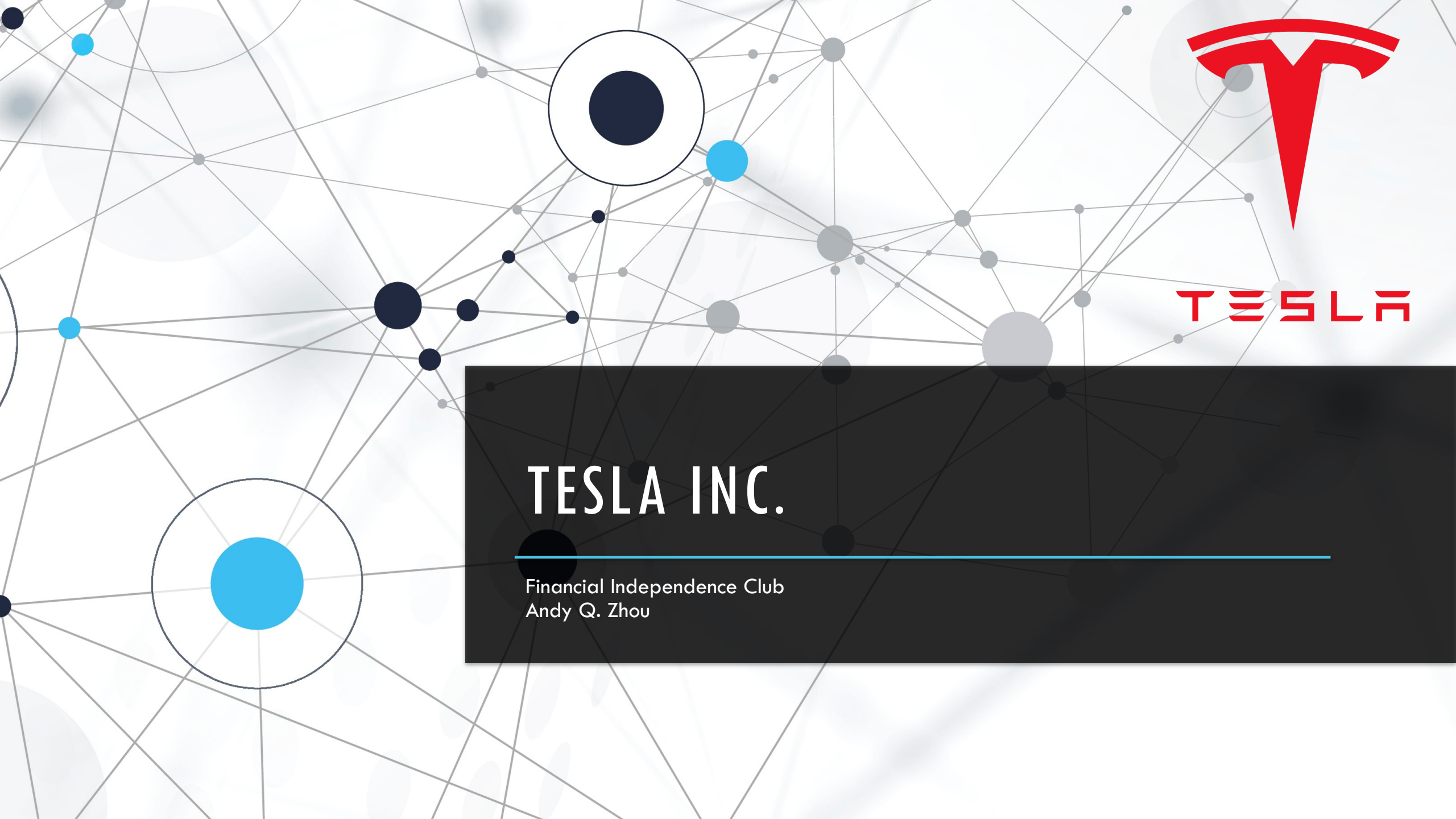


# TESLA INC.

Financial Independence Club
Andy Q. Zhou

# TABLE OF CONTENTS

# COMPANY OVERVIEW

Tesla Inc. designs, develops, manufactures high performance, fully electric vehicles (EVs) and energy generation and storage systems such as solar technology and batteries. The company currently offers 3 models of EVs, namely the Model S, Model 3, and Model X. The company is also planning to begin production and sales of a fourth model called the Model Y.

