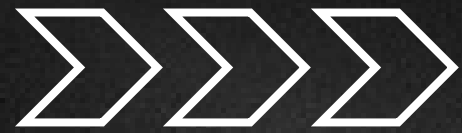
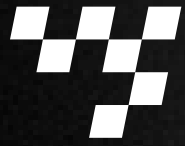




# FUTURE *OF* EV



Electric Vehicles and the Future of  
the Auto Industry - Investors'  
Dilemma?



# **TEAM MEMBERS**



1



**ALYSSA  
MANCHESTER**

**INFORMATION  
SYSTEMS &  
MANAGEMENT**

2



**AVA PETRILLI**

**MARKETING &  
COMMUNICATION**

3



**BEX TESFAYE**

**OPERATIONS  
MANAGEMENT &  
BUSINESS  
ANALYTICS**

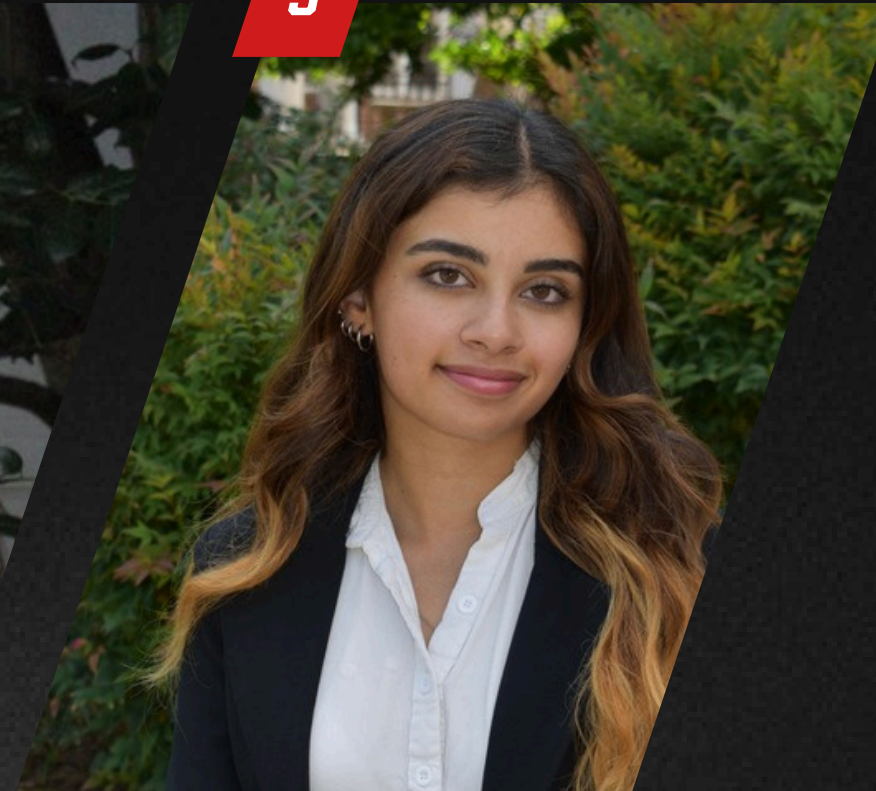
4



**NICOLE CHAN**

**INFORMATION  
SYSTEMS &  
ENGLISH**

5



**WINNIE  
KOPPARAPU**

**FINANCE AND  
MANAGEMENT**





## ***OUR GOAL***

- Add a publicly listed automaker to our winner's portfolio
- Based on financial and sustainability performance
- 3-5 year investment horizon to maximize profit



# TESLA (TSLA)





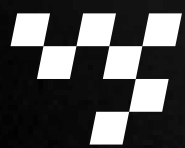


# *WHO IS* *TESLA*



**“Accelerating the World's  
Transition to Sustainable Energy”**

- American Based Automaker
  - Increasing sustainability
  - Increasing automation abilities
  - Maximizing safety and fun

