

# STRATEGY FOR INCREASING THE COMPETITIVENESS OF THE TESLA ELECTRIC VEHICLE

Nataliia Levchenko<sup>1</sup>, Tetyana Yanchuk<sup>2</sup>

**Abstract.** *The purpose* of the paper is to develop a strategy to increase the competitiveness of Tesla's electric car in the market, including an analysis of possible competitors, identifying the strengths and weaknesses of the company, identifying opportunities for improvement and formulating recommendations for further development. It is proven that people are increasingly choosing environmentally friendly vehicles that use alternative energy sources. It was found that one of the leaders in the electric car segment is "Tesla". By releasing new models, Tesla has repeatedly changed the rules of the game in the electric vehicle market, taking leading positions in all ratings. *Research methodology.* To achieve this goal, the method of analysis and synthesis, the method of statistical analysis of indicators, the method of theoretical generalisation and methods of economic analysis were used. The main advantages and disadvantages of electric vehicles, in particular the Tesla car, are investigated. The strengths and weaknesses, internal resources and capabilities of Tesla and its main competitors are analysed using SWOT analysis, VRIO analysis and Porter's 5 forces analysis. The analysis showed that Tesla has several strengths, such as the production of its own components, direct sales to customers and a strong brand. However, frequent production delays, a high-price strategy, and limited production volume pose challenges for the company. It is determined that an influential figure for the Tesla brand is the eccentric and widely known public image of Elon Musk. The total sales of electric vehicles are also analysed and Tesla's main competitor is identified. *The results* of the study show that there is a great deal of competition in the electric vehicle market, which emphasises the need for Tesla to actively develop and update its strategy. Priority areas for improving the competitiveness of the Tesla electric vehicle are proposed. In particular, it was proposed to: expand the network of charging stations and improve the navigation system; reduce maintenance costs and offer more affordable prices; expand production capacity; obtain permission to install turquoise warning lights on its cars; improve the autopilot function; continue to create exquisite car designs that will be different from others.

**Keywords:** electric car, Tesla, competitors, environmental friendliness, competitiveness, Elon Musk.

**JEL Classification:** N70, O30, R41

## 1. Introduction

Due to the rapid deterioration of the global environment and the depletion of the natural resources used to fuel cars, the development of environmentally friendly vehicles using alternative energy sources is gaining momentum. These are electric vehicles. They are an important step not only for the ecological development of Ukraine, but also for the ecological development of the world. For Ukraine, electric transport is a good opportunity to become an ecological country and reduce carbon dioxide emissions in accordance with the commitments signed in the Paris Climate Agreement. In addition, electric vehicles can not

only effectively reduce carbon dioxide emissions, but also become a more cost-effective way to reduce business costs.

One of the leading companies in this field was Tesla, which completely changed the idea of electric transport and defined new standards in its production and efficiency. Sports Tesla Roadster – the first car that was released by the company and eagerly declared itself without a name, tradition, design school. After the release of their second model sedan Tesla Model S, they immediately managed to establish a new segment – premium electric sedans. The world immediately started talking about Tesla innovators and the electric future of mankind.

<sup>1</sup> Vasyl' Stus Donetsk National University, Ukraine (*corresponding author*)  
E-mail: [levchenko.n@donnu.edu.ua](mailto:levchenko.n@donnu.edu.ua)

<sup>2</sup> Vasyl' Stus Donetsk National University, Ukraine  
E-mail: [t.yanchuk@donnu.edu.ua](mailto:t.yanchuk@donnu.edu.ua)  
ORCID: <https://orcid.org/0000-0003-3901-7670>



The relevance of the topic is due to the fact that the electric vehicle market is becoming more diverse and other manufacturers are gradually releasing their electric models, forcing manufacturers such as Tesla to constantly improve their products and seek industry leadership in order to remain competitive in the electric vehicle market.

The goal of the work is to develop a strategy to increase the competitiveness of Tesla's electric car in the market, including an analysis of possible competitors, identifying the company's strengths and weaknesses, identifying opportunities for improvement and formulating recommendations for further development.