Model S

Model 3

Model X

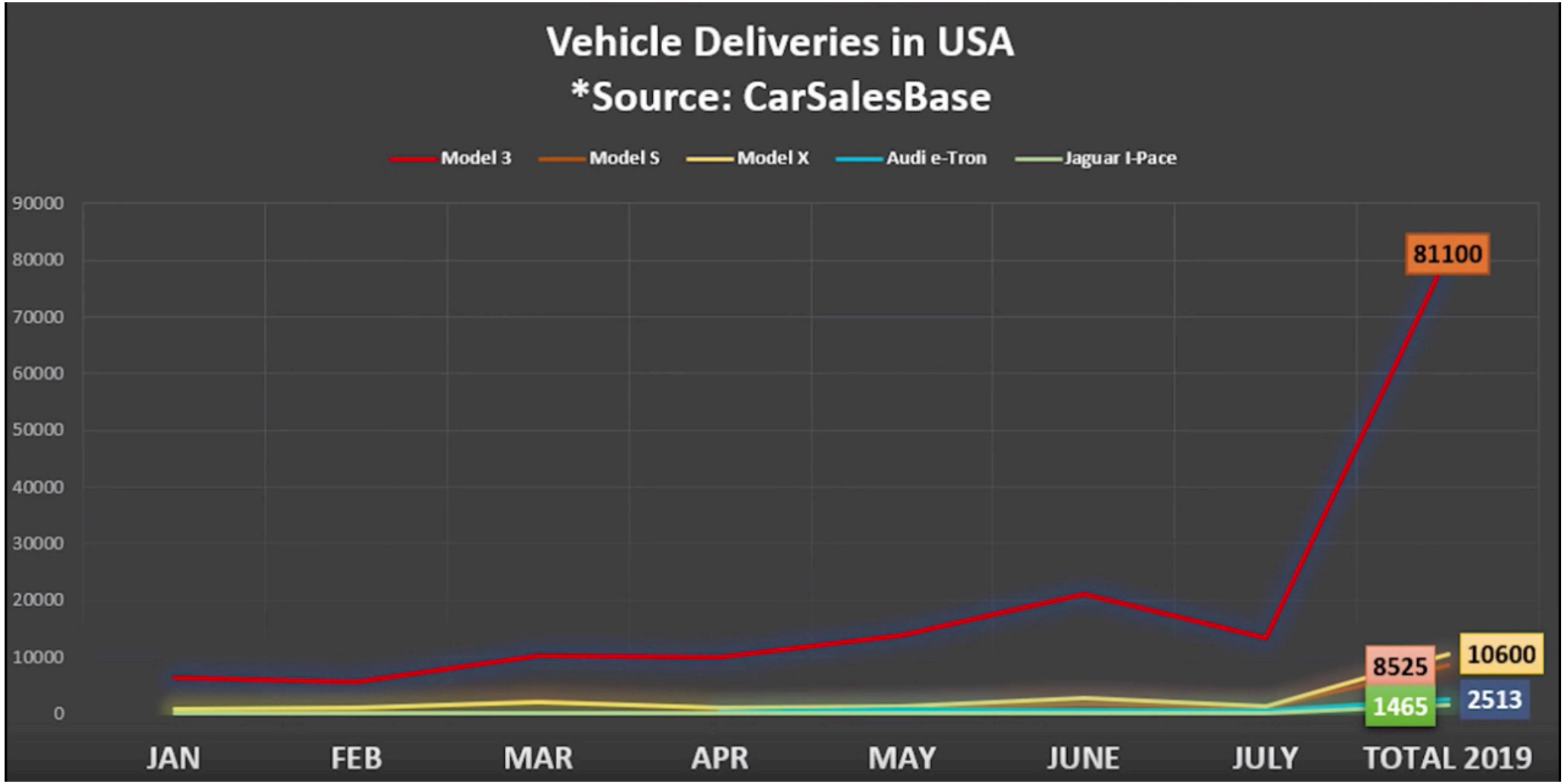
Model Y
(Upcoming)

