1,880	2,770
Total cost of revenues	5,783	5,112	5,993	17,419	20,509
Gross profit	1,443	1,191	1,391	4,042	4,069
OPERATING EXPENSES					
Research and development	356	334	345	1,460	1,343
Selling, general and administrative	668	596	699	2,835	2,646
Restructuring and other	5	—	(12)	135	149
Total operating expenses	1,029	930	1,032	4,430	4,138
INCOME (LOSS) FROM OPERATIONS	414	261	359	(388)	(69)
Interest income	7	15	10	24	44
Interest expense	(175)	(185)	(170)	(663)	(685)
Other (expense) income, net	(14)	85	(25)	22	45
INCOME (LOSS) BEFORE INCOME TAXES	232	176	174	(1,005)	(665)
Provision for income taxes	22	26	42	58	110
NET INCOME (LOSS)	210	150	132	(1,063)	(775)
Net income (loss) attributable to noncontrolling interests and redeemable noncontrolling interests	70	7	27	(87)	87
NET INCOME (LOSS) ATTRIBUTABLE TO COMMON STOCKHOLDERS	140	143	105	(976)	(862)
Net income (loss) per share of common stock attributable to common stockholders					
Basic	0.81	0.80	0.58	(5.72)	(4.92)
Diluted	0.78	0.78	0.56	(5.72)	(4.92)
Weighted average shares used in computing net income (loss) per share of common stock					
Basic	172	179	180	171	177
Diluted	179	184	187	171	177

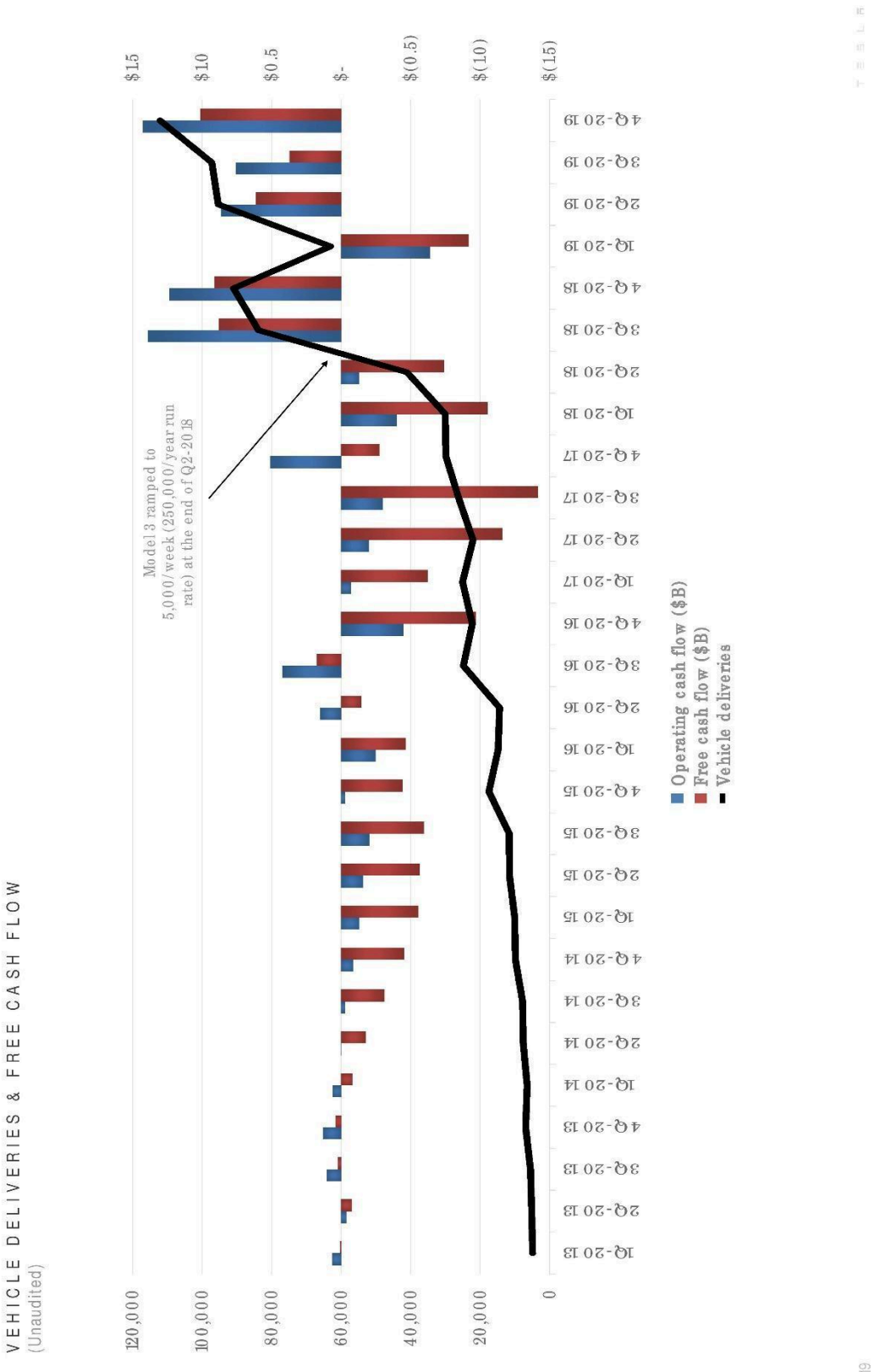


BALANCE SHEET
(Unaudited)