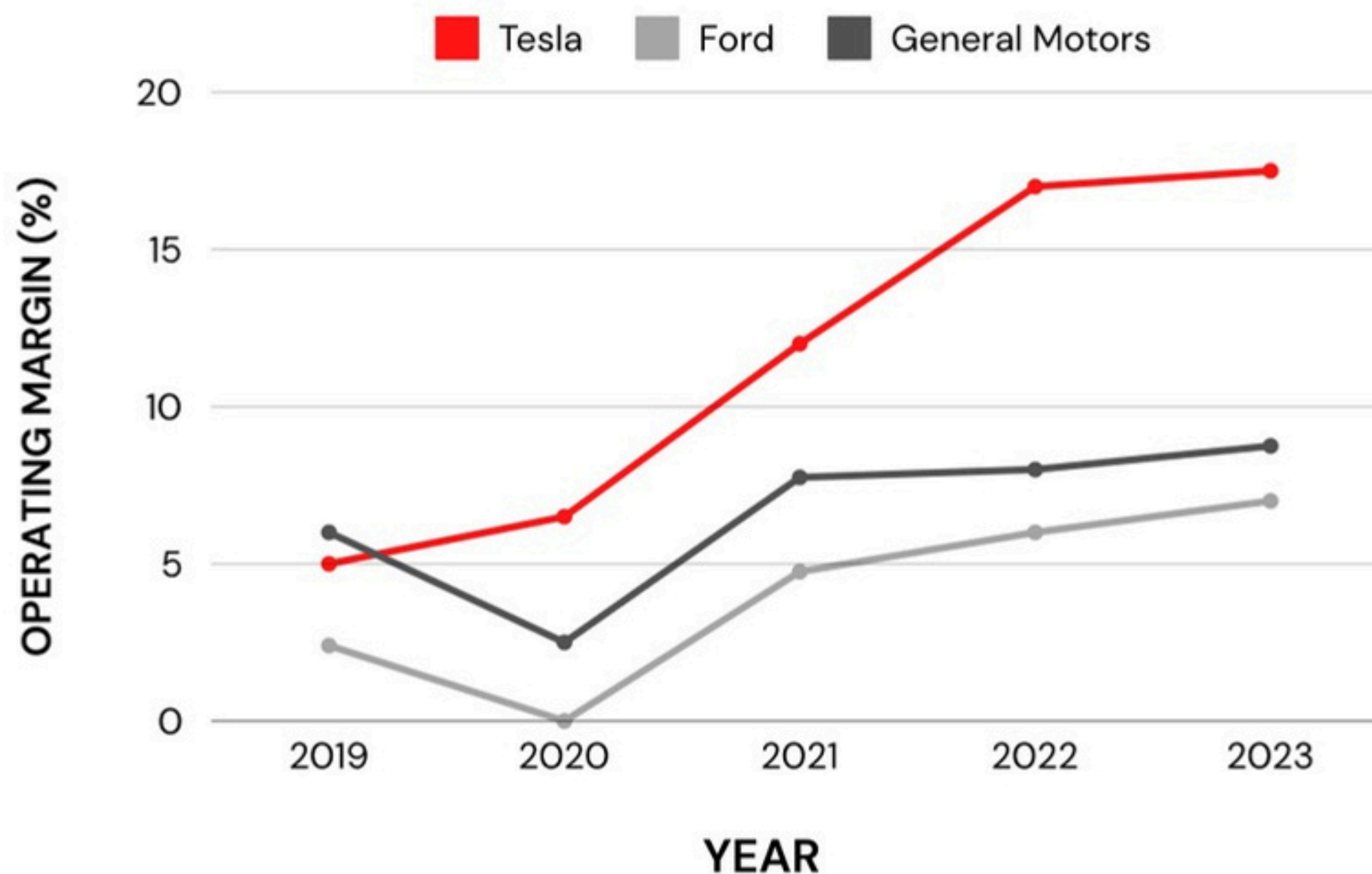


# HIGH OPERATING MARGIN

- Efficient cost management outperforming competitors
- Shows consistent improvement
- Competitive advantage in operational efficiency



## OPERATING MARGIN COMPARISON



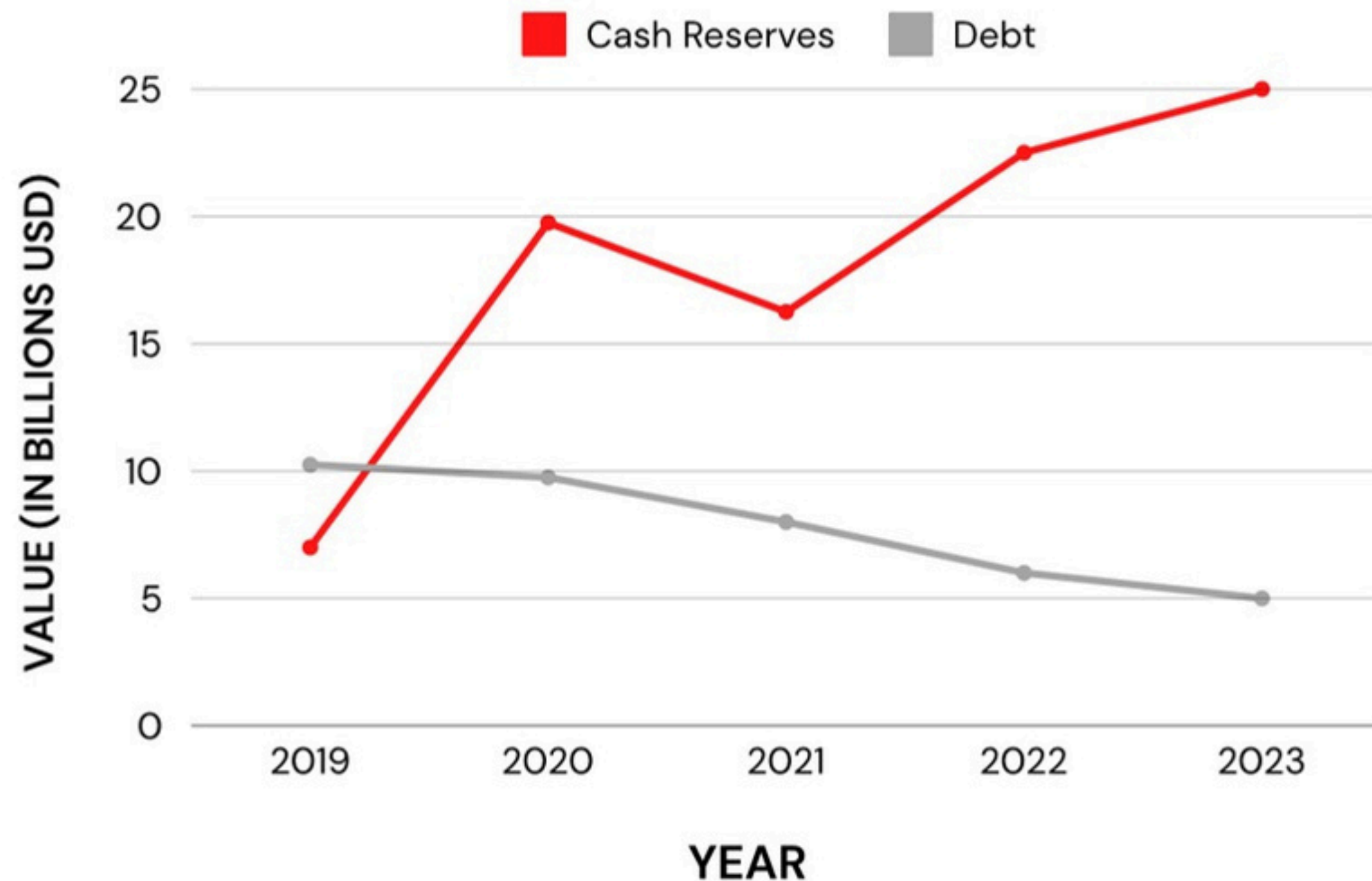


## ***HIGH CASH, LOW DEBT***

- Financial position with increasing cash reserves
- Debt steadily declining
- Financial flexibility, economic resilience, global expansion



### FINANCIAL POSITION





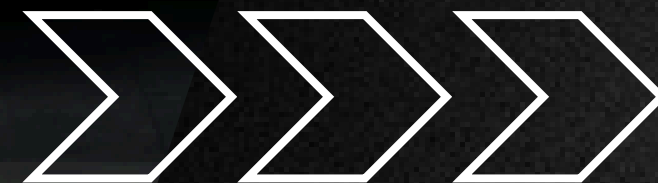


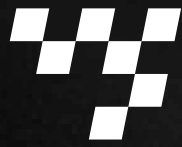
# ***HIGH REVENUE***

# ***GROWTH***

## **Strong Growth Trajectory**

- EV market and Green Transportation Initiatives
- Substantial Expansion and Market Capture
- High Growth Company