# PERFORMANCE ADVANTAGE

| | Taycan Turbo | Taycan Turbo S | Tesla Model S Long Range | Tesla Model S Performance |
|---|---|---|---|---|
| MSRP | $150,900 | $185,000 | $79,990 | $99,990 |
| Battery Size | 93.4 kWh | 93.4 kWh | 100 kWh | 100 kWh |
| Range | 236–279 mi (WLTP) | 241–256 mi (WLTP) | 370 mi (EPA) | 345 mi (EPA) |
| Drive Type | All-wheel drive, dual motor | All-wheel drive, dual motor | All-wheel drive, dual motor | All-wheel drive, dual motor |
| Maximum DC Charging Capacity | 270 kW | 270 kW | Info Unavailable | Info Unavailable |
| Transmission | Single-speed front / Two-speed dog-ring rear | Single-speed front / Two-speed dog-ring rear | Single-speed fixed gear | Single-speed fixed gear |
| Battery Type | Lithium Ion Pouch configuration | Lithium Ion Pouch configuration | Lithium Ion cylindrical cells | Lithium Ion cylindrical cells |
| Max power | 460 kW (617 HP) | 460 kW (617 HP) | Info Unavailable | 568 kW (762 HP) |
| Max torque | 850 Nm | 1,050 Nm | 660 Nm | 931 Nm |
| Top Speed | 161 mph | 161 mph | 155 mph | 163 mph |
| 0 - 60 mph | 3 seconds | 2.6 seconds | 3.2 seconds | 2.4 seconds |
| Quarter Mile time | 11.1 seconds | 10.8 seconds | Info Unavailable | 10.6 seconds * |
| Length | 195.3 inches | 195.3 inches | 196 inches | 196 inches |
| Width | 77.4 inches | 77.4 inches | 77.3 inches | 77.3 inches |
| Height | 54.2 inches | 54.2 inches | 56.5 inches | 56.5 inches |
| Wheelbase | 114.1 inches | 114.1 inches | 116.5 inches | 116.5 inches |
| Drag coefficient | 0.22 Cd | 0.25 Cd | 0.23 Cd | 0.23 Cd |
| Curb Weight | 5,132 lbs | 5,121 lbs | 4,883 lbs | 4941 lbs |

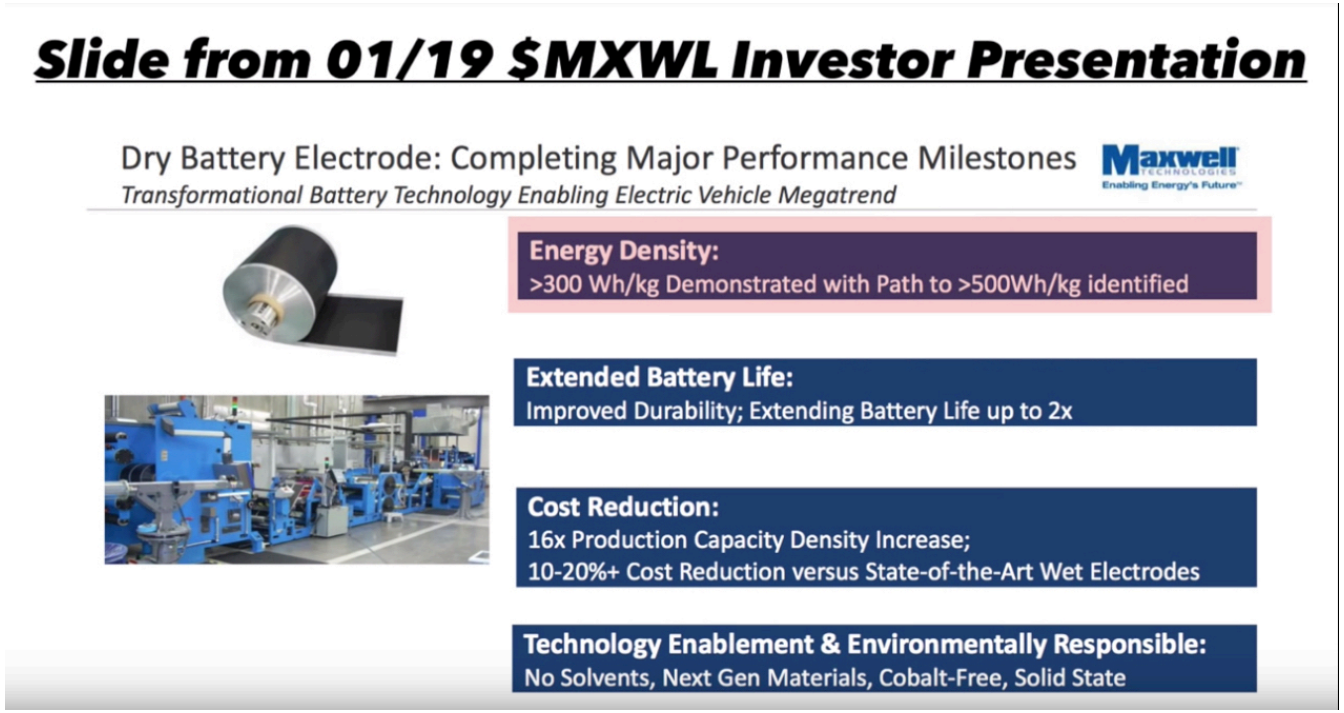
Porsche Taycan Vs Tesla Model S (Sept 2019)