## 2. Object, Subject and Methods of the Research

The object of the study is Tesla's electric vehicles, and the subject is to analyse the current state of the electric industry and Tesla's position in the market, analyse the factors affecting its competitiveness, including technological progress, production processes, marketing strategies, pricing, service and customer support, identify potential opportunities to increase Tesla's competitiveness in the international electric vehicle market, and develop strategies and recommendations to improve its competitiveness based on the data obtained.

The paper uses general scientific and special research methods, namely: the method of analysis and synthesis, the method of statistical analysis of indicators, the method of theoretical generalisation and methods of economic analysis (graphical, tabular, comparison).

## 3. Literature Analysis

Many domestic and foreign scholars have studied certain aspects of the introduction of electric vehicles

in the market. The results of their research help to understand the potential benefits and challenges associated with the massive introduction of electric vehicles, as well as to determine the conditions for further development of this sector.

Studies on the current state of development of electric vehicles were conducted by O. Sakno, V. Olishevska, H. Olishevskiy. Studies on Tesla's competitiveness in the electric vehicle market were conducted by M. Yuzyk, N. Saxena, S. Vibhandik, Y. Qin, Y. Xiao, J. Yuan.

## 4. Results

The automotive industry is constantly evolving and improving. From year to year, motorists are interested in what will be the car of the future. Given the evolution of the car market, as well as some economic and environmental factors, an electric car was created – a vehicle that will dominate in the near future (Driving School Kyiv, 2018).

Today, electric vehicles are the main trend among cars around the world. Most leading automakers are reorienting their production towards electric cars instead of cars with petrol or diesel engines.

It is not difficult to guess that an electric car differs from conventional cars in that it has an engine that runs on electricity. When choosing an electric car, owners are guided by two considerations. The first is environmental friendliness, as such cars do not burn fuel and do not emit carbon dioxide into the air. The second is independence from volatile and much higher fuel prices than electricity. Electric cars can be considered safer because they do not burn fuel. However, when it comes to safety, it should be borne in mind that an electric car's battery can catch fire.

Below are the main advantages and disadvantages of electric vehicles (Table 1).

Table 1

**Main advantages and disadvantages of electric vehicles**

Advantages	Disadvantages
Cost-effectiveness. The annual cost of charging an electric car is almost 63% lower than the annual cost of refuelling a fuel car.	Limited range. Depends on the model and operating conditions. On average, an electric vehicle can travel 100 to 250 km on a single charge.
Environmental friendliness. First of all, it means zero emissions of harmful gases into the atmosphere. Maintenance of an electric vehicle is cheaper because the engine does not require regular maintenance and transmission replacement.	High price. The cost of electric cars is usually one and a half to two times higher than classic middle-class cars.
Low noise level. This advantage is especially relevant in megacities with a lot of traffic.	Sensitivity to air temperature. The battery capacity decreases with cooling (at +5°C – by 20%, at -12°C – by 50%).
Better dynamics. The motor can deliver maximum torque at a time.	Problems with the microclimate in the cabin. The air conditioning of an electric vehicle consumes battery power, which can reduce the range by 20%. An alternative is to install an autonomous heater, but this will entail additional costs.
Safety. The centre of gravity of an electric vehicle is lower than that of a conventional car. This reduces the risk of rollover and improves handling during sharp manoeuvres.	Weak charging infrastructure. Owners of electric vehicles in small towns often do not have access to charging stations, so they charge their cars at home or at work.

Obviously, the main advantage of electric vehicles is their environmental friendliness. These vehicles produce no exhaust gases or harmful emissions, making them the cleanest and greenest vehicles available. Accordingly, their fuel costs are lower.

Here is an analysis of the electric vehicle market in Ukraine (Figure 1). In December 2023, 6.1 thousand electric vehicles were sold in Ukraine, which is 165% more than in December 2022. This is the first time that the electric vehicle market in Ukraine has not shown record growth.

