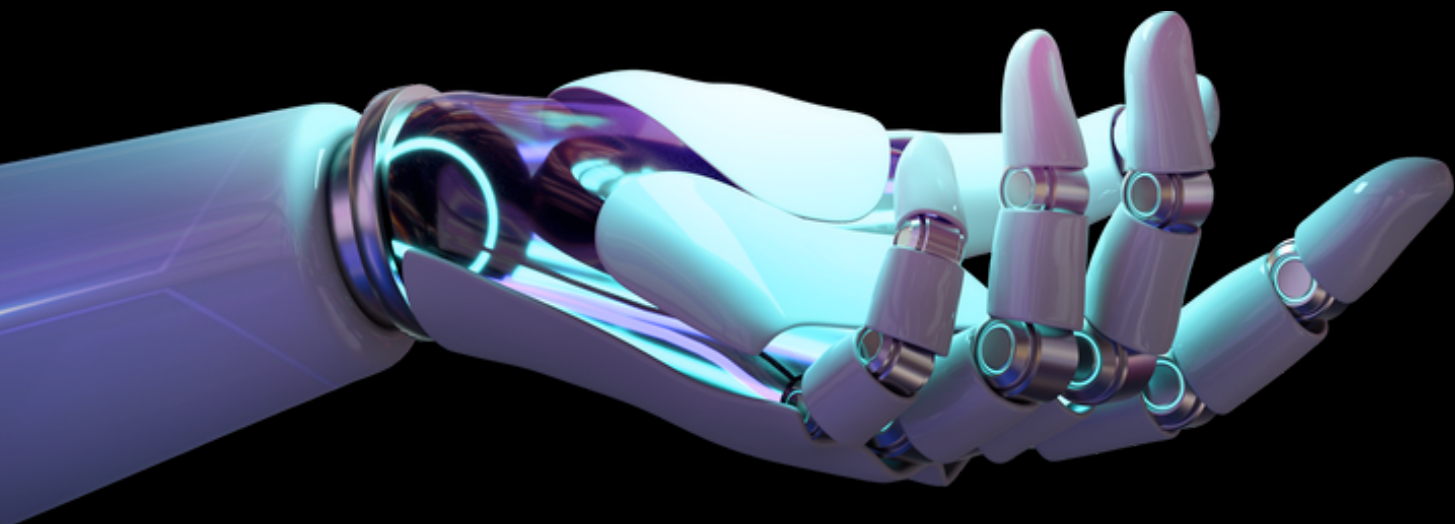


TESLA



WILL THE OPTIMUS BOT REDEFINE THE FUTURE?

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Executive Summary

- Tesla is expanding from Electric Vehicles and Energy Storage to Robotics
- The progress of the humanoid bot will be driven by societal and technological factors
- The humanoid bot industry is contingent on advancements in technology and societal acceptance
- Striking a balance between technology and society is the way ahead
- Tesla can continue to grow through supply chain optimization, R&D, diversification and expansion
- Tesla must navigate a competitive seascape when launching the optimus bot
- Tesla should sequence its moves to emerge a leader in the seascape
- Tesla should grow it's core EV business, make strategic acquisitions and invest in R&D for the Optimus Bot
- Tesla should release it's autonomous vehicles, and start deployment of the bot in specific industries
- Tesla's longterm roadmap: Expand into diverse industries and create a sales ecosystem
- Even longer term strategy: Shoot for the stars!



Tesla is expanding from Electric Vehicles and Energy Storage to Robotics



Early Years and the Roadster (2003-2008)

Model S Development and Expansion (2009-2012)

Model X Launch and Autopilot Introduction (2012-2015)

Model 3 Launch and Expansion into Mass Market (2015-2017)

Continued Innovation and Expansion (2020-2023 and Beyond)

The progress of the humanoid bot will be driven by societal and technological factors



S
SOCIETAL

Concerns regarding acceptance of humanoid robots such as job displacement, safety and privacy



T
TECHNOLOGICAL

Advancements in technology to perform complex, cognitive tasks in unstructured environments

