

The history of tesla's business and its model s

[Business](#), [Company](#)



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Tesla Motors was founded in 2003 and takes its name from Nikola Tesla, one of the inventors of the electric induction motor. The founding team included Elon Musk, who has quickly become the face of Tesla. A beautiful mind and an entrepreneurial spirit have made him one of the most inspiring figures of our century. After selling both Zip2 and PayPal for almost \$2 billion, He started pursuing his dreams such as SpaceX (with the goal of reducing space transportation costs and enabling the colonization of Mars) (Chang, 2016) and Tesla.

For the sake of Tesla, one of the most interesting things is that none of Tesla's founders had a background in the car industry and neither did its original engineering team. Tesla's team was both a mix of specialists from the car industry and people with their roots in Silicon Valley. Indeed, one of Musk's belief was that Tesla's Silicon Valley roots gave it an important boost to its firm and it was such a distinctive point, when doing business in a global context. Tesla's goal was to create a pure electric vehicle that would prove to be better than their gasoline powered counterparts: their final objective

was to offer such vehicles to the mass market, differently from any other automotive manufacturers.

However, the first automotive segment on which Tesla decided to sell its first model was the luxury one. Indeed, the strategy of the company was to firstly enter at the high end of the market, where customers are prepared to pay a premium and then to produce and sell higher unit volumes and lower price models. Actually, it is what happened in these years: the very first model was Tesla Roadster which was the first production automobile to use lithium-ion battery cells. Between 2008 and 2012, Tesla sold more than 2,250 Roadsters in 31 countries. Tesla's first car, the Roadster, released in 2008, changed people's imagination of EV, which was small-size and low-speed. It looked like a sport car, offering fast-speed and powerful acceleration as well as high performance.

Tesla's Business Model

Tesla has developed its business model in an innovative, cost-saving way. Its business model is innovative and cost-saving for what concerns vehicle, battery and Tesla's peculiar infrastructure system. To explain it better, innovation towards vehicle, battery and the infrastructure system, can be analyzed considering some parameters (Yurong Chen, 2018): value proposition, customer segments, distribution channel, value configuration and revenue model. Deepening the analysis towards vehicle, its value proposition is to have high performance ones with innovative and intelligent connective services. The customer segments are the same for vehicle, battery and infrastructure system: innovatively starting with high-end

market to move to the mass market. As far as vehicles' distribution channel is concerned, Tesla developed an innovative multi-channel model, based on vertical integration on selling (Steen, 2015).

Instead of independent dealerships like other car manufacturers, Tesla built a network of company-owned stores with salespeople on salary rather than on commission. Indeed, this was a breakthrough towards sales, just because other automotive companies relied on franchising. That is, existing franchise dealers usually have a conflict of interest: they sell not only EVs, but also gasoline-powered cars. Hence, it is impossible for them to explain the advantages of electric vehicles without undermining their traditional business. For what concerns value configuration, it is the same for vehicle, battery and infrastructure system: innovative value configuration, characterized by a high level of vertical integration. As for the vehicles' revenue model, it is characterized by fundamental assets' ownership, government loan and a new battery-based revenue model. Essentially, the battery is generally sold to customers along with the vehicle, with possibility for extra purchase when the old one is at the end of life and need to be replaced.

Moreover, Tesla also sells its innovative battery pack to other EV's companies. Deepening battery's business model analysis, its value proposition pledges users to have an innovative management of the battery pack, leading to both higher capacity and lower costs. Battery's distribution channel is quite flexible: basically the battery, the core of the car, can be replaced or updated. Last but not least, perhaps one of the most important

Tesla's assets, is its infrastructure system: a high-performance recharging station with a well-established network. The supercharger stations offer fast charging (they are capable of charging to 80% of Tesla Model S within 40 min) and they are free for Tesla's users. Tesla is also committed to an ambitious expansion plan for its network of superchargers.

Until 2015, there were 2, 400 superchargers in 400 stations worldwide. One year later, there were 3708 superchargers in 624 stations and nowadays there are 11, 041 superchargers in 1, 344 stations. It is a huge effort, but necessary. The most important thing is that Tesla does not have competitors in building recharging stations for EVs. Indeed, at the moment, no one of Tesla's competitors is planning to build its own charging infrastructure (DeBord, 2017). Nevertheless, the superchargers network is fundamental to EVs growth, that is why Tesla is always one step ahead of its competitors. From the graph below (Supercharge info, s. d.), it is possible to understand Tesla's effort in building a wider superchargers' network in the US: an essential asset for Tesla's development, growth and its particular business idea's spread across the whole world.