In millions of USD	31-Dec-18	31-Mar-19	30-Jun-19	30-Sep-19	31-Dec-19
ASSETS					
Current assets					
Cash and cash equivalents	3,686	2,198	4,955	5,338	6,268
Restricted cash	193	131	128	233	246
Accounts receivable, net	949	1,047	1,147	1,128	1,324
Inventory	3,113	3,837	3,382	3,581	3,552
Prepaid expenses and other current assets	366	465	570	660	713
Total current assets	8,307	7,678	10,182	10,940	12,103
Operating lease vehicles, net	2,090	1,973	2,070	2,253	2,447
Solar energy systems, net	6,271	6,242	6,201	6,168	6,138
Property, plant and equipment, net	11,330	9,851	10,082	10,190	10,396
Operating lease right-of-use assets	–	1,253	1,248	1,234	1,218
Goodwill and intangible assets, net	350	348	481	537	537
MyPower customer notes receivable, net of current portion	422	413	400	398	393
Restricted cash, net of current portion	398	354	366	255	269
Other assets	572	801	843	820	808
Total assets	**29,740**	**28,913**	**31,873**	**32,795**	**34,309**
LIABILITIES AND EQUITY					
Current liabilities					
Accounts payable	3,405	3,249	3,134	3,468	3,771
Accrued liabilities and other	2,094	2,277	2,623	2,497	2,905
Deferred revenue	630	763	884	1,045	1,163
Resale value guarantees	503	480	527	441	317
Customer deposits	793	768	631	665	726
Current portion of debt and finance leases (1)	2,568	1,706	1,791	2,030	1,785
Total current liabilities	9,993	9,243	9,590	10,146	10,667
Debt and finance leases, net of current portion (1)	9,404	9,788	11,235	11,313	11,634
Deferred revenue, net of current portion	991	1,157	1,182	1,140	1,207
Resale value guarantees, net of current portion	329	211	61	38	36
Other long-term liabilities	2,710	2,476	2,656	2,676	2,655
Total liabilities	**23,427**	**22,875**	**24,724**	**25,313**	**26,199**
Redeemable noncontrolling interests in subsidiaries	556	570	580	600	643
Total stockholders' equity	4,923	4,606	5,715	6,040	6,618
Noncontrolling interests in subsidiaries	834	862	854	842	849
Total liabilities and equity	**29,740**	**28,913**	**31,873**	**32,795**	**34,309**
(1) Breakdown of our debt is as follows:					
Recourse debt	7,081	6,517	7,813	7,882	7,263
Non-recourse debt	3,552	3,486	3,553	3,857	4,538

STATEMENT OF CASH FLOWS
(Unaudited)

In millions of USD	Three months ending 31-Dec-18	30-Sep-19	31-Dec-19	Year ending 31-Dec-18	31-Dec-19
Cash Flows from Operating Activities					
Net income (loss)	210	150	132	(1,063)	(775)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:					
Depreciation, amortization and impairment	497	530	577	1,901	2,154
Stock-based compensation	205	199	281	749	898
Operating cash flow related to repayment of discounted convertible notes	–	–	–	–	(188)
Other	124	68	204	453	665
Changes in operating assets and liabilities, net of effect of business combinations	199	(191)	231	58	(349)
Net cash provided by operating activities	1,235	756	1,425	2,098	2,405
Cash Flows from Investing Activities					
Capital expenditures	(325)	(385)	(412)	(2,101)	(1,327)
Payments for the cost of solar energy systems, net	(29)	(25)	(37)	(218)	(105)
Purchase of intangible assets	–	–	–	–	(5)
Receipt of government grants	–	–	46	–	46
Business combinations, net of cash acquired	(11)	(76)	–	(18)	(45)
Net cash used in investing activities	(365)	(486)	(403)	(2,337)	(1,436)
Cash Flows from Financing Activities					
Net cash flows from debt activities	(185)	(19)	(434)	37	378
Collateralized lease repayments	(216)	(83)	(87)	(559)	(389)
Net borrowings under Warehouse Agreements and automotive asset-backed notes	193	148	321	596	470
Net cash flows from noncontrolling interests - Auto	38	30	19	112	35
Net cash flows from noncontrolling interests - Solar	(18)	(28)	6	92	(76)
Proceeds from issuances of common stock in public offerings	–	–	–	–	848
Other	76	71	96	296	263
Net cash (used in) provided by financing activities	(112)	119	(79)	574	1,529
Effect of exchange rate changes on cash and cash equivalents and restricted cash	(4)	(12)	14	(23)	8
Net increase in cash and cash equivalents and restricted cash	754	377	957	312	2,506
Cash and cash equivalents and restricted cash at beginning of period	3,523	5,449	5,826	3,965	4,277
Cash and cash equivalents and restricted cash at end of period	4,277	5,826	6,783	4,277	6,783


VEHICLE DELIVERIES & FREE CASH FLOW
(Unaudited)
$1.5
$1.0
$0.5
$-
$(0.5)
$(1.0)
$(1.5)
120,000
100,000
80,000
60,000
40,000
20,000
0
Model 3 ramped to 5,000/week (250,000/year run rate) at the end of Q2-2018
1Q-2013
2Q-2013
3Q-2013
4Q-2013
1Q-2014
2Q-2014
3Q-2014
4Q-2014
1Q-2015
2Q-2015
3Q-2015
4Q-2015
1Q-2016
2Q-2016
3Q-2016
4Q-2016
1Q-2017
2Q-2017
3Q-2017
4Q-2017
1Q-2018
2Q-2018
3Q-2018
4Q-2018
1Q-2019
2Q-2019
3Q-2019
4Q-2019
Operating cash flow ($B)
Free cash flow ($B)
Vehicle deliveries

FINANCIAL SUMMARY
(Unaudited)

($ in millions, except percentages and per share data)	Q4-2018	Q1-2019	Q2-2019	Q3-2019	Q4-2019	QoQ	YoY
Automotive revenues	6,323	3,724	5,376	5,353	6,368	19%	1%
of which regulatory credits	95	216	111	134	133	-1%	40%
Automotive gross profit	1,537	751	1,016	1,222	1,434	17%	-7%
Automotive gross margin	24.3%	20.2%	18.9%	22.8%	22.5%	-31bp	-179 bp
Total revenues	7,226	4,541	6,350	6,303	7,384	17%	2%
Total gross profit	1,443	566	921	1,191	1,391	17%	-4%
Total GAAP gross margin	20.0%	12.5%	14.5%	18.9%	18.8%	-6 bp	-113 bp
Operating expenses	1,029	1,088	1,088	930	1,032	11%	0%
Income (loss) from operations	414	(522)	(167)	261	359	38%	-13%
Operating margin	5.7%	-11.5%	-2.6%	4.1%	4.9%	72 bp	-87 bp
Adjusted EBITDA	1,039	155	572	1,083	1,175	8%	13%
Adjusted EBITDA margin	14.4%	3.4%	9.0%	17.2%	15.9%	-127 bp	153 bp
Net income (loss) attributable to common stockholders (GAAP)	140	(702)	(408)	143	105	-27%	-25%
Net income (loss) attributable to common stockholders (non-GAAP)	345	(494)	(198)	342	386	13%	12%
EPS attributable to common stockholders, basic (GAAP)	0.81	(4.10)	(2.31)	0.80	0.58	-28%	-28%
EPS attributable to common stockholders, basic (non-GAAP)	2.00	(2.90)	(1.12)	1.91	2.14	12%	7%
Net cash provided by (used in) operating activities	1,235	(640)	864	756	1,425	88%	15%
Capital expenditures	(325)	(280)	(250)	(385)	(412)	7%	27%
Free cash flow	910	(920)	614	371	1,013	173%	11%
Cash and cash equivalents	3,686	2,198	4,955	5,338	6,268	17%	70%