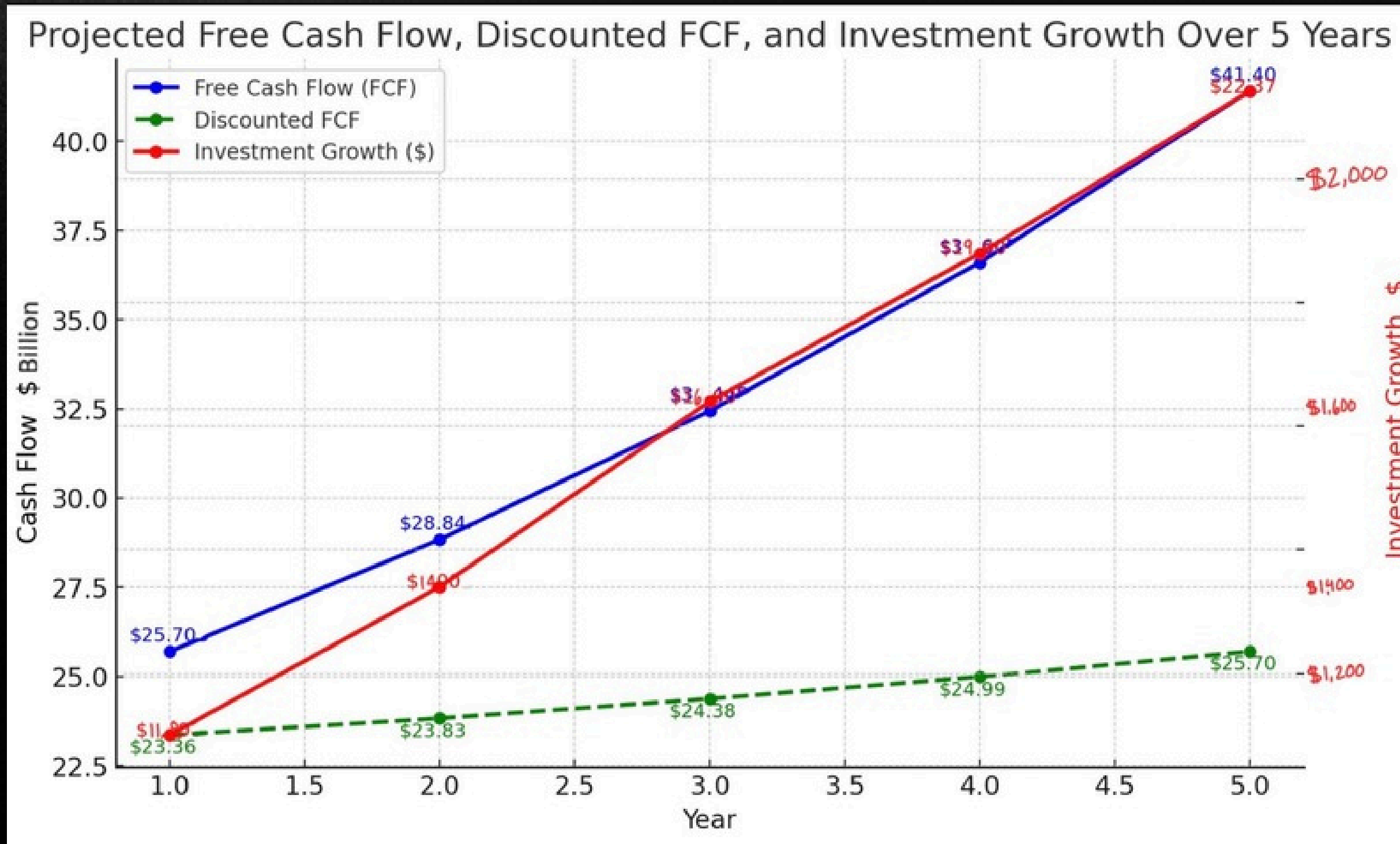


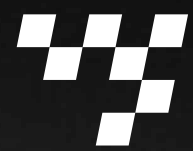
# **PREDICTED ANALYSIS**



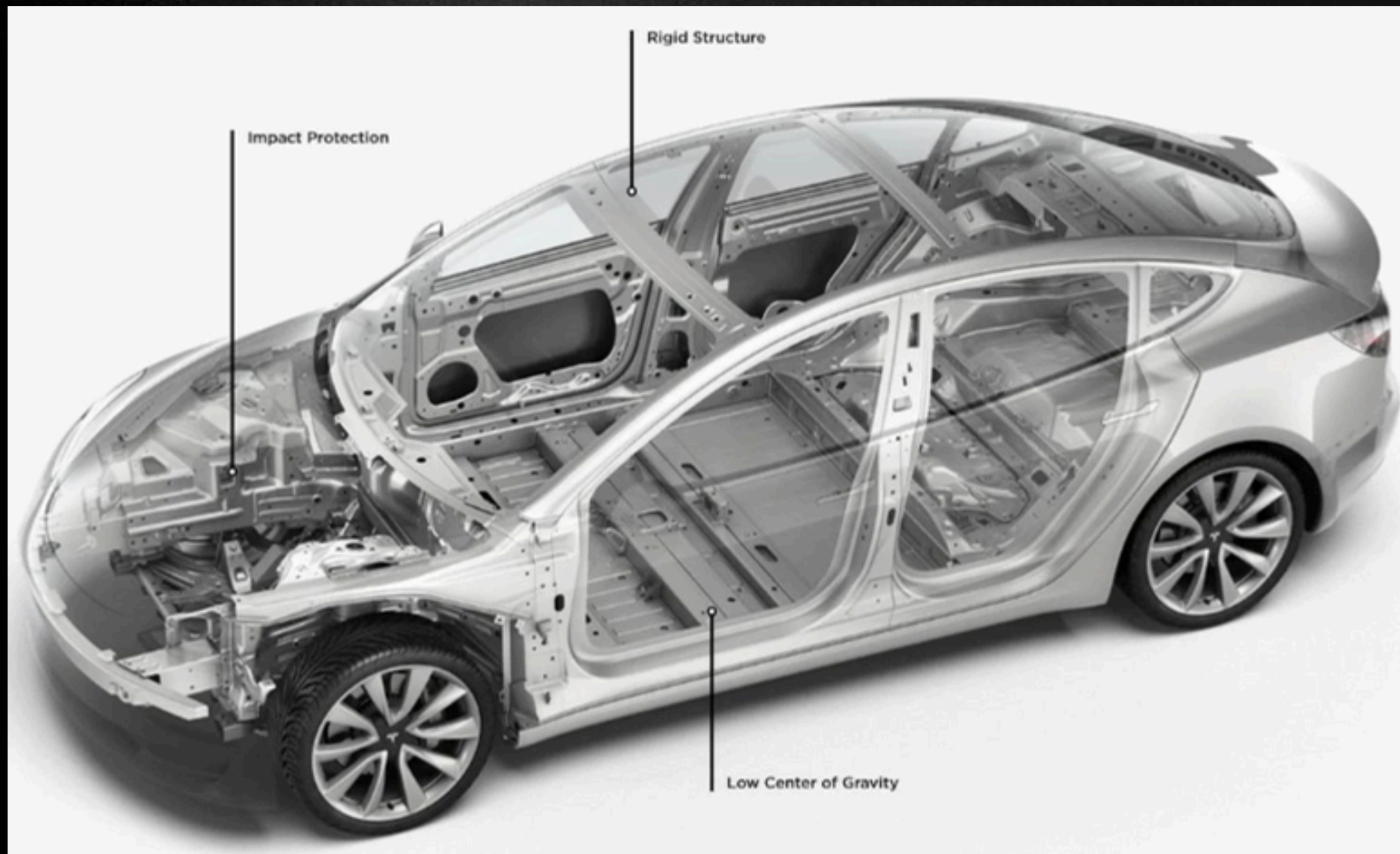
Turn \$1,000 to \$2,237!