Moreover, the US accounts for 42% of Tesla's superchargers stations, then it is the turn of China with 17% and finally EU's countries such as Germany, Italy, France and Norway account for a 15%. Figure 2. 2 Open Superchargers per Country (top five) Source: Supercharge. infoFigure 2. 3 Superchargers per Country (excluding USA/China) Source: Supercharge. infoTo Conclude, Tesla's peculiar business model can be summed up in three points, as presented by (R. Bohnsack, J. Pinkse, A. Kolk, 2014):

Top-down market approach and flexible product strategy

Tesla's product strategy includes entering from high-end, acquiring a strong reputation and enter into mass market. This strategy started with the sport-car Roadster, which was intended to raise market enthusiasm. After that Tesla provided the premium family Model S, earning money to develop an affordable mass market EV. Tesla's product strategy is also flexible: it means that it can adapt to different market needs in the fastest way (just consider the importance of using a 3D printer to print the body of a car).

Complete IT integration

Tesla shows a very high level of integration of information technology into the EV business model. As far as its value proposition is concerned, Tesla innovatively increased the virtual dialog between users, their car and the surrounding environment. This kind of feature has definitely increased the value of the car itself and the brand reputation.

Vertical integration

Just think about the level of vertical integration towards battery and recharging network: it is a way to reduce transactional costs between carmakers and their suppliers. Moreover, risks caused by lack of supporting infrastructure are reduced. Tesla's level of integration is still an unicum, considering that this kind of integration has required lots of investments, both public and private. That is why its business model can not be applied in a general way but must be considered as a single case.

Power of the supercharge network

The most important and expensive long-term strategies of Tesla.

Supercharger stations and their huge expansion around the globe, even in EU's and US' highways. 2. 3 Tesla Model S: disruptive innovation, efficiency in the use of resources and hidden subsidies Tesla's first truly mass-produced car was the Model S, a luxury electric car and it is a perfect example of innovation and cost-saving attitude towards the business. It was launched in June 2012 and become famous in a blink of an eye. It was also selected as the 2013 Car of the Year, having received the highest Consumer Reports rating ever.

Tesla designed the Model S completely in-house, using an improved version of the technology developed for the Roadster. Moreover, the batteries were assembled into a rigid pack that was put in the bottom of the car, allowing Tesla to be the only car to offer an all-glass panoramic roof. For what concerns Model S as an example of disruptive innovation, the car was completely controlled by software. What is more, it could be wirelessly updated through cellular connection and could be used to customize the car's behaviour. The level of electronic integration impressed other car companies and was considered a benchmark.

The Model S had no traditional key but a wireless fob. When the driver approached the car, the car automatically unlocked, and the door automatically opened itself. Finally, the car started when the driver entered in it. The ability to exploit economic contingencies has been important for Tesla's growth. Indeed, the car industry's crisis allowed Tesla to purchase its

massive production plant from Toyota for \$42 million, financing the deal with \$50 million capital injection by Toyota itself. With the new plant, Tesla's output was expected to reach 100. 000 cars per year, from the original 21, 000. Moreover, Tesla bought lots of equipment at a discount from manufacturers in economic sufferings. Indeed, according to a Bloomberg's article by Alan Oshman, Tesla spent less than a third of the \$1bln it would normally cost to get its new plant operational. Tesla also brought a large part of its parts production in-house, making 90% of Model S-specific plastic parts on 3D printers.

Moreover, Tesla Model S is a perfect example of hidden subsidies (Kerpen, 2015). Thanks to " zero-emission vehicle" (ZEV) credits (which requires manufacturers to build dealers to sell a certain number of " zero-emission" vehicles each year) Tesla's Model S has generated four ZEV credits per unit sold (one ZEV credit is worth \$5, 000). In this way, Tesla has been able to sell \$20, 000 in ZEV credits to other manufacturers for each Model S sold, the cost has been shouldered by purchasers of other cars. Finally, that amount used to be even higher because Tesla was able to obtain additional credits, generating three additional credits per vehicle sold by simply demonstrating that its batteries could be rapidly swapped. In this way Tesla has earned \$35, 000 per car sold.