As the figure shows, 6.1 thousand electric vehicles were sold in Ukraine in December 2023. Of these, 61.3%, or 3.7 thousand, were imported with mileage. This figure is higher than in November, indicating an increase in supply on the market. 27%, or 1.6 thousand, of electric vehicles were sold in the domestic market. This figure is lower than in November, indicating a decrease in demand. 11.7%, or 710 electric vehicles, were sold new. This is also less than in November. As of the end of 2023, there were 85.8 thousand electric vehicles in Ukraine, of which 83.6 thousand were cars, 2.2 thousand were trucks and 5 thousand were buses.

Consider the top three leaders for each position as of September 2023.

TOP-3 most popular electric vehicles on the domestic market:

- Nissan Leaf – 442 pcs.
- Volkswagen Golf – 192 pcs.
- Tesla Model 3 – 178 pcs.

TOP-3 most popular imported used electric vehicles:

- Nissan Leaf – 588 pcs.
- Volkswagen Golf – 432 pcs.
- Tesla Model 3 – 403 pcs.

TOP-3 most popular new electric vehicles:

- Volkswagen ID.4 – 344 pcs.
- Volkswagen ID.6 – 69 pcs.
- Toyota bZ4X – 50 pcs.

According to CleanTechnica, the Tesla Model Y ranks first in terms of electric vehicle sales in the world, followed by the Tesla Model 3. Tesla's main competitor, BYD (Atto 3/Yuah Plus), rounds out the top three (Visual Capitalist, 2023).

It is worth noting that Tesla, the automaker that has arguably become synonymous with the term "electric car", is at the forefront of the electric vehicle revolution. Thanks to its advanced technology, elegant design and commitment to the environment, Tesla has created some of the most desirable cars in the world. Consider Tesla's electric cars in more detail.

Tesla vehicles are defined by originality and innovation. They are characterised by their electric drive, which makes them different from traditional cars with petrol engines. In terms of design, Tesla cars are sleek and modern, with an emphasis on aerodynamics to improve range and performance. The company's vehicles are also equipped with advanced technology, such as Tesla's Autopilot system, which provides semi-autonomous driving capabilities.

Tesla is a leader in sales not only in the US but also globally. The most popular models include the Model 3, Model S and Model X.

Equally important, Tesla has its own Superchargers and operates the largest global fast-charging network in the world. In the US, there are more than 50,000 "Supercharger" charging stations located on major routes near convenient facilities.

In order to maintain its leading position in the electric vehicle segment, the company needs to improve its strategy to increase Tesla's competitiveness.

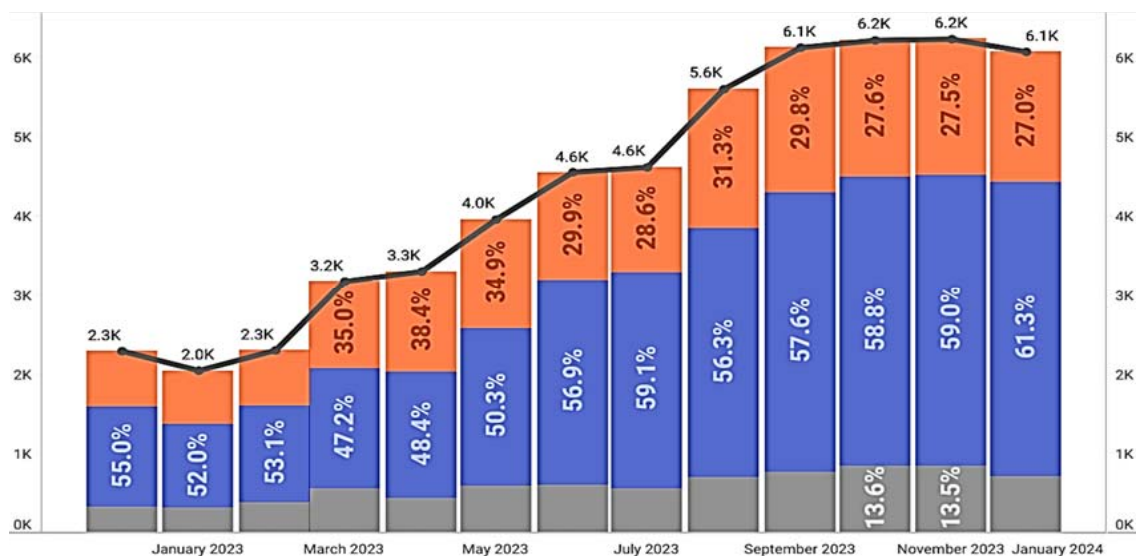


Figure 1. Dynamics of the Ukrainian market of electric cars  
Source: (Auto 24, 2023)