# DOMINANCE IN THE EV MARKET (AUG 2019)



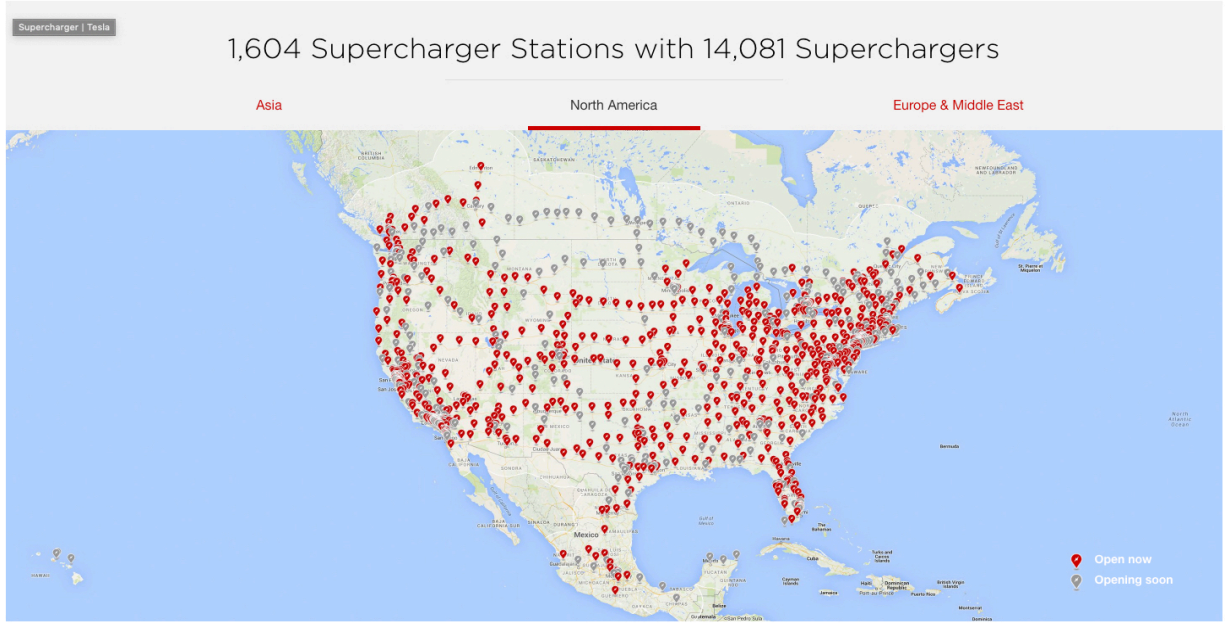
# GIGAFACTORY AND MAXWELL TECHNOLOGIES


Expected to be completed Q4 2019, begin production of cars Q1 or Q2 2020




Currently the best energy density for battery EVs is 246Wh/KG, dry electrode tech will enable a minimum of a 15% increase

