



TAMIM

GLOBAL MOBILITY & SEMICONDUCTORS

Presented by Ryan Mahon
Global Mobility Portfolio Manager

JUNE 2024






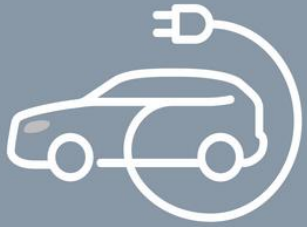



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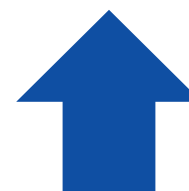
Disclaimer





Our Investment Platform

EQUITIES				OTHER ASSET CLASSES		
AUSTRALIAN		GLOBAL		PROPERTY		PRIVATE DEBT
 AUSTRALIA ALL CAP	 SMALL CAP INCOME	 GLOBAL HIGH CONVICTION	 GLOBAL MOBILITY	 TAMIM PROPERTY	 LISTED PROPERTY	 TAMIM CREDIT FUND



-
1. A Technology Revolution
 2. Multiple Ways to Invest
 3. Why Now?
 4. Trend Acceleration – EV Adoption
 5. Tesla is Not a Car Company
 6. Investing Along the Path
 7. Supply Chain Buildout
 8. Semiconductors are the New Oil
 9. Mineral Demand Inflicting
 10. ROBOTAXI Model
 11. Robot + LLM = Human-like
 12. Top Picks for 2024+