E
ECONOMIC

Increase in carbon footprint due to large-scale complex manufacturing of robots

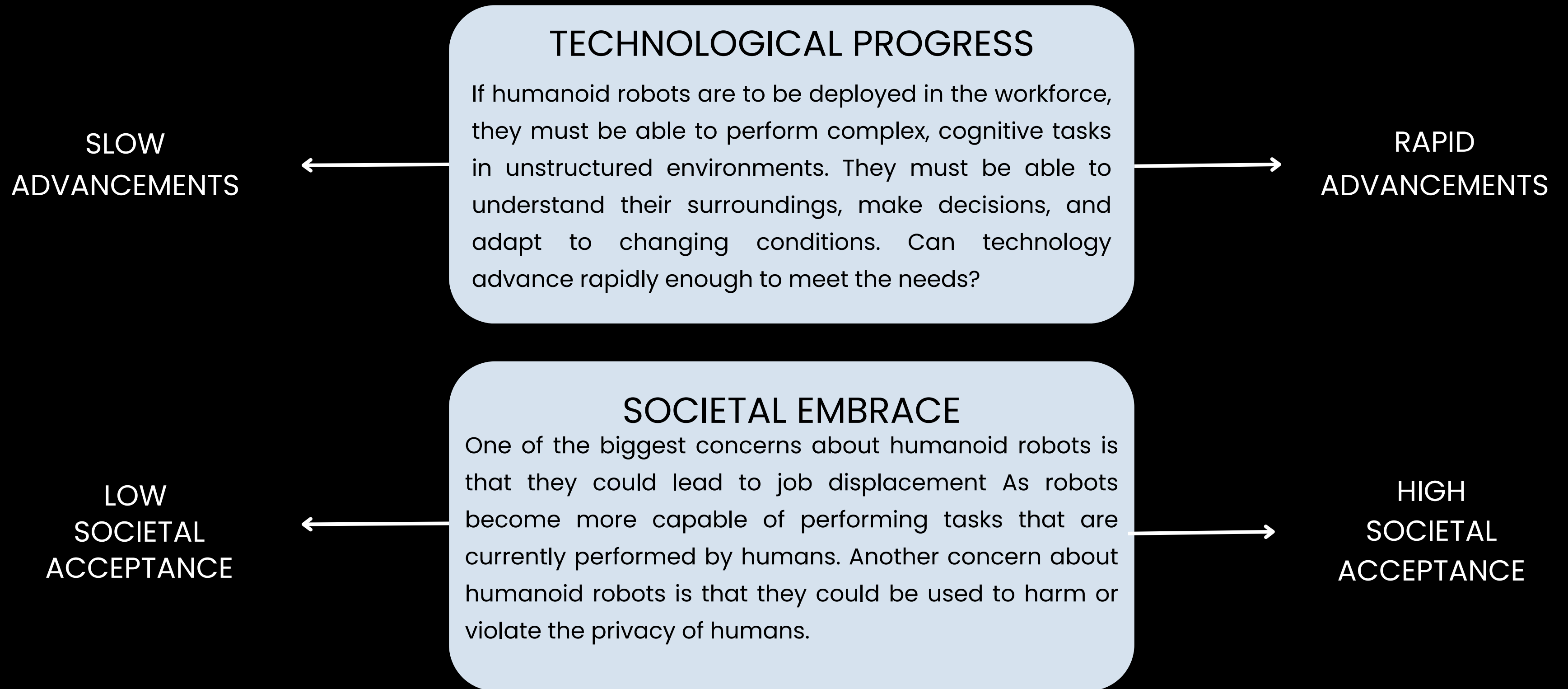
E
ENVIRONMENTAL

Price affected by advanced hardware components and scale of production

P
POLITICAL

Regulatory challenges such as developing safety standards for robots

The humanoid bot industry is contingent on advancements in technology and societal acceptance



Striking a balance between technology and society is the way ahead



Slow Technological Advancements

Rapid Technological Advancements

High Societal Acceptance

ROBOTS FACE A BUMPY ROAD

Companies not able to keep up with the demand to mass produce robots menial labour. People are willing to embrace robots in various roles, but these robots are not yet advanced enough to fulfill those expectations. Robots need constant supervision, are unable to perform complex tasks independently. Slow advancements lead to few players and high prices.

ROBOTS REDEFINE WORK

Highly sophisticated robots are deployed in workforce to do manual, repetitive jobs. Individuals are liberated from mundane tasks and presented with fresh opportunities in the employment landscape. People embrace these robots as valuable assistants. Rapid advancements fosters a fiercely competitive market with many companies vying for supremacy.

ROBOTS CAUGHT BETWEEN SLOW TECH AND SKEPTICISM

Slow progress in the field has resulted in robots that are not safe for the workforce. Companies are also facing many technical challenges while trying to deploy robots and warehouses and factories. Fears of job displacement and privacy also hindered the adoption of these robots. Few companies venture into this field.

ROBOT BACKLASH BREWS AMONG LAYOFFS

Humanoid robots become highly advanced and capable but face resistance and fear from a significant portion of the population. Companies start replacing human workers with robots causing mass layoffs, which lead to backlash and protests. Ethical and privacy concerns become pervasive as the integration of AI and robots accelerates.

Low Societal Acceptance

Tesla can continue to grow through supply chain optimization, R&D, diversification and expansion



Drivers

- **Strong brand reputation:** Tesla's reputation for innovation and quality could drive acceptance of the Optimus.
- **Financial resources:** Tesla's financial resources could support the development of the Optimus.
- **Access to talent:** Tesla's access to talented engineers and scientists could contribute to the Optimus's development.