## **DISCOUNT CASH FLOW MODEL**





# **TESLA SAFETY**



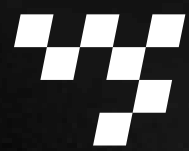
- **NO FRONT ENGINE**
- **LOW CENTER OF GRAVITY**
- **ADVANCED DRIVER ASSISTANCE SYSTEM (ADAS)**
- **CRASH SAFETY (NHTSA)**

**RATING: 5**

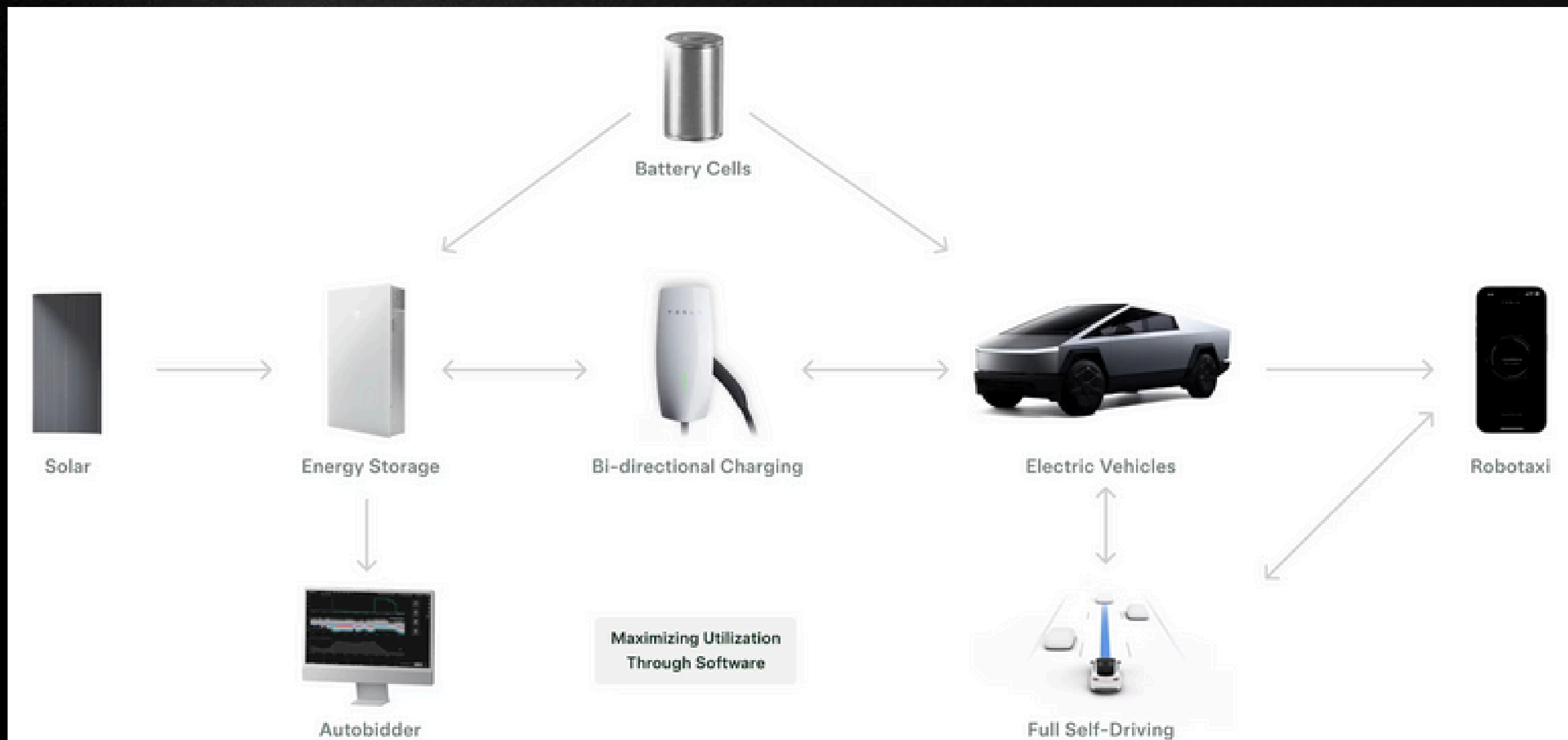
## **COMPARISON TO COMPETITORS:**

**BYD Atto 3: 80% safety assist score** vs. **Tesla Model Y: 98% safety assist score**





# TESLA SUSTAINABILITY



- **SOLAR PANELS**
- **SCHEDULED CHARGING**
- **INTEGRATED ECOSYSTEM**
- **MAXIMIZED EFFICIENCY**

- **\$9B REVENUE (\$1.79B+ IN 2023) FROM SALE OF CARBON CREDITS TO AUTOMAKERS**
- **90% MANUFACTURING WASTE RECYCLED IN 2023**
- **0 EMISSION EVS**