# VERTICAL INTEGRATION




Over 1600 Supercharger stations as of Aug 2019


Comparison of Camera system Vs. LiDAR

# MACRO AND MICROECONOMIC FACTORS

Macroeconomic factors:

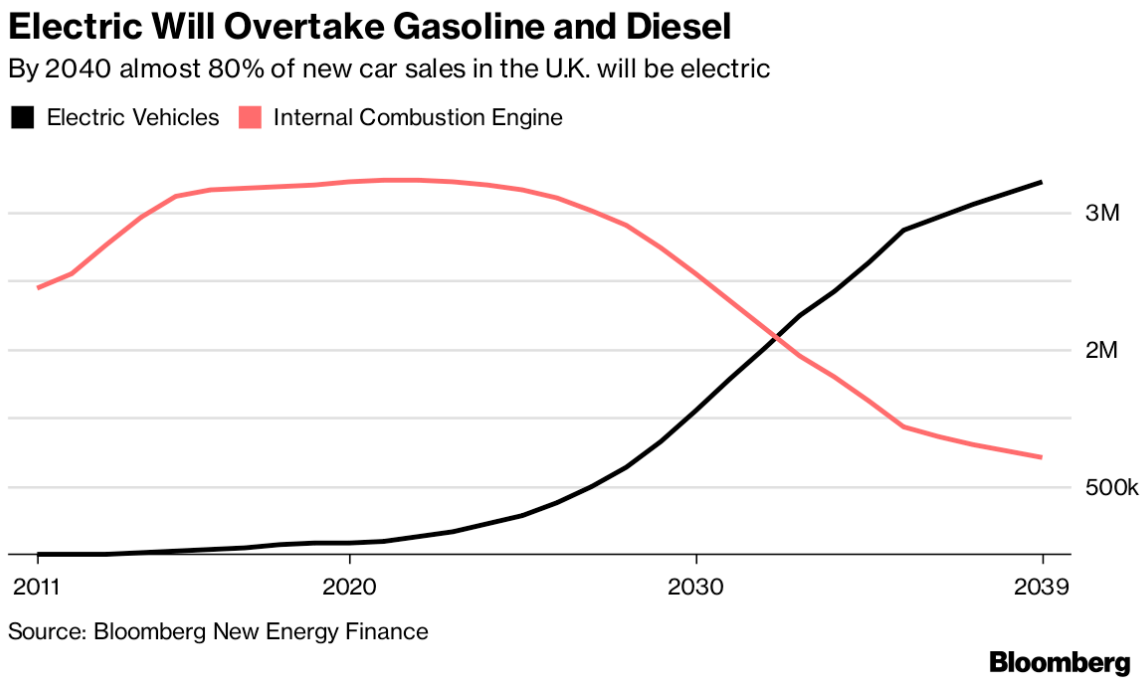
- Trade war with China → won 10% tariff reduction from Chinese government

- Growing trend of number of EVs vs. traditional ICE vehicles

Microeconomic factors:

- Demand for Tesla Model 3 → record number of deliveries in Q1 2019

- Price for batteries decreasing, causing decrease in price for new Tesla vehicles




*Electric Vehicles vs. traditional ICE vehicles projection

# RISKS


1. Tesla remains unprofitable on a YoY basis

2. Increasing competition from traditional automakers and startups

3. Recessions tend to have a disproportionately large negative effect on automakers compared to other industries

# VALUATION


We will take a long term look at Tesla's opportunities and make some conservative estimates to try and evaluate what the company should be worth **today**.

Tesla solar roofs, battery packs = $0
Autonomous taxi network total = $200B → Tesla captures 1% = $2B
Global EV market in 2025 (projection) = $567B → Tesla captures 20% = $113.4B
Total: $115.4B

Aggregated and discounted to 2019 dollars for 5 years with rate of 3% = $99.55B = ~$100B

Data collected and other misc. items like patents, brand etc. = $20B
Total = $120B
Current valuation (Market cap, Sept 2019) = ~$40B
Current Share price (Sept 8 2019) = $227.45 per share
Price target = ~$680 per share

*Assign $0 on this area of the business for now
*Note that this may be 5-10 years away
*According to Allied Market Research