Opportunities

- **Closed Loop Supply Chain:** Leverage Optimus's capabilities to develop new and innovative ways to make Tesla more sustainable.
- **Labor shortages:** Optimus could fill labor shortages in various industries.
- **Increasing demand for automation:** Optimus could automate a wide range of tasks, fulfilling the growing demand for automation.



Threats

- **Societal acceptance concerns:** Humanoid robots could raise concerns about job displacement, safety risks, and privacy violations, hindering their adoption.
- **Technical challenges:** Developing a robot capable of complex tasks poses significant technical challenges.
- **Competition:** Tesla faces competition from other companies developing humanoid robot.



Strategies

- **Horizon 1:** Grow EV Business, invest in R&D of Optimus, and strategic acquisitions
- **Horizon 2:** Introduce fully autonomous vehicles, and deploy Optimus in specific industries
- **Horizon 3:** Expand into diverse industries and create a sales ecosystem

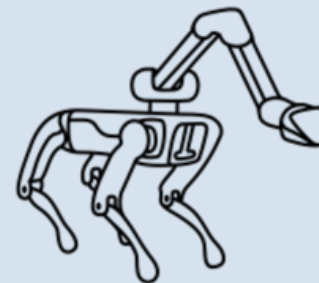
Tesla must navigate a competitive seascape when launching the optimus bot



