Tesla, Inc. – Company Overview

- Tesla was founded in July 2003 by Martin Eberhard and Marc Tarpenning; Elon Musk joined as chairman and became CEO in 2008.
- Named after inventor Nikola Tesla.
- Headquarters: Austin, Texas (previously Palo Alto, California).
- Number of employees: ~125,665 (2024).
- Mission: To accelerate the world’s transition to sustainable energy.

Products and Services

- **Roadster (2008):** First production car, proving that electric cars can be fast and desirable.
- **Model S (2012):** Luxury electric sedan, awarded multiple “Car of the Year” titles.
- **Model X (2015):** SUV with Falcon Wing doors.
- **Model 3 (2017):** Affordable sedan, one of the best-selling EVs worldwide.
- **Model Y (2020):** Compact SUV, became the world’s best-selling car in 2023 and 2024.
- **Tesla Semi (2022):** Fully electric long-haul truck.
- **Cybertruck (2023):** Stainless steel all-electric pickup truck.
- **Energy Products:** Solar Roof, Solar Panels, Powerwall (home energy storage), Powerpack, and Megapack (utility-scale storage).

Financials and Growth

- Revenue 2024: **US$97.7 billion**.
- Net Income 2024: **US$7.1 billion**.
- Total Assets: **US$122.1 billion**.
- Shareholders’ Equity: **US$72.9 billion**.
- Vehicle Deliveries 2024: **~1.77 million**.
- Energy Storage Deployments 2024: **31.4 GWh**.
- Market Share: **17.6% of global BEV market** (2024).

Manufacturing and Operations

- Gigafactory Nevada: Battery cells and packs.
- Gigafactory Shanghai: Large-scale production for Asia and Europe.
- Gigafactory Berlin: European hub for Model Y production.
- Gigafactory Texas (Austin): Cybertruck and Model Y production.
- Global Supercharger Network: Over 50,000 chargers worldwide.

Key Innovations

- **Autopilot** and **Full Self-Driving (FSD):** Advanced driver assistance, continuously updated via over-the-air (OTA) software.
- **Battery Technology:** Development of 4680 battery cells for higher efficiency and lower cost.
- **Gigacasting:** Large aluminum casting technology for vehicle frames.
- **Over-the-Air Updates:** Regular software improvements without service center visits.

- **Energy Products:** Megapack for grid-scale storage, helping integrate renewable energy.
- **Tesla Bot (Optimus):** AI-powered humanoid robot under development.
- **Cybercab:** Planned fully autonomous ride-hailing vehicle.

Acquisitions and Partnerships

- **SolarCity (2016):** Expanded into solar energy solutions.
- **Grohmann Engineering:** Advanced automation for manufacturing.
- **DeepScale & Hibar Systems:** AI and battery technology.
- **Perbix:** Automation and manufacturing efficiency.
- Partnerships with **Panasonic, LG Chem, CATL**, and **SpaceX (shared R&D expertise)**.

Challenges and Risks

- Growing competition from **BYD, NIO, Rivian, Lucid Motors**, and traditional automakers like Volkswagen, Ford, and GM.
- Regulatory scrutiny over **Autopilot and FSD safety claims**.
- Production delays (e.g., Cybertruck).
- Leadership controversies and reliance on Elon Musk.
- Global supply chain and raw material constraints (especially lithium and cobalt).

Vision and Future

- To remain the leader in global EV adoption.
- Expansion into **robotics and artificial intelligence**.
- Mass-market adoption of **autonomous ride-hailing (Robotaxi / Cybercab)**.
- Greater integration of **solar and battery storage solutions** worldwide.
- Long-term goal: **Global transition to sustainable energy**.