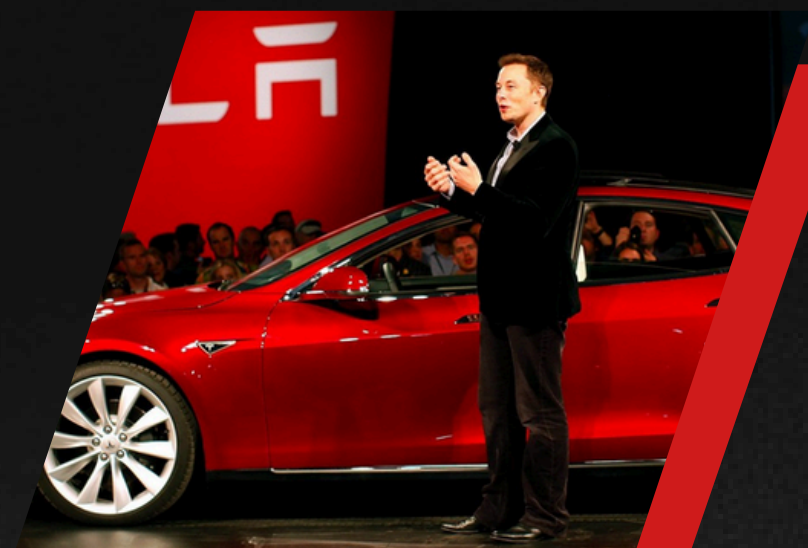


# **CUSTOMER BASE**



## **BRAND LOYALTY**

- 67.8% return for another



## **ALL AGES**

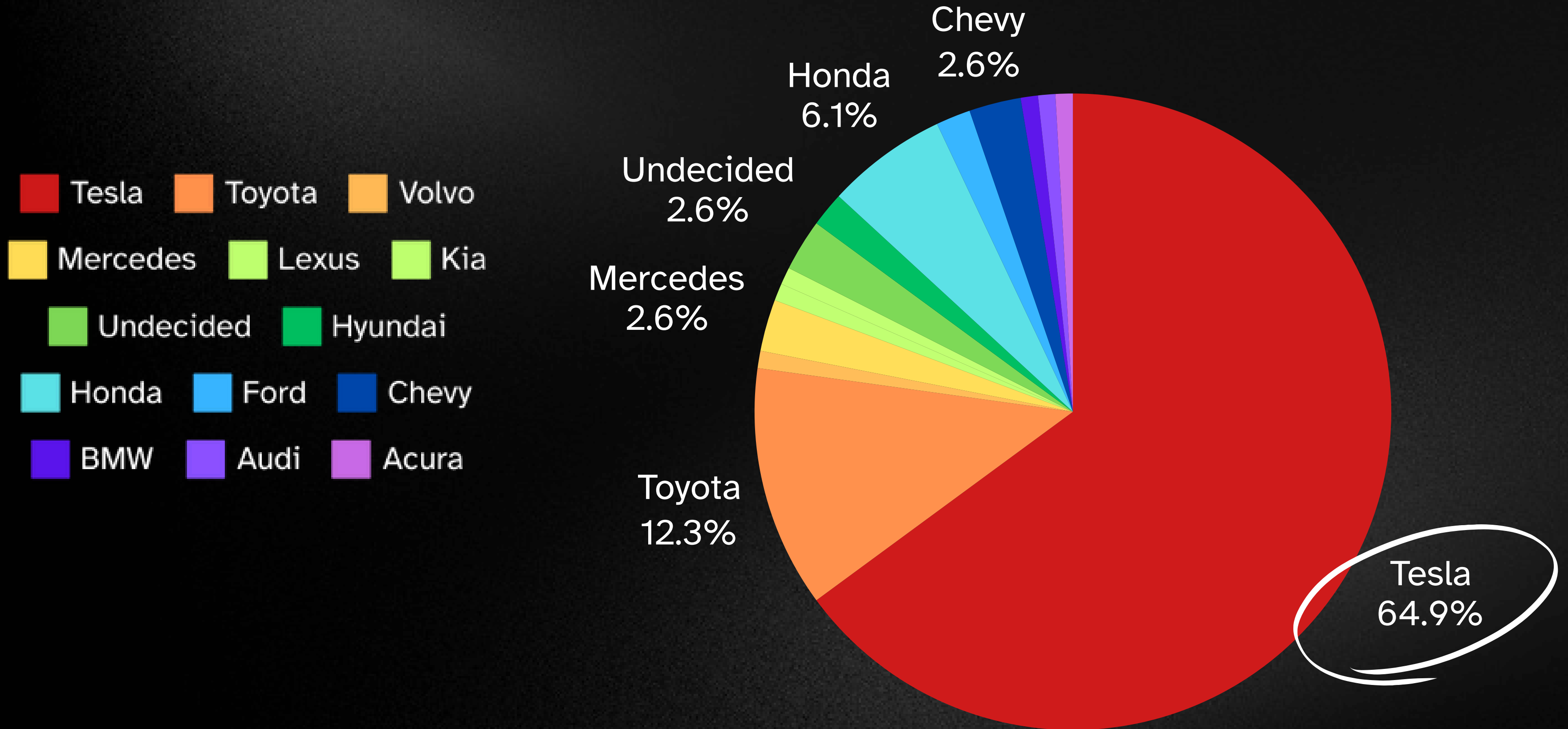
- Median 48 but first time buyers shopping for EV's age 18-25 say Tesla 60% of the time



## **ONLINE PRESENCE**

- Elon Musk has 202 million followers on X (previously Twitter)

**WE ASKED OVER 100 PARTICIPANTS TO WRITE DOWN  
WHICH AUTOMAKER THEY WOULD PURCHASE AN EV FROM**





# **WHEN ASKED WHY TESLA?** >>>>

Briefly explain your answer

Everyone has it

Briefly explain your answer

Tesla is the original. So I would trust they do it best.

Briefly explain your answer

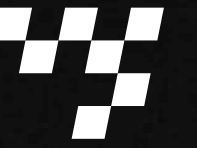
this is the only electrical vehicle that I know

Briefly explain your answer

It is the one I have heard the most about.

Briefly explain your answer

It's the only name brand for EVs that I've heard out there that does testing and is constantly working to upgrade their models



# INVESTMENT WEAKNESSES



## **1** INCREASED COMPETITION

### BYD

- Chinese EV leader with rapid, dramatic growth

### Volkswagen

- Committed **\$130 billion** to a massive **EV ramp-up by 2028**

### Toyota

- Shifted focus of its Chinese research & development to EVs
- Using local component suppliers to speed up EV production

## **2** HIGH QUALITY FOR A HIGH COST

### Starting Prices:

Tesla Model 3: \$40,380

Nissan Leaf S: \$29,235

Hyundai USA IONIQ 6: \$37,500

BYD Seagull: \$9,700 USD (China)



# **KNOWING THE MARKET**

## **1 BYD**

- NO US Market
- Insufficient product delivery

## **3 VOLKSWAGON**

- World's 2nd most indebted company: \$275 billion (Oct 2024)
- Transition challenges

## **2 FORD**

- Scaling back \$12 billion on EV Investments
- Dissapointing return: 24% In the last 10 years

## **4 TOYOTA**

- World's 3rd most indebted company: \$255 billion (Oct 2024)
- Transition Challenges