INCUMBENTS



INSURGENTS



UnitreeRobotics®
High-performance Quadruped Robots



ADJACENTS

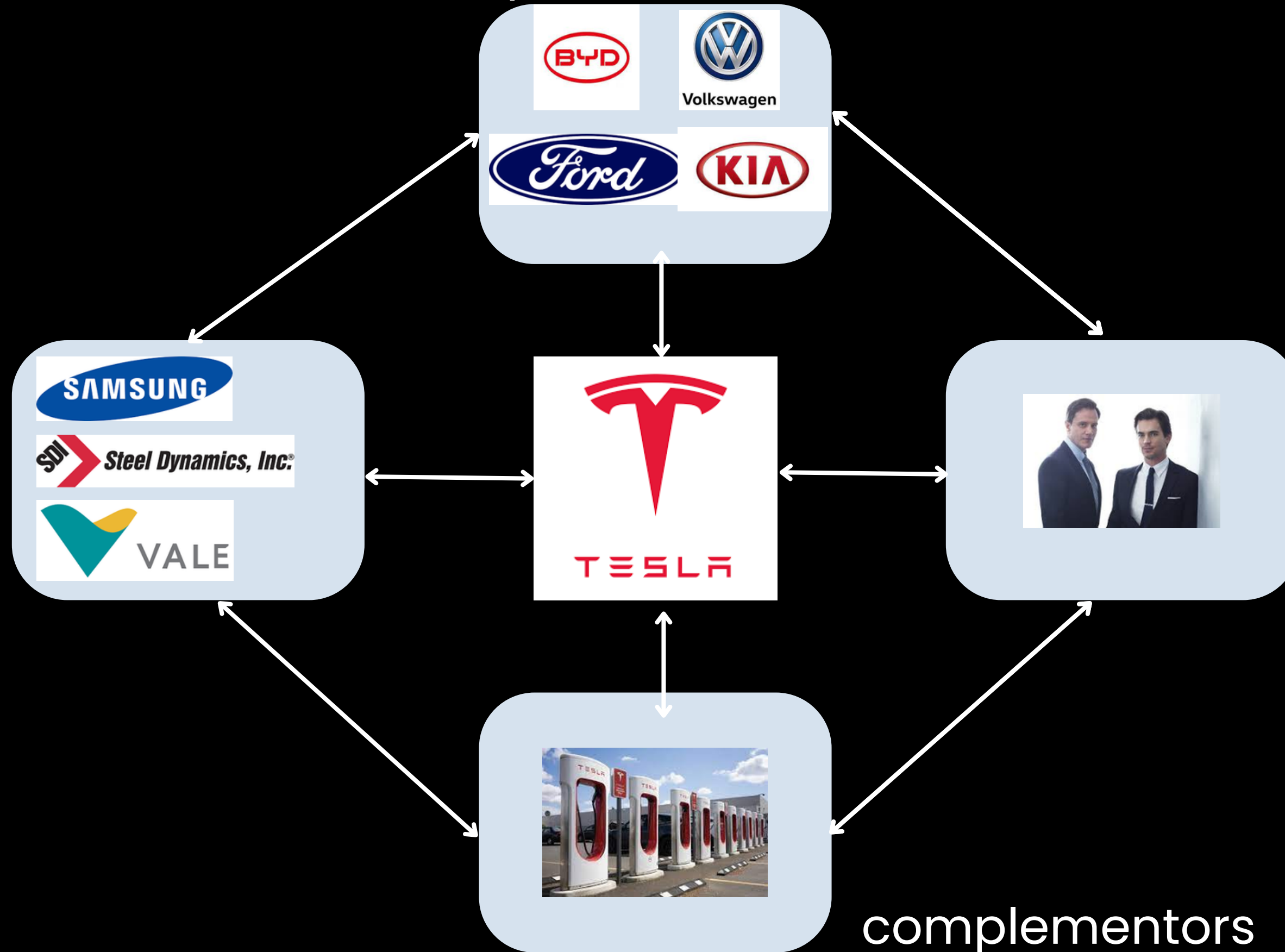


Co-opetition Model

competitors/substitutes



suppliers



complementors

Tesla should sequence its moves to emerge a leader in the seascape

Value

Horizon 1 (1–2 years)

- Tackle supply chain issues
- Strategic acquisitions
- Invest in R&D for the Optimus

Horizon 2 (3–4 years)

- Introduce FSD Vehicles to the market
- Launch Optimus and Partner with companies
- Establish a continuous ethical assessment process

Horizon 3 (5–7 years)

- Use Optimus to recycle batteries
- Diversify application of the bot
- RAAS (Robots as a Service)

Time

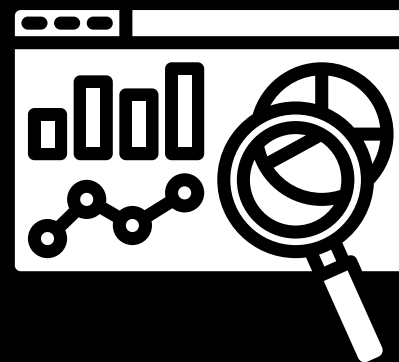
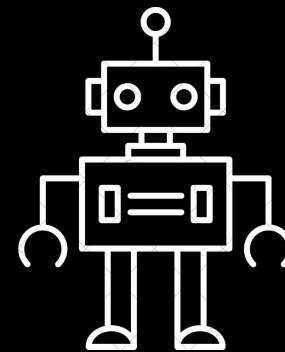
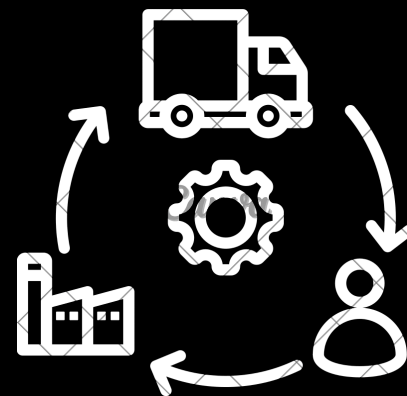
Tesla should grow it's core EV business, make strategic acquisitions and invest in R&D for the Optimus Bot- **Horizon 1 (1-2 years)**

What?

Tackle Supply Chain Issues – reduce shipping port dependencies, work with labor unions, and expand supplier base to other regions

Acquire start-ups with expertise in humanoid robots

Invest in R&D for the Optimus robot to develop a viable prototype



Why?

To continue to improve and scale the production of electric vehicles to maintain market leadership and revenue flow