EPS = Earnings per share



HIGHLIGHTS

Cash

$930M increase in our cash and cash equivalents in Q4 to $6.3B

$1.0B operating cash flow less capex ("free cash flow") in Q4

Profitability

$359M GAAP operating income; 4.9% operating margin in Q4

$105M GAAP net income; $386M non-GAAP net income (ex-SBC) in Q4

Operations

Model Y production ramp started in January 2020, ahead of schedule

Increased Model Y all-wheel drive EPA range to 315 miles from 280 miles

Record vehicle deliveries of 112,095 in Q4

Record Q4 storage deployment of 530 MWh; 26% solar growth QoQ

SUMMARY

2019 was a turning point for Tesla. We demonstrated strong organic demand for Model 3, returned to GAAP profitability in 2H19 and generated $1.1B of free cash flow for the year. We achieved strong cash generation through persistent cost control across the business.

Our pace of execution has also improved significantly, as we have incorporated many learnings from our experience launching Model 3 in the United States. As a result, we were able to start Model 3 production in Gigafactory Shanghai in less than 10 months from breaking ground and have already begun the production ramp for Model Y in Fremont.

None of this would be possible without strong demand for our products. For most of 2019, nearly all orders came from new buyers that did not hold a prior reservation, demonstrating significant reach beyond those who showed early interest. Amazingly, this was accomplished without any spend on advertising. As more people drive our cars and as the industry rapidly validates electrification, interest in our products will continue to grow.

Higher volumes driven by Model Y and Gigafactory Shanghai, continued improvements in operating leverage, and further cost efficiencies should allow Tesla to ultimately reach an industry-leading operating margin.

SBC = stock-based compensation expense

FINANCIAL SUMMARY

Revenue

In 2019, our revenue growth was positively impacted by a strong increase in vehicle deliveries. Revenue growth was offset by higher lease mix*, Model 3 becoming a larger part of our mix, introduction of the Standard Range trims of Model 3, and adjustments to vehicle pricing. These changes have resulted in a reduction to the average selling price (ASP) relative to 2018. We do not expect ASP to change significantly in the near term, which means volume growth and revenue growth should correlate more closely this year.

We are positioned to accelerate our revenue growth further through increasing build rates in Gigafactory Shanghai and our Model Y production line in Fremont. These production increases will allow for higher total vehicle deliveries and associated revenue.

Profitability

GAAP gross profit of $4.1B remained essentially flat in 2019 compared to 2018. Volume growth and successful cost reduction efforts were offset by normalization of ASP, mix shift towards Model 3 and a higher lease mix.

Sequentially, GAAP gross margin remained relatively flat in Q4 compared to Q3, while we ramped Model 3 production at Gigafactory Shanghai. While we saw an increase in operating expenses in Q4 (driven mostly by $72M of non-cash SBC expense related to one more 2018 CEO award operational milestone becoming probable), higher gross profit resulted in a 72bp sequential improvement of GAAP operating margin to 4.9% in Q4.

Cash

Quarter-end cash and cash equivalents increased by $930M QoQ to $6.3B, driven by positive quarterly free cash flow of $1.0B. Capital expenditures increased sequentially due to investments in Gigafactory Shanghai and Model Y preparations in Fremont.

* Revenue on leased vehicles is recognized on monthly lease payments, and thus contribute less to total revenues in the quarter of delivery than sold vehicles

CHAPTER-3

COMPETATIVE ANALYSIS OF TESLA.INC

Tesla's Competitors: The Other Players in The Electric Vehicle Industry

There is no doubt that Musk's eccentric style, as well as never-before-seen products like the Cyber truck, have helped to make Tesla the most recognizable electric carmaker in the industry. Outside of the United States, however, there are many companies that are quietly setting themselves up to compete with, and perhaps even to surpass, the quirky entrepreneur at his own game.

1. Nio

"Tesla" and "China" have been big buzzwords for years, associated as they both are with potentially world-changing innovation and growth. So, when a Shanghai-based automotive start-up comes along amid whispers of being "China's Tesla", you know it's worth your attention.

Founded back in 2014, **NIO** (NYSE: NIO) manufactures premium electric vehicles for the international market. While its products have generally been met with critical acclaim, the company has also developed a reputation for being risky and unpredictable. Some commentators fear that its valuation is based on a vague notion of "potential", rather than its current financial performance — although perhaps a similar charge could be made against Tesla itself.

On the other hand, the stock has been looking a little more attractive lately. In the fiscal quarter ending in October, Nio delivered almost 5,000 vehicles, representing a 35% sales surge, while it saw its share price jump following the announcement of a partnership to develop autonomous cars with technology giant **Intel** (NASDAQ: INTC). Nio is definitely a high-risk bet, but the company's commitment to pushing boundaries, combined with its exceptionally low price, make it simply too hard to write off.

2. BYD Company

Based out of the economic powerhouse of Shenzhen, **BYD Company** (SHE: 002594) is one of the world's fastest-growing auto firms, and now may be the perfect time to get familiar with it. From the unusual name (an acronym for "Build Your Dreams") to its unique headquarters (a 670-acre campus complete with schools, hotels, and a monorail system), the company exudes the sort of confidence associated with the early days of Silicon Valley.

Little-known internationally, BYD is already a giant in China, its huge array of products touching on almost every high-tech sector from consumer electronics to energy storage. In fact, the company is already the world's largest producer of battery-powered vehicles.

Though the company has made little impact outside of China and has yet to show any real global ambition, this does not mean there isn't still room for phenomenal growth. Electric cars only account for 2% of total car sales in China, partly because the country is poorly equipped with electric charging points. Even if it never ventures beyond its own borders, the future looks exciting for BYD.



3. Volkswagen

When Elon Musk announced this year that the next Gigafactory would be located on the outskirts of Berlin, all attention turned to the German auto industry, and its relative failure to produce anything as exciting as its American counterpart.