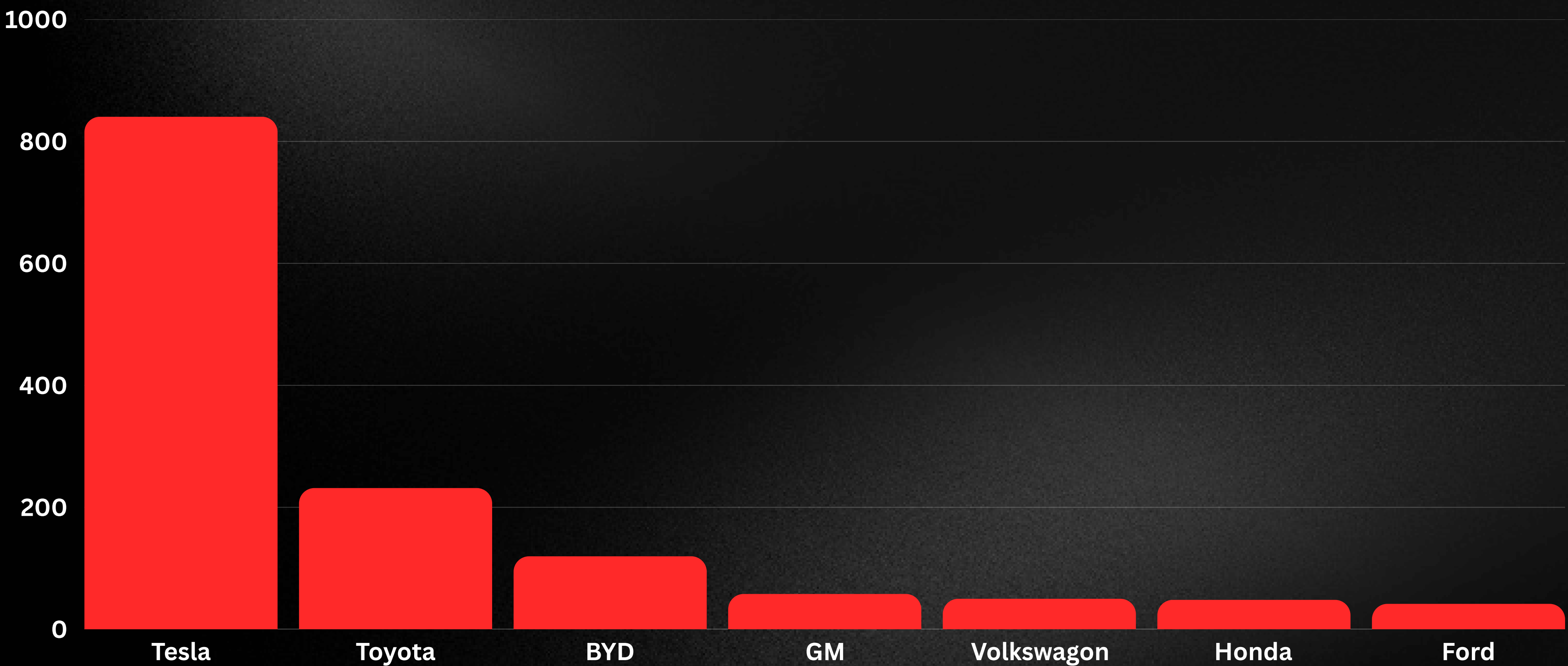


# **COMPETITIVE ADVANTAGE**

- Software licensing
- Supercharger network
- Highest market capitalization:  
\$840 billion (2024)

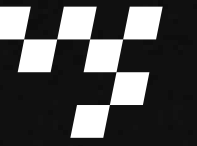
***GLOBAL MARKET VALUE OF CARMAKERS AS OF OCTOBER, 2024***

● Market Cap in billion USD

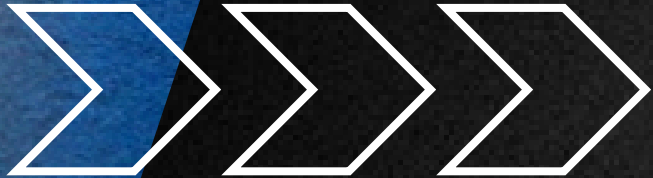




***RECAP***



***TESLA***

- Strongest financial performance
  - Most powerful leadership
  - Best commitment to sustainability
- 





**THANK  
YOU**

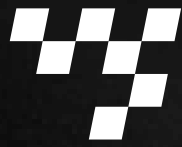


**DSP TEAM 3**



# *QUESTION & ANSWERS*





# ***SOURCES***



SOURCE 1: <https://finance.yahoo.com>

SOURCE 2: <https://www.bloomberg.com>

SOURCE 3:

[https://www.researchgate.net/publication/376887907\\_The\\_Supply\\_Chain\\_Advantages\\_and\\_Challenges\\_of\\_BYD\\_in\\_the\\_New\\_Energy\\_Vehicle\\_Industry\\_Implications\\_for\\_the\\_Future](https://www.researchgate.net/publication/376887907_The_Supply_Chain_Advantages_and_Challenges_of_BYD_in_the_New_Energy_Vehicle_Industry_Implications_for_the_Future)

SOURCE 4: <https://finance.yahoo.com/news/ford-stock-buy-151100298.html>

SOURCE 5: <https://www.financecharts.com/screener/most-indebted>

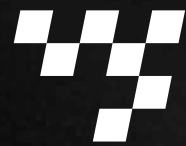
SOURCE 6: <https://www.ft.com/content/7e5677b8-87fa-41fa-8648-9009ac7f14fc>

SOURCE 7: <https://www.youtube.com/watch?v=SRrLDVKX1HA>

SOURCE 8: <https://www.cnbc.com/2024/02/29/tesla-to-earn-billions-from-charging-partnerships-with-ford-others.html#:~:text=AutoForecast%20Solutions%20says%20Tesla%20could,drivers%20of%20non%2DTesla%20EVs.>

SOURCE 9: <https://companiesmarketcap.com/automakers/largest-automakers-by-market-cap/>

SOURCE 10: <https://www.forbes.com/sites/brookecrothers/2024/10/27/new-tesla-coming-in-2025---price-design-could-reset-ev-market/>



# APPENDIX A

Krajcik, Patrick. "3 Compelling Reasons to Hold on to Tesla Stock Despite the Volatility." Nasdaq, 28 Sept. 2024, [www.nasdaq.com/articles/3-compelling-reasons-to-hold-on-to-tesla-stock-despite-the-volatility](https://www.nasdaq.com/articles/3-compelling-reasons-to-hold-on-to-tesla-stock-despite-the-volatility).

Over the past 12 months, the stock has dropped by 43%, highlighting the turbulent journey of [growth stocks](#) since last year. However, 2023 is proving to be very lucrative for TSLA stock bulls. There has been a surge of almost 72% in the stock this year, [showing no signs of slowing down](#).