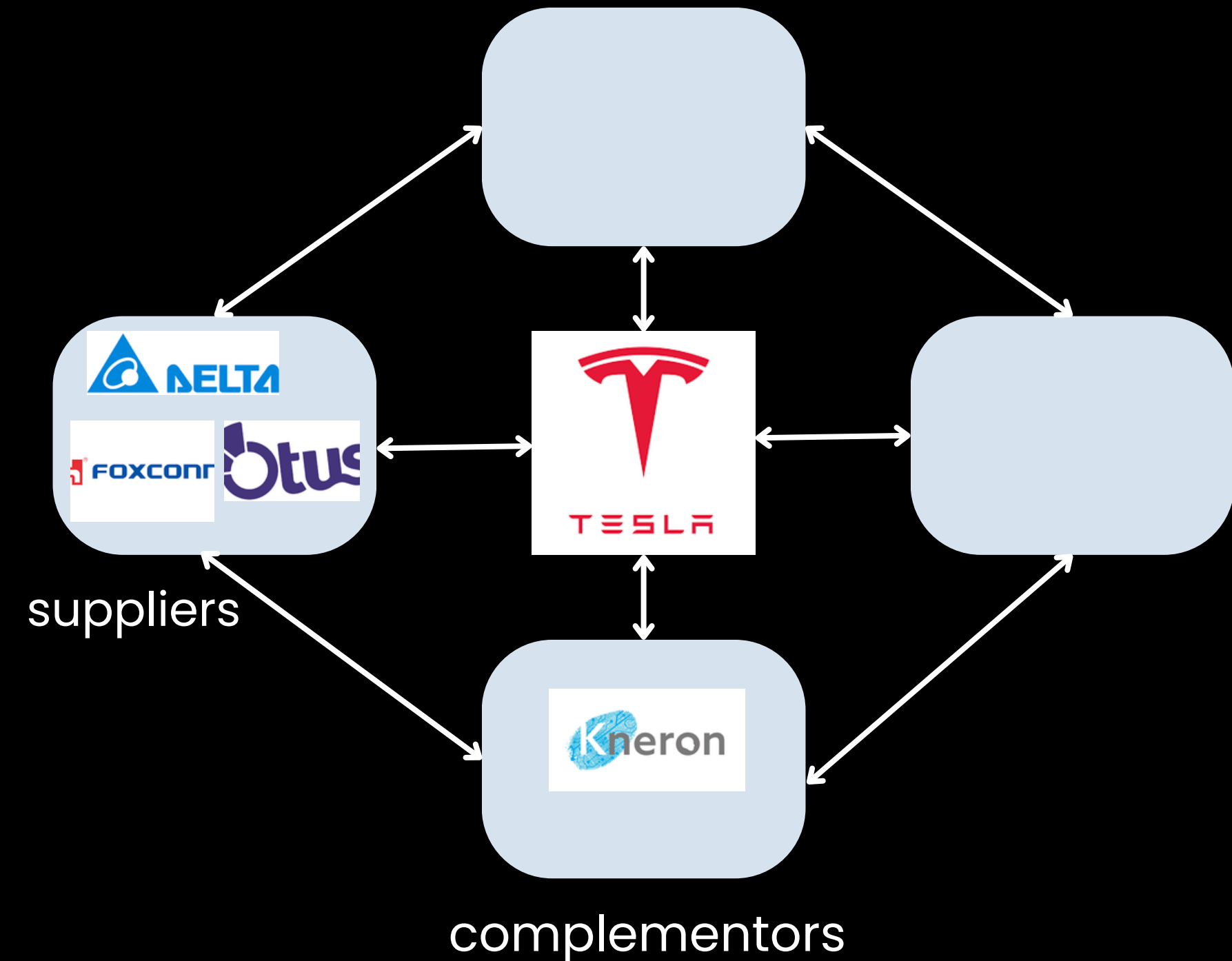
Gives access to talent, as well as expertise in hardware and software

To monitor the development progress of Optimus and test it in both controlled and unstructured environments

Co-opetition Model

CHANGING THE PLAYERS:

- Tesla could collaborate with tech companies and research institutions to advance robotics technology.
- By partnering with companies that specialize in AI, sensors, or materials, Tesla can leverage their expertise while still maintaining a competitive edge in the final product.

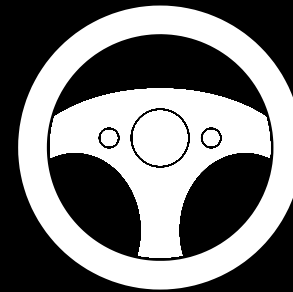


Tesla should release it's autonomous vehicles, and start deployment of the bot in specific industries – **Horizon 2 (3–4 years)**



What?

Introduce Fully Self-Driving vehicles in the US market



Launch Optimus and partner with companies like Walmart and Target



Establish a continuous ethical impact assessment process to monitor the societal implications of Optimus's deployment.



Why?