One of the industry giants that has long been promising to change this is **The Volkswagen Group** (ETR: VOW3)**.** In November, the company made good on its word by starting production of a new electric vehicle dubbed the "ID.3." In what it calls its "electric offensive", Volkswagen also aims to dedicate tens of billions of euros by 2028 in order to launch as many as 70 new electric models.

One of the world's largest companies, the 82-year-old Volkswagen has survived countless cycles of boom-and-bust — not to mention dictatorship, war, and the division and reunification of its host country — making it particularly adept to achieving long-term aims such as this one.



KEY TAKEAWAYS

- Tesla has a number of competitors among traditional carmakers, such as Ford and Honda.
- Tesla has managed to see success by focusing on high-status and premium electric vehicles (EVs).
- There is more competition, however, now entering the higher-end electric and self-driving car market.
- Still, when it comes to luxury EVs, Tesla owns the top spots.

It's also involved with providing services to other automotive companies toward these goals, for example, by selling its battery technology. Tesla has two primary revenue segments—automotive sales and development services. Automotive sales account for the lion's share of the revenue.

Major competitors for Tesla include traditional auto companies such as:

- Ford Motor Company (F), the multinational automobile manufacturer founded in 1903.
- General Motors (GM), the U.S.-based automobile manufacturer founded in 1908.
- Honda Motor Company (HMC), a multinational automobile manufacturer founded in 1948
- Navistar (NAV), commercial vehicle holding company.
- Oshkosh (OSK), truck and military vehicle manufacturer, founded in 1917.
- PACCAR, truck manufacturer.
- Spartan Motors, a specialty chassis and vehicle manufacturer.
- Tata Motors, the largest automotive manufacturer in India.
- Toyota Motor Corp. (TM), a multinational automotive manufacturer.

- Wabco (WBC), manufacturer of systems for heavy-duty commercial vehicles.

Traditional car companies are continuously increasing their offerings of hybrid gasoline-electric cars as well as pure electric vehicles—such as the Chevy Volt and Nissan Leaf. Still, Tesla cars carry with them a certain high-status cache that has not yet been reproduced by the incumbent automakers. But this is quickly changing, as more car companies are getting involved with developing and producing electric cars, including BMW, Fiat Chrysler, Ford, General Motors, Honda, Hyundai, Jaguar & Land Rover, Kia, Mazda, Mercedes-Benz, Mitsubishi, Nissan, Subaru, Toyota, Volkswagen, and Volvo.

Still, when it comes to high-end EVs, Tesla rules. US News ranks the top 5 luxury electric vehicles, where Tesla cars took the no. 1 and no. 2 spots:

1. Tesla Model S
2. Tesla Model 3
3. Porsche Taycan
4. Lexus ES Hybrid
5. BWI i3

Porsche has a lot of name recognition, known for high-quality sports cars. Porsche claims its charging station to be the fastest in the world, and its Taycan going from 0 to 60 miles per hour in 3.5 seconds. The BWI i3 meanwhile is a high-roof hatchback but has the same high-end name recognition that Porsche carries.

Tesla markets and sells its cars through its own network of retail stores located in North America, Europe, and Asia. For the full fiscal year 2019, the company reported gross revenues of $24.57 billion. Tesla has a market capitalization of $88 billion as of Apr. 2, 2020. It does not pay a dividend.

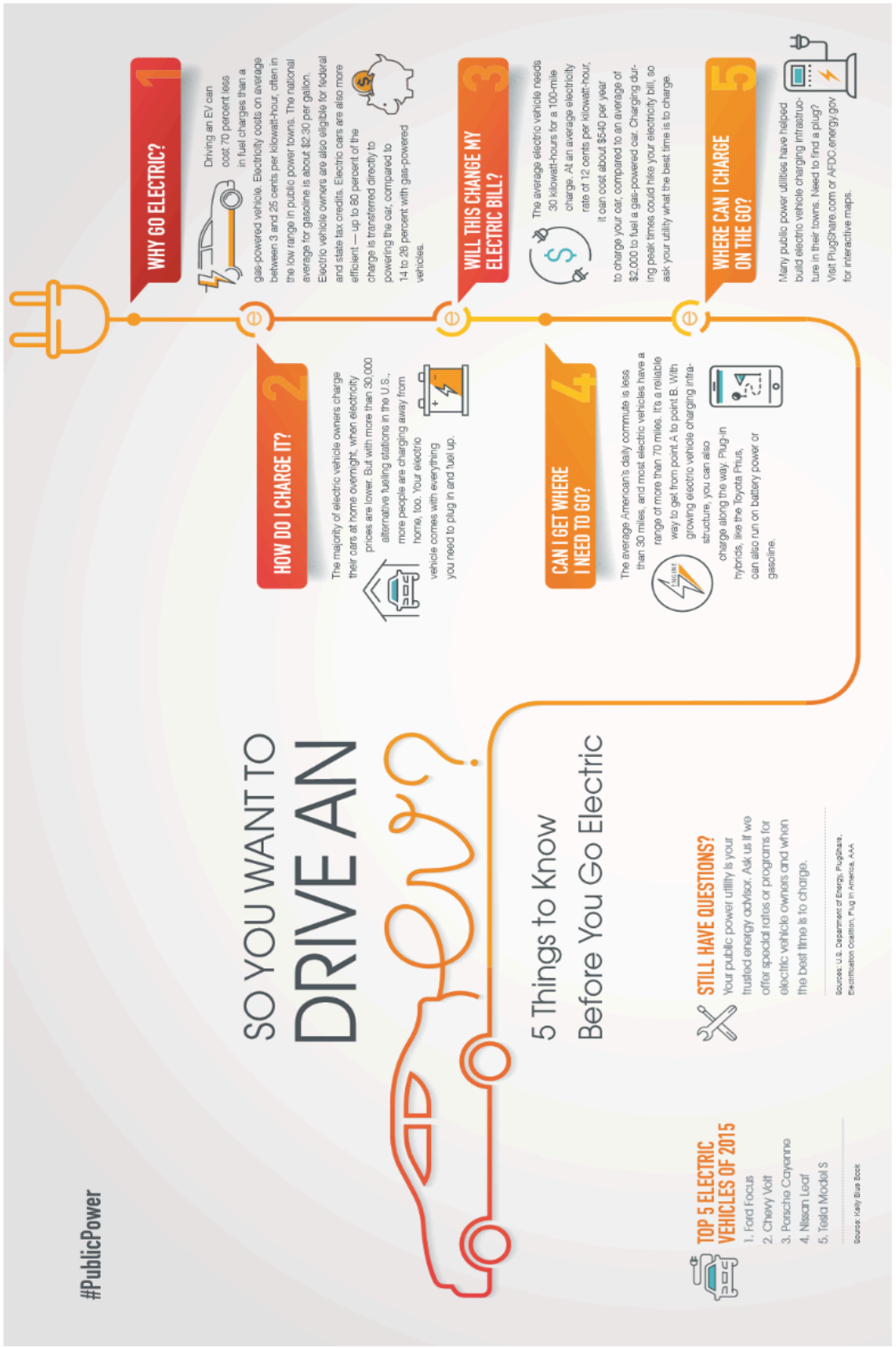
Tesla has not remained profitable despite its high demand for its electric cars and rapid expansion—the company has also been investing heavily in its infrastructure, with the construction of its new Gigafactory in Reno, Nev., among other initiatives. "Given that Tesla has never made an annual profit in the almost 15 years since it existed, profit is obviously not what motivates us," Elon Musk wrote in 2018.