Although Tesla implemented significant price cuts this year, it still enjoys considerable scale and brand strength advantages, providing it with pricing power in the auto market. This edge has enabled it to generate relatively strong margins that put pressure on the competition.

By introducing price cuts this year, the automaker has created challenges for rivals looking to enter its market while still retaining the opportunity to sell additional services to customers who purchase vehicles at lower prices.

[Nothing, not even Elon Musk's other exploits](#), is slowing down TSLA stock. It continues to perform in a challenging market.

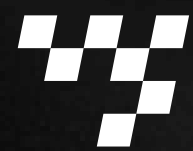
No wonder TSLA stock [unites all types of investors](#) in its praise. It is truly a revolutionary enterprise in every sense of the word.

[TSLA](#)

Tesla

\$184.73

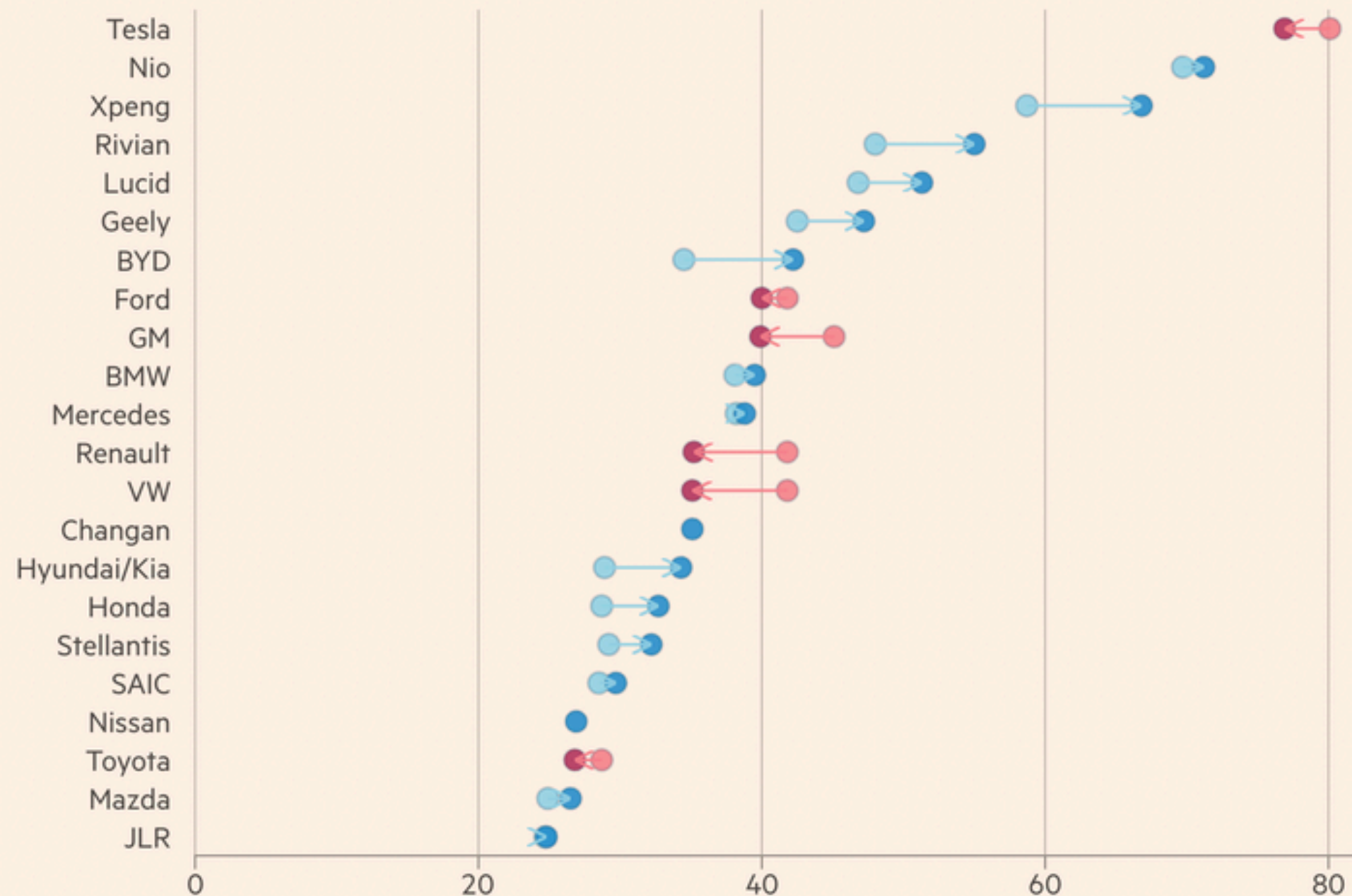




# APPENDIX B

Gartner Digital Automaker index (2024 score, %)

Change on year: Increase | decrease (darker dots 2024; lighter dots 2023)



FINANCIAL TIMES

Source: Gartner

<https://www.ft.com/content/7e5677b8-87fa-41fa-8648-9009ac7f14fc>



# APPENDIX C



Tesla has shared an update on the growth and performance of the Supercharger Network in the third quarter of 2024. The electric vehicle maker posted the information on its official Tesla Charging account on social media platform X.

As per the [Tesla Charging account](#), the Supercharger Network saw substantial growth in Q3 2024. During the third quarter, Tesla opened an additional 2,800 Supercharger stalls, representing a year-over-year network growth of 23%. With these results, [industry watchers](#) estimate that Tesla has likely built almost 62,400 Superchargers worldwide so far.

**Tesla stands to earn billions of dollars a year by opening U.S. charging stations to drivers of Ford and other EVs**

AutoForecast Solutions says Tesla could generate \$6 billion to \$12 billion in annual charging revenue by 2030 by opening its charging stations to drivers of non-Tesla EVs.