To continuously innovate and maintain leadership in the EV industry

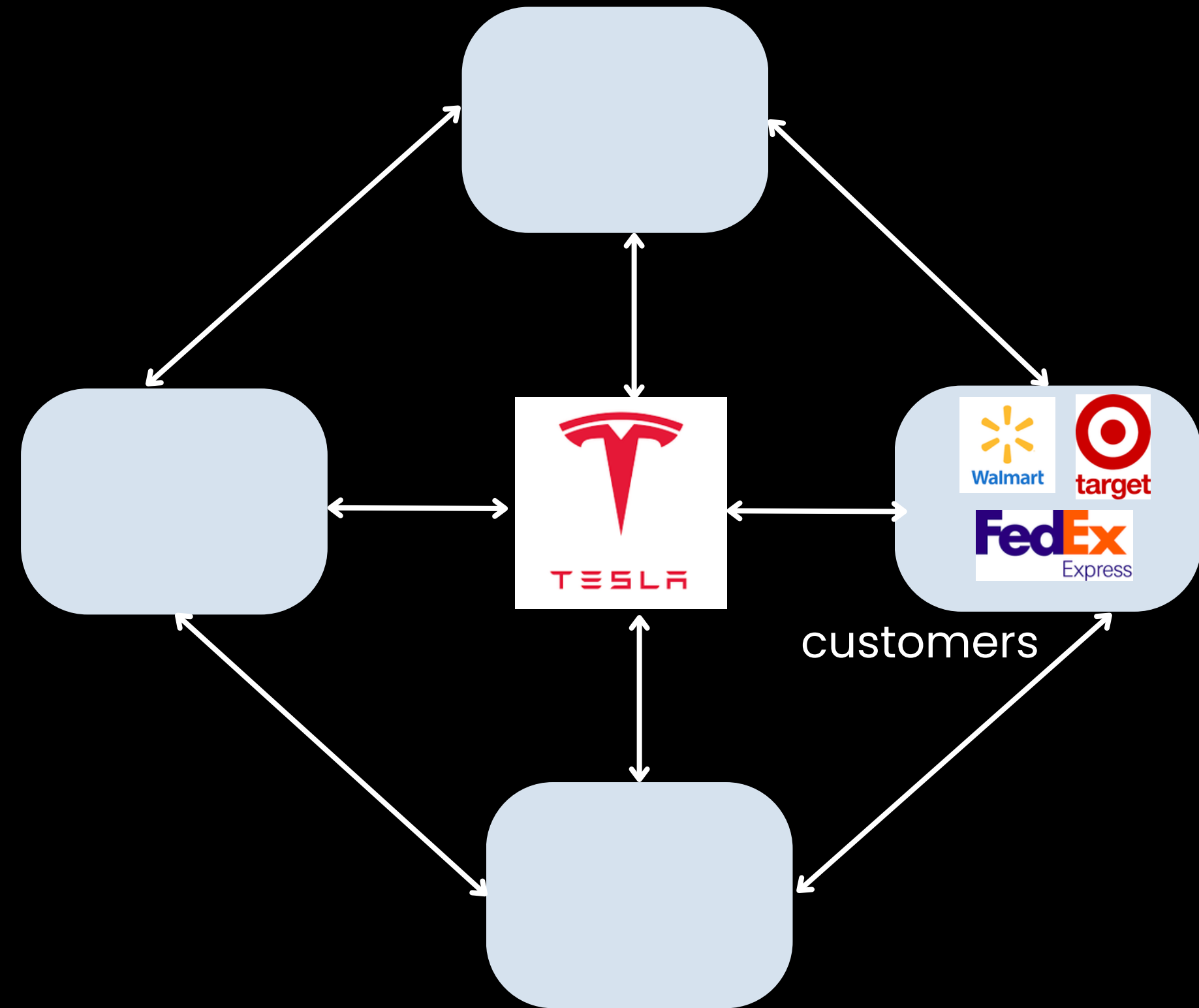
Start deployment of the Optimus Bot in warehouses to establish the capabilities of the bot

To continuously improve and innovate Optimus to make it more socially acceptable and accessible

Co-opetition Model

APPLYING TACTICS TO SHAPE PLAYER PERCEPTIONS OF THE GAME:

- Tesla could use its brand reputation to shape perceptions of humanoid robots, emphasizing their safety, utility, and necessity in modern life.
- By showcasing high-profile use cases of Optimus, Tesla can alter public perception and create a sense of inevitability about the role of robots in society.



Tesla's longterm roadmap: Expand into diverse industries and create a sales ecosystem - **Horizon 3 (5-7 years)**

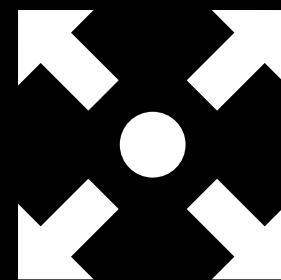
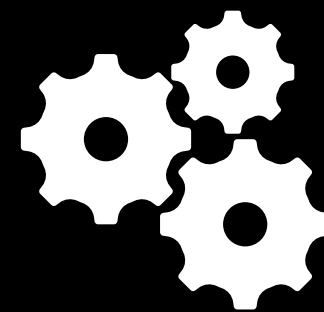


What?

Using Optimus bots to recycle Tesla EV batteries

Diversify the application of robotic technology – manufacturing, construction, chemical industries etc.

Innovate how robots are sold or leased to consumers, offering subscription models or robot-as-a-service



Why?

This would help Tesla to reduce its environmental impact and create a closed-loop supply chain for its EV batteries.