Does Tesla Have a Competitive Advantage?

As all of these competitors begin to pour into the electric vehicle market, we must examine if Tesla has a competitive advantage and whether it can retain its dominance in the industry.

- **First-mover advantage:** Tesla has been around the EV industry a lot longer than its competitors. It enjoys brand recognition, word-of-mouth advertising, and a much more expansive charging network thanks to its time in the market.
- **Autonomous Driving:** It's estimated that Tesla has amassed roughly 2 billion miles of data through its Autopilot driver-assist feature, each and every inch of which has strengthened its self-driving algorithm through machine learning. The data from which Tesla can avail of is streets ahead of **Alphabet's** (NASDAQ: GOOG) Waymo and **General Motor's** (NYSE:GM) Cruise.
- **Battery Power:** The main reason why Tesla made up almost 60% of electric vehicles sold in the U.S. for the first three quarters of 2019 is simple: its cars go further. Tesla's Model S has a range of 380 miles. Its closest competitor? The Model 3, followed in third by the Model X. Many people call Tesla a battery company that sells cars, with this type of dominance it's easy to see why.
- **Brand Evangelicals:** Slightly less tangible than its other competitive advantages, but no less important, is the almost cult-like following Tesla garners. Fans of the company and the stock truly think Tesla is on the brink of changing the world for the better, and they are putting their money where their mouth is as deliveries and the stock continues to soar.

BENEFITS OF OWNING AN ELECTRONIC VEHICLE


SO YOU WANT TO DRIVE AN
5 Things to Know Before You Go Electric
#PublicPower
1 WHY GO ELECTRIC?
Driving an EV can cost 70 percent less in fuel charges than a gas-powered vehicle. Electricity costs on average between 3 and 25 cents per kilowatt-hour, often in the low range in public power towns. The national average for gasoline is about $2.30 per gallon. Electric vehicle owners are also eligible for federal and state tax credits. Electric cars are also more efficient — up to 80 percent of the charge is transferred directly to powering the car, compared to 14 to 26 percent with gas-powered vehicles.
2 HOW DO I CHARGE IT?
The majority of electric vehicle owners charge their cars at home overnight, when electricity prices are lower. But with more than 30,000 alternative fueling stations in the U.S., more people are charging away from home, too. Your electric vehicle comes with everything you need to plug in and fuel up.
3 WILL THIS CHANGE MY ELECTRIC BILL?
The average electric vehicle needs 30 kilowatt-hours for a 100-mile charge. At an average electricity rate of 12 cents per kilowatt-hour, it can cost about $540 per year to charge your car, compared to an average of $2,000 to fuel a gas-powered car. Charging during peak times could hike your electricity bill, so ask your utility what the best time is to charge.
4 CAN I GET WHERE I NEED TO GO?
The average American's daily commute is less than 30 miles, and most electric vehicles have a range of more than 70 miles. It's a reliable way to get from point A to point B. With growing electric vehicle charging infrastructure, you can also charge along the way. Plug-in hybrids, like the Toyota Prius, can also run on battery power or gasoline.
5 WHERE CAN I CHARGE ON THE GO?
Many public power utilities have helped build electric vehicle charging infrastructure in their towns. Need to find a plug? Visit PlugShare.com or AFDC.energy.gov for interactive maps.
TOP 5 ELECTRIC VEHICLES OF 2015
1. Ford Focus
2. Chevy Volt
3. Porsche Cayenne
4. Nissan Leaf
5. Tesla Model S
Source: Kelly Blue Book
STILL HAVE QUESTIONS?
Your public power utility is your trusted energy advisor. Ask us if we offer special rates or programs for electric vehicle owners and when the best time is to charge.
Sources: U.S. Department of Energy, PlugShare, Electrification Coalition, Plug In America, AAA

IMPACT CREATED BY TESLA VEHICLE OWNERS

ENVIRONMENTAL IMPACT

550,000+
Tesla vehicles sold

10,000,000,000+
Miles driven

4,000,000+
Metric tons of CO_2 saved

Tesla began delivering its first mass-market vehicle, Model 3, in July 2017. Like every Tesla, Model 3 combines range, performance, safety and technology — accelerating from 0-60 mph in a mere 3.2 seconds.

Over 550K Tesla vehicles have been sold, and they have driven over 10B miles to date, resulting in a combined savings of over 4M metric tons of CO_2. This is the equivalent of saving emissions from being released into the environment from over 500K ICE vehicles with a fuel economy of 22 miles per gallon (MPG).

Tesla's Supercharger network — the fastest and most extensive charging network in the world — has delivered over 595 Gigawatt-hours (GWhs) of energy, saving the equivalent of over 75M gallons of gasoline. That's enough gasoline for the average ICE vehicle with a fuel economy of 22 MPG to travel round trip from Los Angeles to New York City over 290K times.

As of February 2019, Tesla Energy has installed over 3.5 Gigawatts of solar installations and has cumulatively generated over 13 Terawatt-hours (TWhs) of 100% clean, emissions-free electricity. To put 13 TWhs in perspective, this amount of energy could supply the annual residential electricity consumption for the entire state of Connecticut. Over their entire expected use life of 35+ years, these solar installations are expected to generate 86.5 TWh of energy, which is enough electricity to power all of Washington D.C. for almost a decade.

DATA ANALYSIS AND INTERPRETATION

Why is a data analysis important?