Extensive  
Supercharger network

[https://www.teslarati.com/tesla-supercharger-network-performance-growth-q3-2024/#google\\_vignette](https://www.teslarati.com/tesla-supercharger-network-performance-growth-q3-2024/#google_vignette)

<https://www.cnbc.com/2024/02/29/tesla-to-earn-billions-from-charging-partnerships-with-ford-others.html#:~:text=AutoForecast%20Solutions%20says%20Tesla%20could,drivers%20of%20non%2DTesla%20EVs.>

# APPENDIX D

 **Reuters**

World ▾ US Election Business ▾ Markets ▾ Sustainability ▾ Legal ▾ More ▾

Autos & Transportation | Sustainable & EV Supply Chain | Regulatory & Policy | Financial Results

## BYD tells EU to 'stay away' from tariffs as it expands European supply chain

By Victoria Waldersee

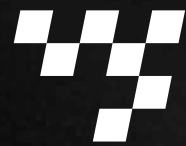
October 14, 2024 9:08 AM EDT · Updated 16 days ago

🔖 Aa 🔄

PARIS, Oct 14 (Reuters) - Chinese EV giant **BYD on Monday slammed** the EU's planned tariffs

<https://www.reuters.com/business/autos-transportation/chinas-byd-warns-eu-tariffs-will-raise-prices-deter-buyers-2024-10-14/>

Barrier to Entry (BYD)



# APPENDIX E



[https://www.reuters.com/business/autos-transportation/china-tells-carmakers-pause-investment-eu-countries-backing-ev-tariffs-sources-2024-10-30/#:~:text=SHANGHAI%2C%20Oct%2030%20\(Reuters\),likely%20to%20further%20divide%20Europe](https://www.reuters.com/business/autos-transportation/china-tells-carmakers-pause-investment-eu-countries-backing-ev-tariffs-sources-2024-10-30/#:~:text=SHANGHAI%2C%20Oct%2030%20(Reuters),likely%20to%20further%20divide%20Europe)

## Exclusive: China tells carmakers to pause investment in EU countries backing EV tariffs, sources say

By Reuters

October 30, 2024 7:13 AM EDT · Updated 3 hours ago



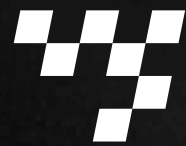
As Beijing continues negotiations over an alternative to tariffs, Chinese automakers including **BYD** (002594.SZ) , SAIC (600104.SS) , and Geely (GEELY.UL) were told at a meeting held by the Ministry of Commerce on Oct. 10 that they should pause their heavy asset investment plans such as factories in countries that backed the proposal, said the people.

They declined to be named, as the meeting was not public.

**BYD TARIFF: 17%**

Barrier to Entry (BYD)





# APPENDIX F

[Tesla, Inc. "Tesla Breaks Ground on New Lithium Refinery." Tesla Blog, 8 May 2023, \[www.tesla.com/blog/tesla-lithium-refinery-groundbreaking\]\(https://www.tesla.com/blog/tesla-lithium-refinery-groundbreaking\).](#)

[Visconti, Zachary. "Tesla Lithium Refinery Construction Making Progress." Teslarati, 11 Mar. 2024, \[www.teslarati.com/tesla-lithium-refinery-construction/\]\(https://www.teslarati.com/tesla-lithium-refinery-construction/\).](#)

[Jin, Hyunjoon. "Explainer: How Tesla Weathered Global Supply Chain Issues That Knocked Rivals." Reuters, 4 Jan. 2022, \[www.reuters.com/markets/europe/how-tesla-weathered-global-supply-chain-issues-that-knocked-rivals-2022-01-04/\]\(https://www.reuters.com/markets/europe/how-tesla-weathered-global-supply-chain-issues-that-knocked-rivals-2022-01-04/\).](#)

NEWS

## Tesla Lithium Refinery construction making progress



By [Zachary Visconti](#)

Posted on March 11, 2024

Tesla is making construction progress on its upcoming lithium refinery in Texas, as shown in photos taken by o

Longtime Tesla construction observer Joe Tegtmeier shared photos of Tesla's forthcoming lithium plant near photos, as posted on [X](#), show the foundations of what will eventually be Production Line 1, with other superst construction on Production Line 2, as Tegtmeier explains.

NATIONAL NEWS RELEASE

## Unlocking Arkansas' Hidden Treasure: USGS Uses Machine Learning to Show Large Lithium Potential in the Smackover Formation

By [Communications and Publishing](#) October 21, 2024

RESTON, Va. — Using a combination of water testing and machine learning, a U.S. Geological Survey-led study estimated between 5 and 19 million tons of lithium reserves are located beneath southwestern Arkansas. If commercially recoverable, the amount of lithium present would meet projected 2030 world demand for lithium in car batteries nine times over.

### HOW MUCH IS TESLA VERTICALLY INTEGRATED?

Tesla also designs the chips used in its driver assistant systems and makes parts ranging from seats to battery cells in-house. It also owns its own direct sales, service and charging networks.

## VERTICAL INTEGRATION

# APPENDIX G

## BYD AND AMPLY LAUNCH PREFERRED PARTNERSHIP FOR ELECTRIC VEHICLE CHARGING INFRASTRUCTURE AND ENERGY SERVICES



### Shell Recharge x BYD Promotion

Introducing an exciting promotion for BYD drivers: enhance your EV Journey and reduce the cost of public rapid and ultra-rapid charging with Shell Recharge.

<https://shellrecharge.com/en-gb/landing/byd>

BYD CHARGING

<https://en.byd.com/news/byd-and-amply-launch-preferred-partnership-for-electric-vehicle-charging-infrastructure-and-energy-services/#:~:text=With%20the%20high%20costs%20and,charging%20infrastructure%20provider%2C%20AMPLY%20Power>

# APPENDIX H

TECH · TESLA

## Elon Musk says Tesla robotaxi service is already on San Francisco roads in tests for employees

BY JESSICA MATHEWS

October 24, 2024 at 12:00 AM EDT



*PepsiCo unveiled the world's first fleet of electric Tesla Semi trucks in December 2022.*

Eric was the first person at Frito-Lay to officially take a Tesla Semi on the road, making the 220-mile trip from the company's Modesto facility to Reno, Nevada, for the unveiling in December. "It's a really fun vehicle to drive," says Eric, who has been with Frito-Lay for 22 years. "I appreciate that PepsiCo and Frito-Lay have put them in our hands."

Future Investments

<https://fortune.com/2024/10/24/elon-musk-tesla-robotaxi-service-already-testing-san-francisco-employees-autonomous-driving-earnings/>

<https://www.pepsico.com/our-stories/story/go-behind-the-wheel-with-pepsico-s-first-tesla-semi-driver>



# APPENDIX I

FORBES > LIFESTYLE > CARS & BIKES

## Tesla Cybertruck Frunk Gets Safety Update After ‘Alarming’ Viral Video

**Sasha Lekach** Contributor ⓘ

*Sasha Lekach covers electric vehicles and vehicle technology.*

Tesla investor Sawyer Merritt, a prolific X poster on all things Tesla and EV, later explained that the Cybertruck in the camping video had Tesla’s “spring” software update, known as 2024.14.3, which includes better sensing on the frunk enclosure. The release, coming to vehicles this week through an over-the-air update, also includes a new hands-free trunk opening feature. [Cybertruck owners](#) have praised the powered frunk, a first for Tesla’s EV lineup.

Future Investments

<https://www.forbes.com/sites/sashalekach/2024/05/03/tesla-cybertruck-frunk-gets-safety-update-after-alarming-viral-video/>