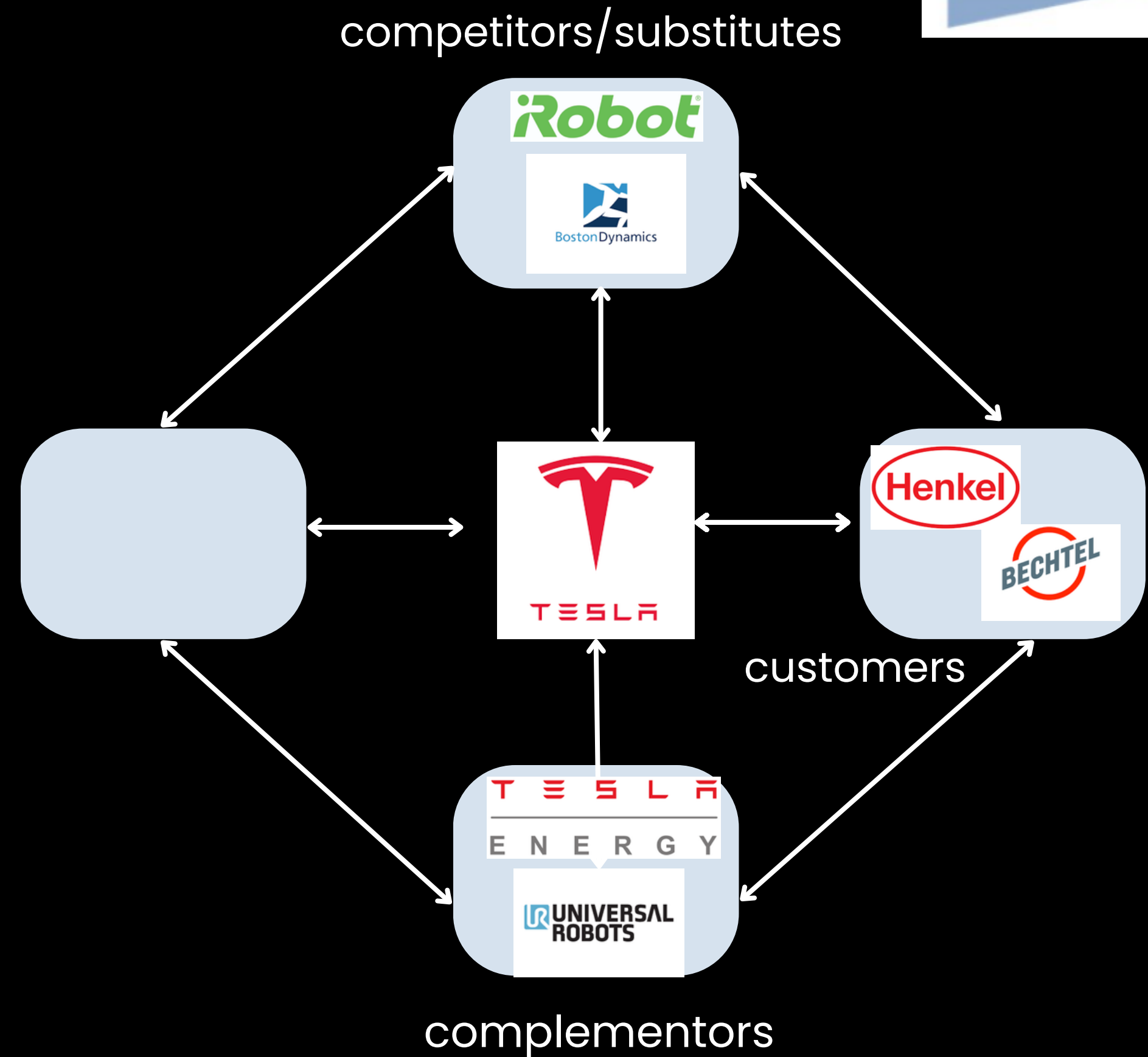
To perform dangerous activities that are unsafe for humans– it will alleviate fears of job displacement leading to societal acceptance

To create a comprehensive marketplaces to streamlines the sales ecosystems for customers

Co-opetition Model

CREATING ADDED VALUE:

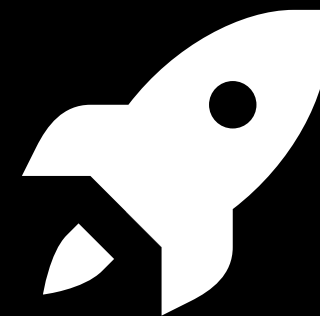
- Tesla can develop the Optimus to perform tasks in environments that are unsafe for humans.
- They could also innovate in how robots are sold or leased to consumers, offering subscription models or robot-as-a-service, which could disrupt traditional sales models.



Even longer term strategy: Shoot for the stars!

What?

Collaborate with SpaceX to explore opportunities in space – build habitable colonies, perform experiments and other dangerous activities



Why?

To go where no man has gone before

THANK YOU!

APPENDIX

TESLA'S JOURNEY: FROM EV'S AND ENERGY STORAGE TO BOTS



Early Years and the Roadster (2003-2008)

- Tesla Motors is founded in 2003
- The company develops the Tesla Roadster, a high-performance electric sports car.
- The Roadster is launched in 2008 and receives critical acclaim.

Model S Development and Expansion (2009-2012)

- Tesla unveils the Model S, a luxury electric sedan.
- The Model S offers a spacious interior, long range, and impressive performance.
- The Model S officially launches in 2012 and receives widespread praise.

Model X Launch and Autopilot Introduction (2012-2015)

- Tesla expands its product line with the Model X, a luxury SUV.
- The company introduces its Autopilot semi-autonomous driving system.
- Tesla begins construction of its Gigafactory, a massive battery production facility.