Data analysis is an internal organisational function performed by data analysis that is more than merely presenting numbers and figures to management. It requires a much more in-depth approach to recording, analysing and dissecting data, and presenting the findings in an easily digestible format.

With a data analysis course, you will be able to provide a company with decision-making insight into the following key areas:

- Predict customer trends and behaviours
- Analyse, interpret and deliver data in meaningful ways
- Increase business productivity
- Drive effective decision-making

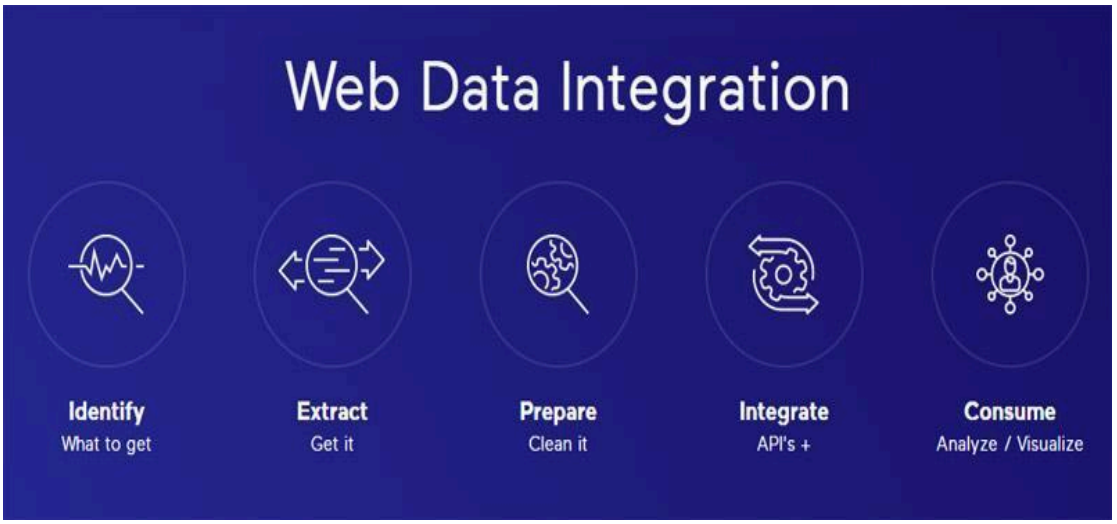
To do this effectively, Data Analysts need to be able to:

- Understand business direction and objectives
- Explore the meaning behind the numbers and figures in data
- Analyse the causes of certain events based on data findings
- Present technical insights using easy-to-understand language
- Contribute to business decision-making by offering educated opinion

How is data analytics used in business?

Data analytics is used in business to help organizations make better business decisions. Whether it's market research, product research, positioning, customer reviews, sentiment analysis, or any other issue for which data exists, analysing data will provide insights that organizations need in order to make the right choices.

Data analytics is important for businesses today because data-driven choices are the only way to be truly confident in business decisions. Some successful businesses may be created on a hunch, but almost all successful business choices are data-based.



What are the methods of data analysis?

Since our expertise at Import.io is in data from the web, we will discuss the methods of analysis for data from the web. The steps leading up to web data analysis are: identify, extract, prepare, integrate, and consume. In traditional manual data analysis, each of these steps take a substantial amount of time to perform.

Identifying the data, you need can be challenging with the vast amount of data on the web. You may choose a data source that is not reliable or miss crucial data sources that should be part of your research. Reliable and complete data is necessary for accurate data analysis.

Extracting data from the web has traditionally required a web scraper that is coded to scrape data from a certain website according to certain parameters. For example, traditional Twitter sentiment analysis might use a web scraper that is coded to scrape tweets that mention your brand name. Creating and running these web scrapers takes time. And even once it is finished, it is possible the data could be incomplete or inaccurate. The parameters for which tweets will be scraped could be missing a rule, resulting in missing crucial data.

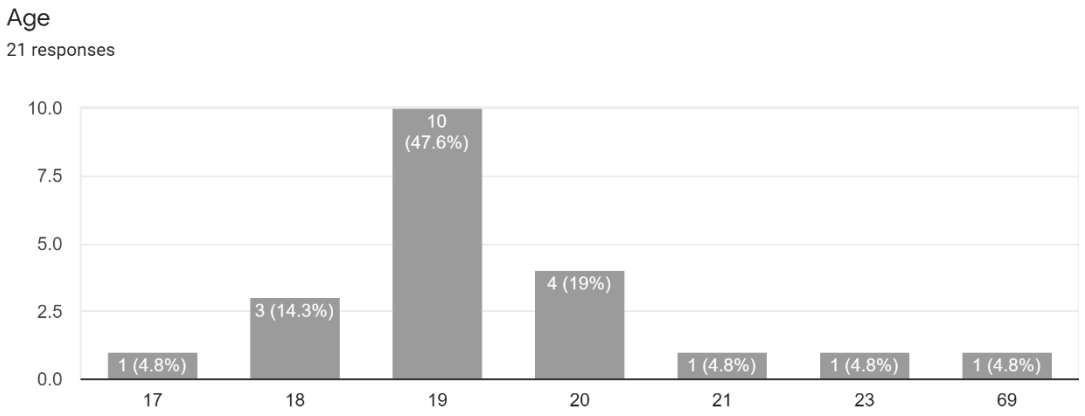
Preparing data for analysis requires many steps that each take a long time to do manually. The data must be cleansed, standardized, transformed, etc. This is where a lot of the outdating happens. By the time, the data is ready, it is not as recent and there is newer data out there.

Integrating the data with your data analysis software can be an issue depending on which software your organization uses. And it needs to be integrated so that it can be consumed.