To do this, the following should be done:

1. Consider identifying Tesla's main competitor and conducting a comparative analysis.
2. It is necessary to conduct a SWOT analysis, VRIO analysis and Porter's 5 forces analysis to identify the main advantages and disadvantages in the company's work.
3. A strategy needs to be developed to improve Tesla's competitiveness.

In terms of brands, as of January-November 2023, BYD is the undisputed leader (Figure 3). After the first 11 months of 2023, the difference between BYD (2.55 million) and Tesla (over 1.6 million) is quite noticeable.

Thus, the main competitor in the electric vehicle market for Tesla is BYD.

BYD Auto is a car manufacturer from China that is actively present in Ukraine. Their range includes both small compact cars and luxury business sedans and crossovers. The company's main strategy is to maintain affordable prices (Electric Export Car, 2024).

To better assess the Tesla electric car, the SWOT analysis will be conducted. Consider the strengths and weaknesses of Tesla, as well as its opportunities and threats to business development (Table 2).

Although Tesla has several strengths, such as manufacturing its own components, direct sales to customers and a strong brand, its weaknesses and threats cannot be ignored. Frequent production delays, a high-pricing strategy and limited production capacity pose challenges for the company.

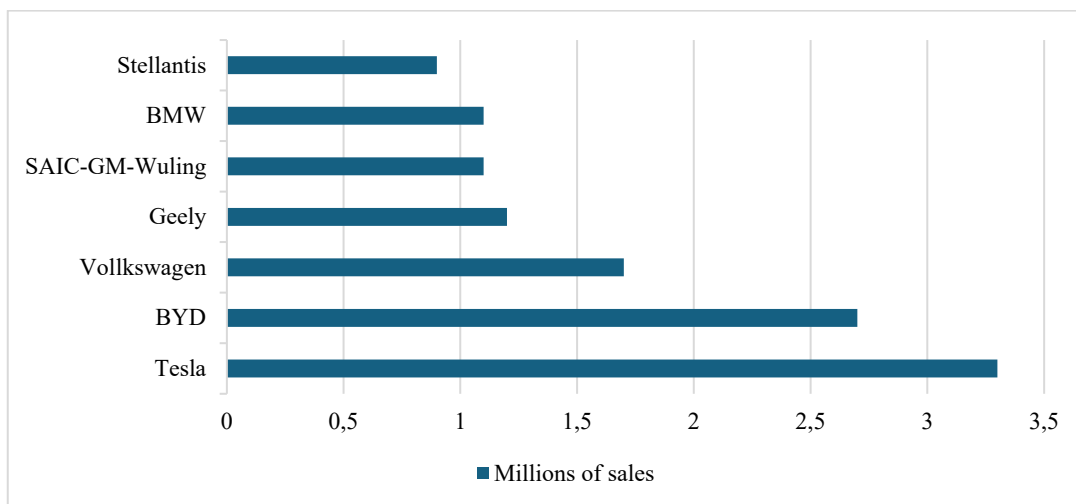


Figure 2. Total sales of electric vehicles as of the end of 2022

Source: (BloombergNEF, 2022)