Model 3 Launch and Expansion into Mass Market (2015-2017)

- Tesla expands its product line Model 3, with battery electric luxury sedan.
- The company enters the solar power market announcing product lines to power homes and business.
- Tesla Motors changed its name to Tesla, Inc

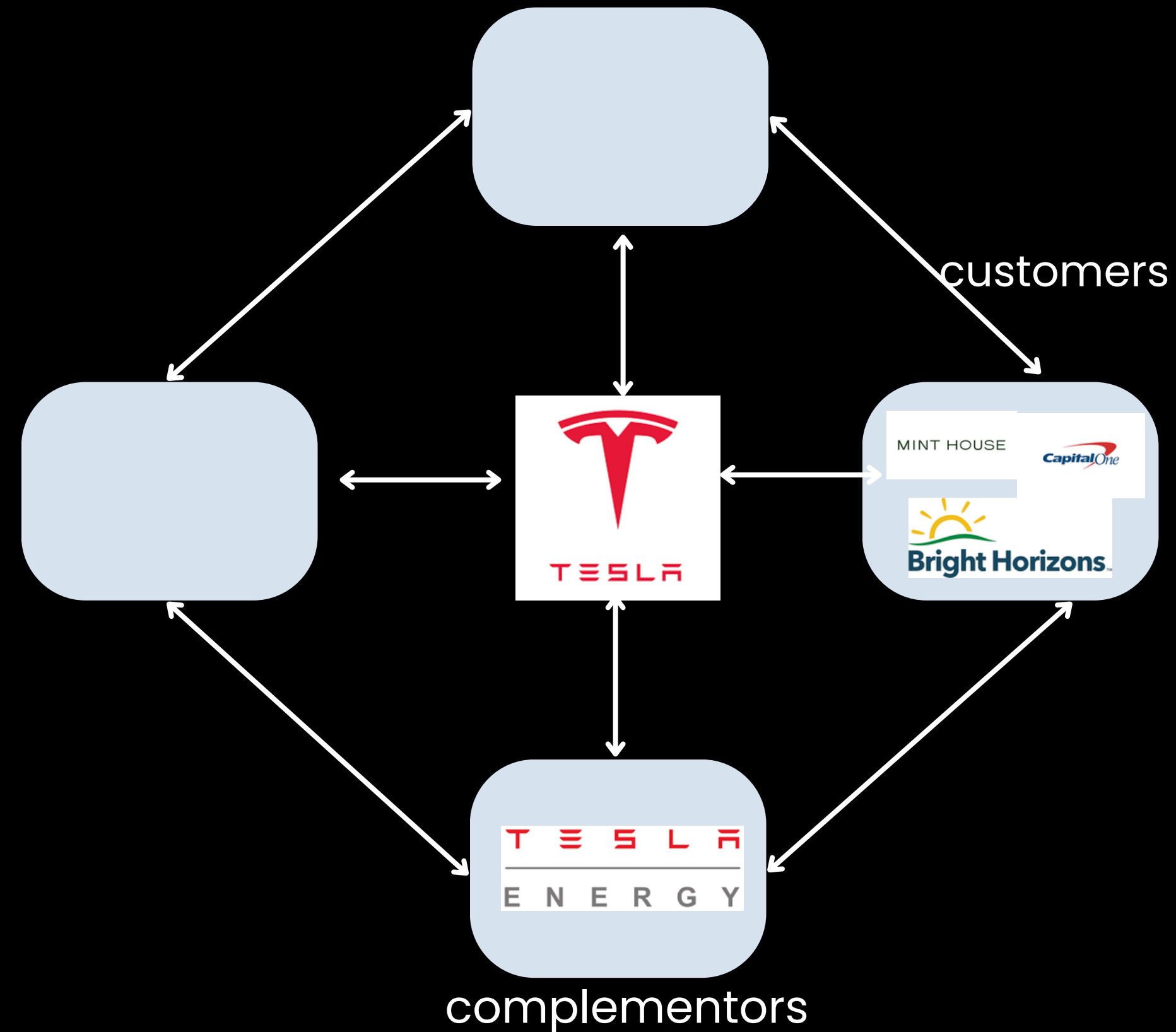
Continued Innovation and Expansion (2020-2023 and Beyond)

- Tesla introduces the Model Y, a crossover SUV based on the Model 3 platform.
- The company unveils the Cybertruck, an electric pickup truck.
- Tesla continues to develop its software, introducing new features like Navigate on Autopilot.

Co-opetition Model

CHANGING THE SCOPE OF THE GAME:

- Tesla can expand the scope of the robotics market by positioning Optimus as not just a tool for automation but as an integral part of the future smart home ecosystem, interconnected with other Tesla products.
- They could also explore new markets, such as healthcare or hospitality, where humanoid robots have not yet been significantly adopted.



*empty boxes indicate no change