Discussion Points

A Technology Revolution

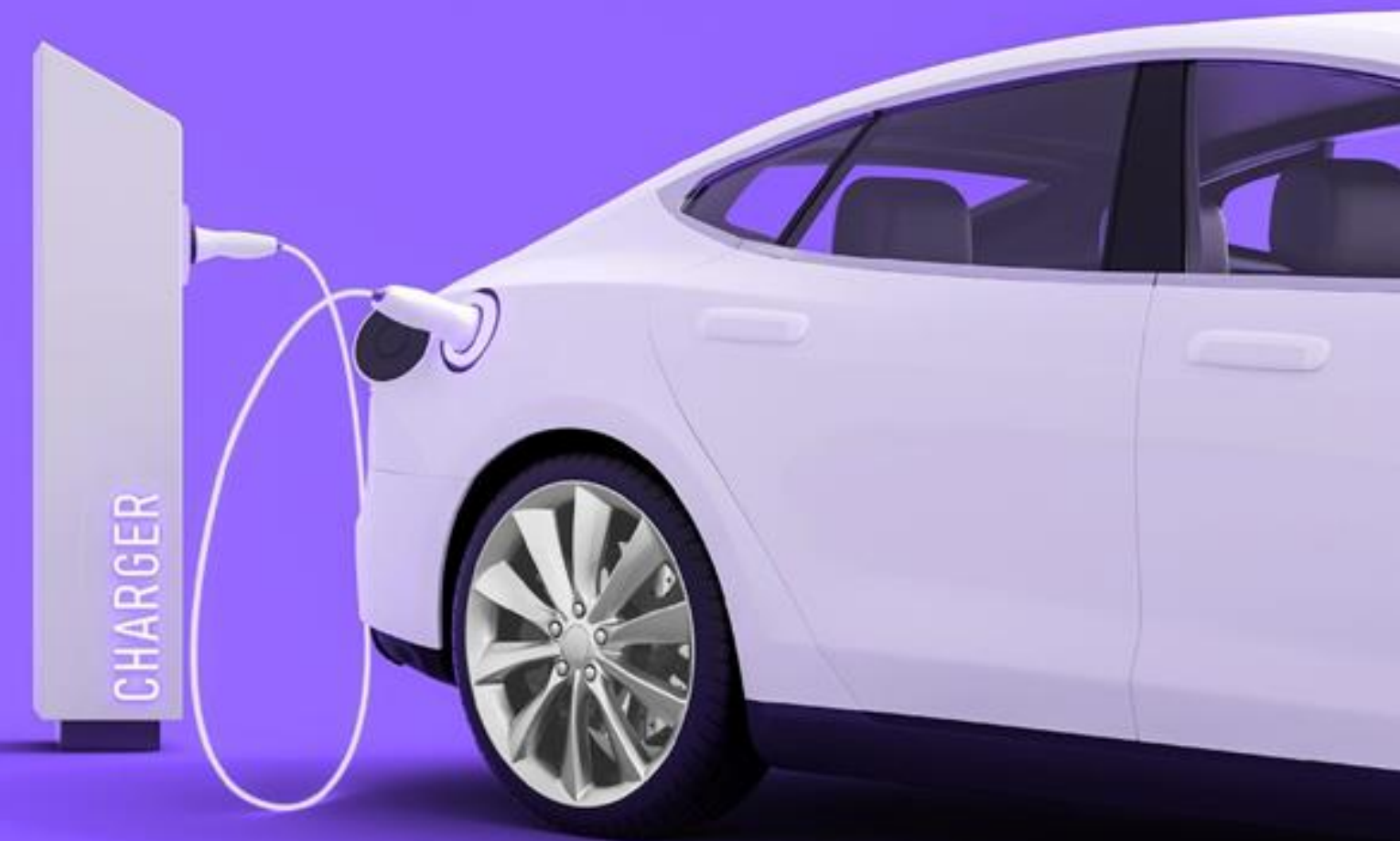
\$8-10 Trillion Opportunity¹



Historic Industry Creation



Historic Industry Destruction



¹ Michael Wayland. "GM's Cruise values autonomous vehicle industry at \$8 trillion" CNBC, 5 February 2020 <https://www.cnbc.com/2020/02/05/gms-cruise-values-autonomous-vehicle-industry-at-8-trillion.html>

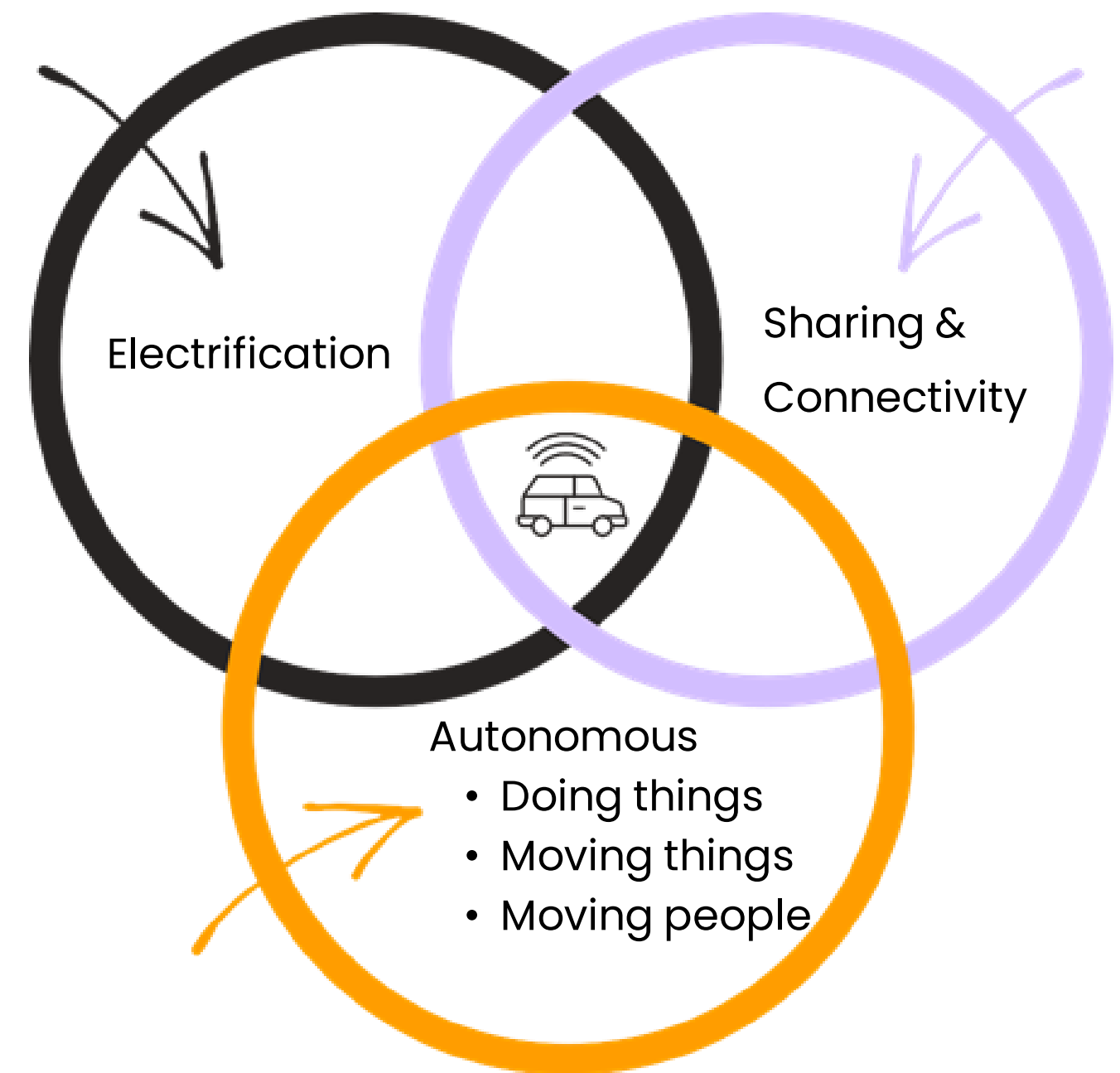
Mark Phelan, "Detroit leads, Tesla lags in trillion-dollar face for robot-car business" Detroit Free Press, 13 March 2019 <https://www.freep.com/story/money/cars/mark-phelan/2019/03/13/waymo-ford-chrysler-apple-tesla-autonomous-car/3142974002/>