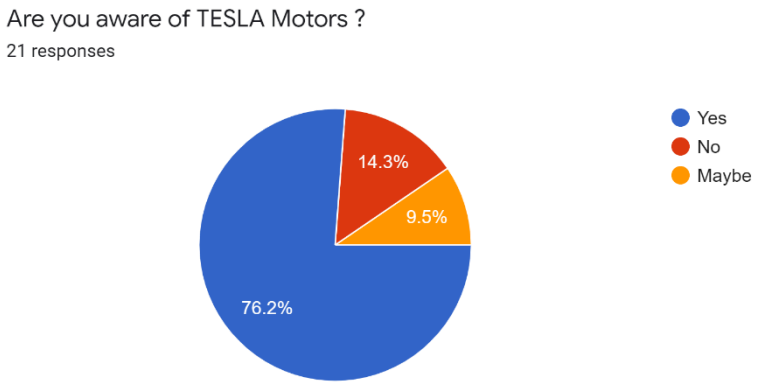
Questionnaires

1. Name:
2. Age:
3. Are you aware of Tesla motors?
4. Would you prefer electric over gasoline vehicles?
5. How much are you willing to pay for a vehicle that does no harm to the nature?
6. Did you know that tesla vehicles have autopilot mode?
7. Are you aware how you can contribute to environment by burning E-fuel over fossil fuels?
8. Are you aware of Tesla's $0 marketing strategy?
9. Which advertising channels do you most frequently get car information from?
    1) Car magazines
    2) Tv advertisements
    3) Email promotions
    4) Word of mouth
    5) Social media
    6) Auto show
10. How likely are you to purchase an Electric Vehicle (EV)?
11. What is opinion on the future of automotive industry?
12. Does free charge of tesla vehicles for a lifetime at supercharge points amaze you into buy a tesla vehicle?
13. Are you willing to buy an Eco-friendly vehicle in near future?

14. What is the first thing you consider when designing for manufacturability?
15. Did the Electronic Vehicles meet your expectations?

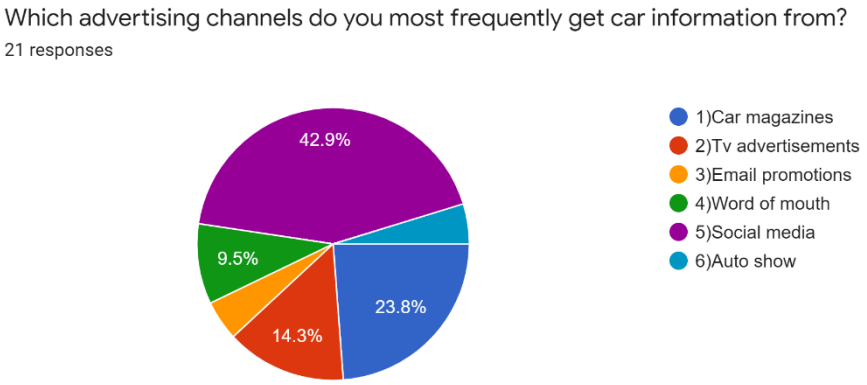


Interpretation: As we can see the majority number people who use nestle products are 19 years of age which shows younger generation use tesla motors as they have more information about Tesla motors

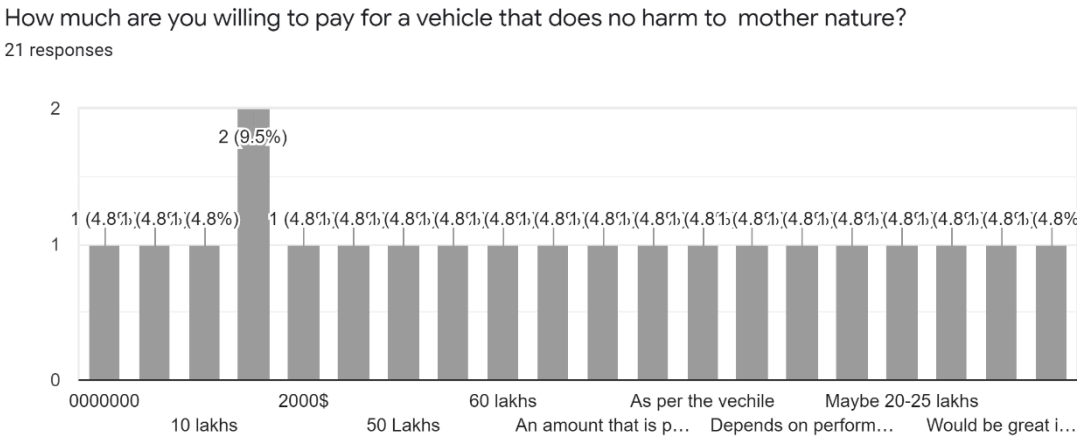


Interpretation:

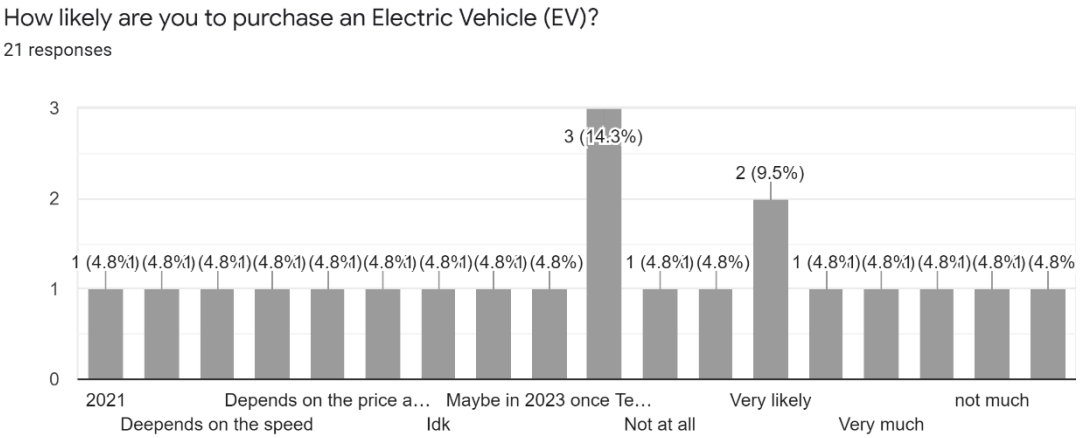
As we can see around 76% people are aware of Tesla and its vehicles which shows Tesla is successful in their marketing strategy.