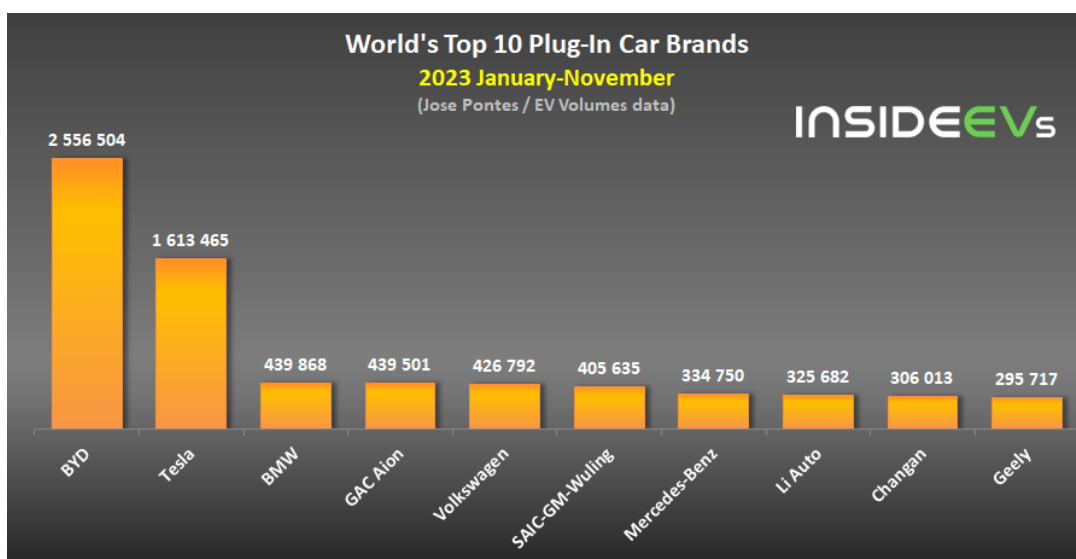


Figure 3. World's Top 10 Plug-In Car Brands

Source: (Insideevs, 2023)

Table 2  
Tesla SWOT analysis

Strengths	Weaknesses
<p>The company produces most of the components for its cars on its own.</p> <p>It sells cars directly to customers without intermediaries.</p> <p>Tesla customers can order a car online or at one of the company's dealers.</p> <p>Excellent service specialists.</p> <p>The company has the largest share in the luxury electric vehicle market.</p> <p>Strong brand value and high market capitalisation.</p> <p>Strong innovation potential.</p>	<p>Frequent production delays.</p> <p>High price strategy. Tesla positions itself for a certain limited class of consumers.</p> <p>Limited production, which leads to the inability to meet demand.</p> <p>Controversial CEO.</p> <p>Problems with the autopilot and software.</p> <p>Possible fire of electric vehicle batteries.</p>
Opportunities	Threats
<p>Strategic initiative: to change the company's image from a brand that sells high-quality luxury electric vehicles to a brand that offers a wider range of products for a more diverse consumer base.</p> <p>Expansion into global markets.</p> <p>The company can expand its sales and distribution network in these markets and reach new customers.</p> <p>Entering a wider consumer market by producing cheaper cars for the average consumer.</p>	<p>Increased competition from other leading automakers</p> <p>Excessive dependence on suppliers.</p> <p>Elon Musk's eccentric and widely known public image. His recent controversial political views on Twitter and several lawsuits from both investors and consumers have not helped the company.</p> <p>Despite the general downturn in the tech industry at the end of 2022, many shareholders believe the recent controversy is an important factor in Tesla's losses.</p>

In order to assess the company's internal resources and capabilities, a VRIO analysis will be conducted (Table 3).

The following resources were selected for this analysis:

- Battery pack and powertrain technologies. This is a key component for Tesla's electric vehicles. This technology allows Tesla to sell cars with an impressive range and high performance, which is an important competitive advantage.
- Gigafactory. These are large Tesla factories that produce batteries for its cars. The large-scale production of batteries reduces production costs and increases productivity, which creates a sustainable competitive advantage.
- Manufacturing. Tesla has its own car manufacturing plants, which allows it to control the quality and efficiency of production. This also allows for a quick response to demand and provides greater flexibility in production.
- Own store network. Owning its own stores allows Tesla to gain direct access to customers. This ensures brand support, improves service, and boosts sales.

– Supercharging stations network. The creation of a network of charging stations contributes to the convenience of Tesla owners. This is important to increase the popularity of electric vehicles and ensure comfortable travel.

– Elon Musk. As CEO, Elon Musk is an influential figure in the technology industry. His popularity and leadership style may be important factors in attracting investors and consumers to the Tesla brand.

To assess Tesla's strategic position, it is also important to analyse Porter's five forces in detail. This approach will help to better understand the strategic opportunities and challenges faced by the company:

1. The strength of competition among existing competitors. At the beginning of its existence, Tesla did not have significant competition in the electric vehicle space, but over time new players have emerged, such as BYD in China, as well as traditional brands such as Nissan, Volkswagen and BMW. Competition in this segment is intensifying, which could put pressure on Tesla. As mentioned above, BYD has already become one of Tesla's biggest

Table 3  
VRIO analysis of Tesla

Resource / Capability	Valuable	Rarity	Limitability	Organisation	Competitive Advantage
Battery pack and powertrain technologies	Yes	Yes	Unlikely	Yes	Sustainable competitive advantage
Gigafactory	Yes	Yes	Unlikely	Yes	Sustainable competitive advantage
Manufacturing	Yes	Yes	Only in the long-run	Yes	Temporary competitive advantage
Own store network	Yes	Yes	Only in the long-run	Yes	Temporary competitive advantage
Supercharging stations network	Yes	Yes	Only in the long-run	Yes	Temporary competitive advantage
Elon Musk	Yes	Yes	Unlikely	Yes	Sustainable competitive advantage

global competitors and will overtake Tesla as the world's biggest seller of electric vehicles in Q4 2023.

2. The threat of new entrants. More and more new entrants are entering the electric vehicle market, which could increase competition for Tesla. Threat level: high.

3. Threat of substitute products or services. Substitute products, such as natural gas or hydrogen vehicles, may pose a threat to electric vehicles. However, in many countries, governments are actively supporting the development of electric vehicles, which reduces this threat to Tesla. Threat level: low.

4. Customer influence. Electric car buyers have some influence on Tesla, as they can choose between different brands. One of the factors that reduces Tesla's competitiveness is the high price of its cars compared to similar models from other manufacturers. This may affect the level of customer influence, as customers may prefer more affordable options. Level of customer influence: very high.

5. Supplier Impact. Tesla has significant leverage over its suppliers due to its size and production volumes. This allows it to negotiate more favourable terms and reduce its own costs. However, Tesla relies heavily on its network of suppliers and partners to purchase the raw materials necessary for its production. This dependency can expose the company to risk in the event of a disruption in the supply chain. For example, a shortage of components forced Tesla to suspend production of cars at its Berlin-Brandenburg Gigafactory from January 29 to February 11, 2024. Level of supplier influence: average.

According to the analysis, the growing threat of new entrants and substitute products underscores the need for Tesla to actively develop and update its strategy. The high level of consumer influence indicates the need for Tesla to ensure the competitiveness of its products, in particular by reducing prices and improving quality.

Consequently, a possible strategy to improve Tesla's competitiveness in the electric vehicle market could be as follows:

- Expansion of the network of charging stations and improvement of their navigation system. Tesla should expand its network not only in major cities but also in remote rural areas to provide access to charging for most electric vehicles and ensure that such a vehicle is a good choice for long-distance travel. In addition, their Supercharger network only works for Tesla cars, so there is the prospect of more charging stations being added, giving their customers more options. Ford and Tesla have already signed a cooperation agreement to build joint electric vehicle charging stations. As part of the agreement, Ford said it will switch to Tesla's open-source North American Charging Standard (NACS) for its vehicles starting with the 2025 model year.

- Offering more affordable electric vehicles and reducing their maintenance costs. Reducing the price of some of the most expensive Tesla Model X and Model S models will attract a wider range of potential customers and help maintain market competitiveness. Reducing the cost of maintenance can also make Tesla's electric vehicles more attractive to buyers by reducing the total cost of ownership. This can increase customer loyalty and provide additional advantages when competing with other electric vehicle manufacturers.

- Another way that Tesla can stay ahead of the competition is by expanding its production capacity. By expanding production capacity, Tesla will be able to produce more cars and meet the growing demand for electric vehicles. In addition, expanding production capacity will help reduce overall costs and thus make Tesla's electric vehicles more affordable for consumers.