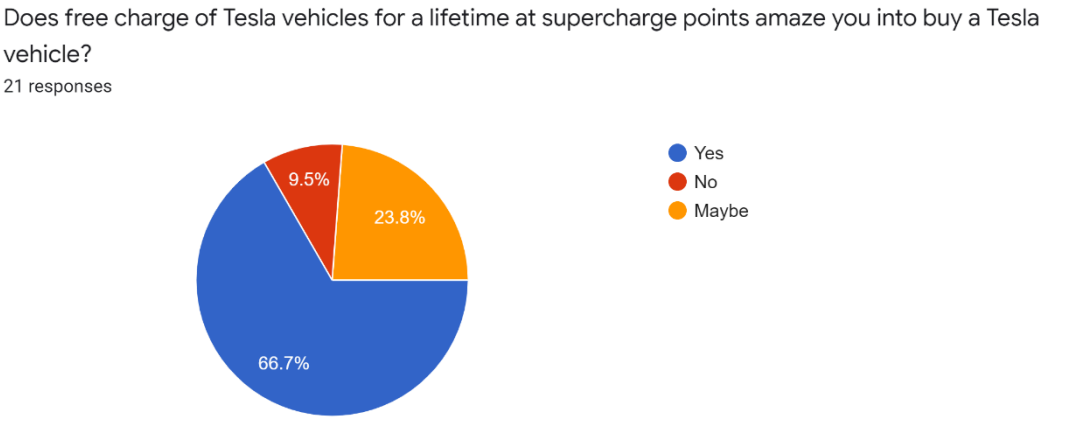
Interpretation: As we can see about 43% of the response was social media which shows Tesla's zero marketing strategies are effective.



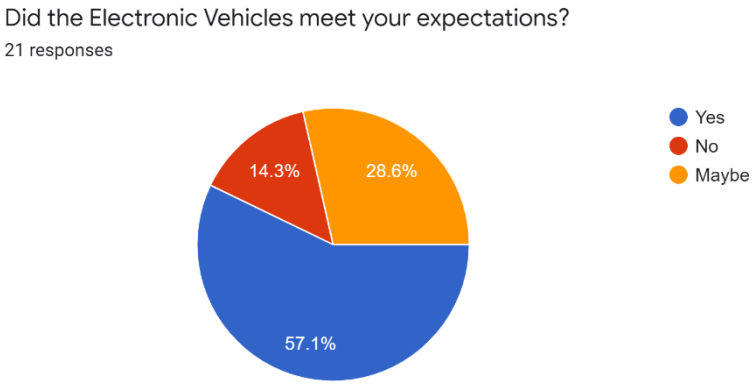
Interpretation: As we can see from the above figure. It shows that purchasing power differs form class to class and depends on affordability.



Interpretation: As we can see from above figure. It shows people are very likely to purchase an electric vehicle in near future.



Interpretation: As we can see from above figure most the people who participated in survey are interested in buying a Tesla vehicle because of free E-fuel top-ups initiative Tesla has took as solar energy is free of cost and accessible to everyone.



Interpretation: As you can see from above figure. It shows more than half of the people are impressed with it is features and are satisfied.

CHAPTER-4

CONCLUSION

The electric vehicle market is considered as an 'emerging industry'. The emerging industry typically consists of just a few companies and it often depends on a new technology. Market type is oligopoly with few sellers with the same product and Tesla is the market leader in USA. Tesla has direct control over input prices mainly for battery cells, which will enable it to build battery electric vehicles with luxury standards in the price range of a midsize sedan. Worth mentioning that this product is an elastic one. Tesla Model “S” market forces (demand and supply) is usually affected by other externalities and circumstances other than the price. Tesla Company spent on research for the improvement of their products and enhanced the supply to avoid losing market shares in front of its competitors.

In 2013, Tesla Motors was a 4500-person company on track to set history. It had created two cars that most people agreed were remarkable. It had posted its first quarterly profit in 2013 and had repaid its government loans ahead of the major auto conglomerates. Most importantly, it looked like it might survive. Perhaps even thrive. This was astonishing as there had been no other successful auto manufacturing start up in the U.S. since the 1920s.

The road leading up to Tesla’s position in 2013 had not always been smooth, and there were many doubts that still lingered. Tesla had benefited from the enthusiasm of the “eco-wealthy”—a rather narrow portion of the market. How would Tesla fare when it was in direct competition with General Motors, Ford, and Nissan for the mass market? Would it be able to turn a sustainable profit on its automobile operations? Furthermore, some questioned whether Tesla’s goals to sell to the mass market even made sense. In the niche market, it had a privileged position with customers that were

relatively price-insensitive and were seeking a stylish, high performance car that made an environmental statement. To compete for the mass market, the car would have to pro- vide good value for the money (involving trade-offs that might conflict with Chairman Elon Musk's ideals), and the obstacles to charging would have to be overcome.

Based on the data collected for this case study, I have concluded that Tesla Motors is an innovative company whose mission is to avoid global warming. Its sustainability business strategy is to apply innovation and shared value. This has made Tesla socially responsible to its environment as well as earning millions of dollars in profit.

Their impact in the automobile industry are significant; The Triple Bottom Line shows the significant impact Tesla has on the sustainability of their environment. They care for their customer's safety, and also provide great health insurance to their employees while working in a safe satellite's offices. Their environmental benefits include reducing the greenhouse effect, zero emission, renewable energy source. Even though Tesla have not made much profit; its revolutionized industry had a great impact on people, which have increased its market share. Other automotive manufacturers even began creating hybrid vehicles, most through Tesla's patent.

Recommendations

Even a world-renowned company like Tesla Inc. makes mistakes, misses a couple of key areas where they can successfully expand and enunciate their 'Green marketing' style of marketing. I would like to suggest the following after reviewing their interactions and other data collected from this specific project:

1) Tesla can advertise their product but solely relies on viral marketing for their promotion which can only help the promoted the product to a limited concentration of people.
2) Tesla could help the global economy by expanding to various countries but sticks to a core section of the world market that is profitable
3) Tesla loses money on every car sale, but they should instead increase their price points and should use the extra money earned to invest on more sustainable ways to produce their products.

This is my recommendation after reviewing Tesla's SWOT analysis

Tesla, Inc. has the strengths to remain successful in the business in the years to come. However, as identified in this SWOT analysis, there are various issues that the company must address to maintain its competitiveness and improve its profitability. Tesla must improve its multinational presence. For example, new facilities and sales operations in high-potential developing countries can enhance business growth, satisfying Tesla's corporate mission and vision statements. Also, the company must continue its significant investments in research and development (R&D) to produce technologically advanced products that are competitive.

This SWOT analysis shows that Tesla has the potential to grow in the global automotive market despite aggressive competition.

In considering the results of this SWOT analysis, with the goal of improving business competitiveness, growth, and development, it is recommended that Tesla Inc.:

1. Expand operations in foreign markets to exploit the global growth of the renewable energy industry.
2. Continue or increase investments for product innovation.
3. Diversify the supply chain to reduce supply-side risks.

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