- Tesla should continue to research and develop new batteries to make electric vehicles even more practical and cost-effective for customers.

- It is also worth paying attention to possible cases of electric vehicles catching fire due to possible battery damage. Tesla can use more reliable battery management systems and install additional safety features. In addition, customers should be informed of this risk and provided with up-to-date information on how to deal with such situations.

- The use of turquoise LEDs to indicate full autonomy is another step in the evolution of automated driving technology. For Tesla, it could also be a significant competitive advantage in the battle between electric cars. This Mercedes-Benz initiative reflects the importance of standardising information communication between cars and pedestrians in the context of an autonomous transport system. One of the key benefits of introducing turquoise LEDs is to improve the safety and predictability of the movement of cars in fully autonomous control mode. These LEDs provide a clear and easily recognisable signal to road users that the car is operating without driver intervention. This reduces the risk of misunderstandings and accidents, contributing to overall road safety.

- It is worth continuing to highlight the exquisite design of their electric cars. Modern minimalism, which is the highlight of Tesla, distinguishes it from other competitors. The absence of unnecessary details, clear lines and smooth shapes make the car visually elegant. But the new Tesla Cybertruck, unveiled at the end of 2023, has caught the attention of many with its futuristic and geometric design, which is radically different from traditional pickups. Its angular shape and unusual silhouette make it a true embodiment of the car of the future. This design is not only emotive, but also practical, as it is made from ultra-durable stainless steel.

It is important to improve the autopilot function using the latest sensor technologies and artificial intelligence.

Therefore, the strategy developed by the authors to increase competitiveness can help Tesla remain a leader in the electric vehicle market.

## 5. Conclusions

The future of electric vehicles is clear and inevitable. The study found that the variety of electric vehicle models is increasing every year, filling all the roads with the new generation of economical and environmentally friendly cars. However, Tesla remains an icon of the electric car industry. By releasing new models, Tesla has repeatedly changed the rules of the game in the electric car market, taking the lead in all evaluations. It has also been found that the

electric car market does not stand still and every year other manufacturers produce new and cooler models of cars, creating great competition for Tesla. Therefore, in order to remain competitive in the electric vehicle market, a strategy was developed to increase the competitiveness of the Tesla electric vehicle. In particular, the following was proposed:

- To expand the network of charging stations and improve the navigation system;
- to reduce maintenance costs and offer more affordable prices to expand production capacity;
- to obtain a permit to install turquoise warning lights on their vehicles;
- to improve the autopilot's performance;
- to continue creating exquisite designer cars that will differentiate themselves from others.

The developed strategy can help Tesla remain a leader in the electric vehicle market.

---

## References:

- Auto 24 (2023). New Chinese electric vehicles in Ukraine captured 85% of the market. Available at: [https://auto.24tv.ua/novi\\_kytaiski\\_elektromobili\\_v\\_ukraini\\_zakhopyly\\_85\\_rynku\\_n49388](https://auto.24tv.ua/novi_kytaiski_elektromobili_v_ukraini_zakhopyly_85_rynku_n49388)
- Driving School Kyiv (2018). The electric car is the transport of the future. Available at: <https://askiev.com.ua/ua/news/elektromobil-transport-maybutnogo>
- BloombergNEF (2022). China's BYD Winning 2022 Electric Vehicle Sales Race. Available at: <https://about.bnef.com/blog/chinas-byd-winning-2022-electric-vehicle-sales-race/>
- Electric Export Car (2024). Available at: <https://ecars.com.ua/models/byd>
- InsideEVs (2023). Global Plug-In Electric Car Sales Increased 70% In April 2023. Available at: <https://insideevs.com/news/671485/global-plugin-electric-car-sales-april2023/>
- Visual Capitalist (2023). Ranked: Electric Vehicle Sales by Model in 2023. Available at: <https://www.visualcapitalist.com/electric-vehicle-sales-by-model-2023/>

Received on: 29th of April, 2024

Accepted on: 23th of June, 2024

Published on: 12th of July, 2024