Multiple Ways to Win

OUR APPROACH

- Capitalising on the Path – Building Blocks for the Future of Mobility.
- The pillars are not mutually exclusive, but overlapping, synergistic, and collectively “constructing” the expected

8–10 Trillion Revolution¹



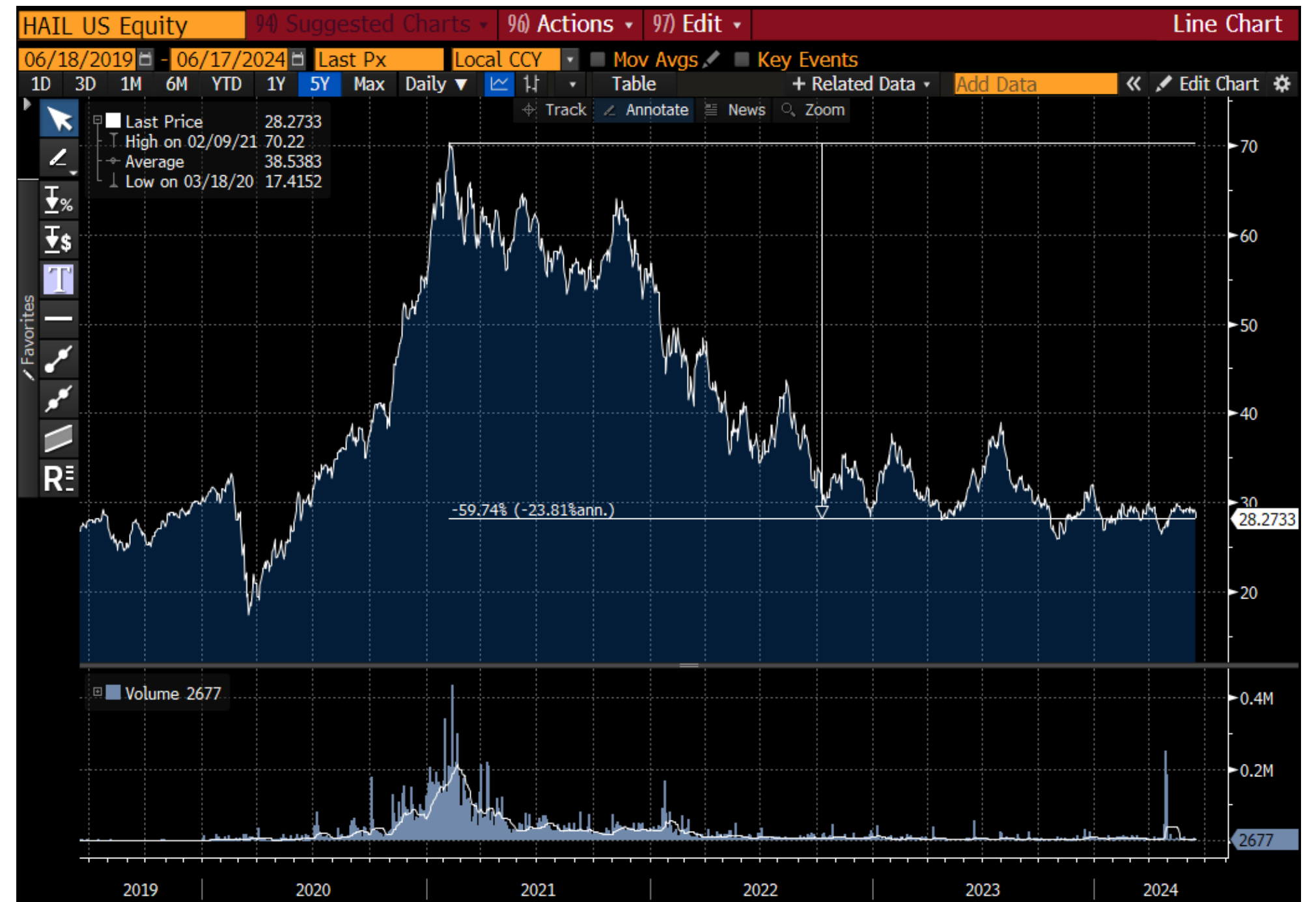
¹ Michael Wayland. “GM’s Cruise values autonomous vehicle industry at \$8 trillion” CNBC, 5 February 2020

Mark Phelan, “Detroit leads, Tesla lags in trillion-dollar face for robot-car business” Detroit Free Press, 13 March 2019

Why Now?

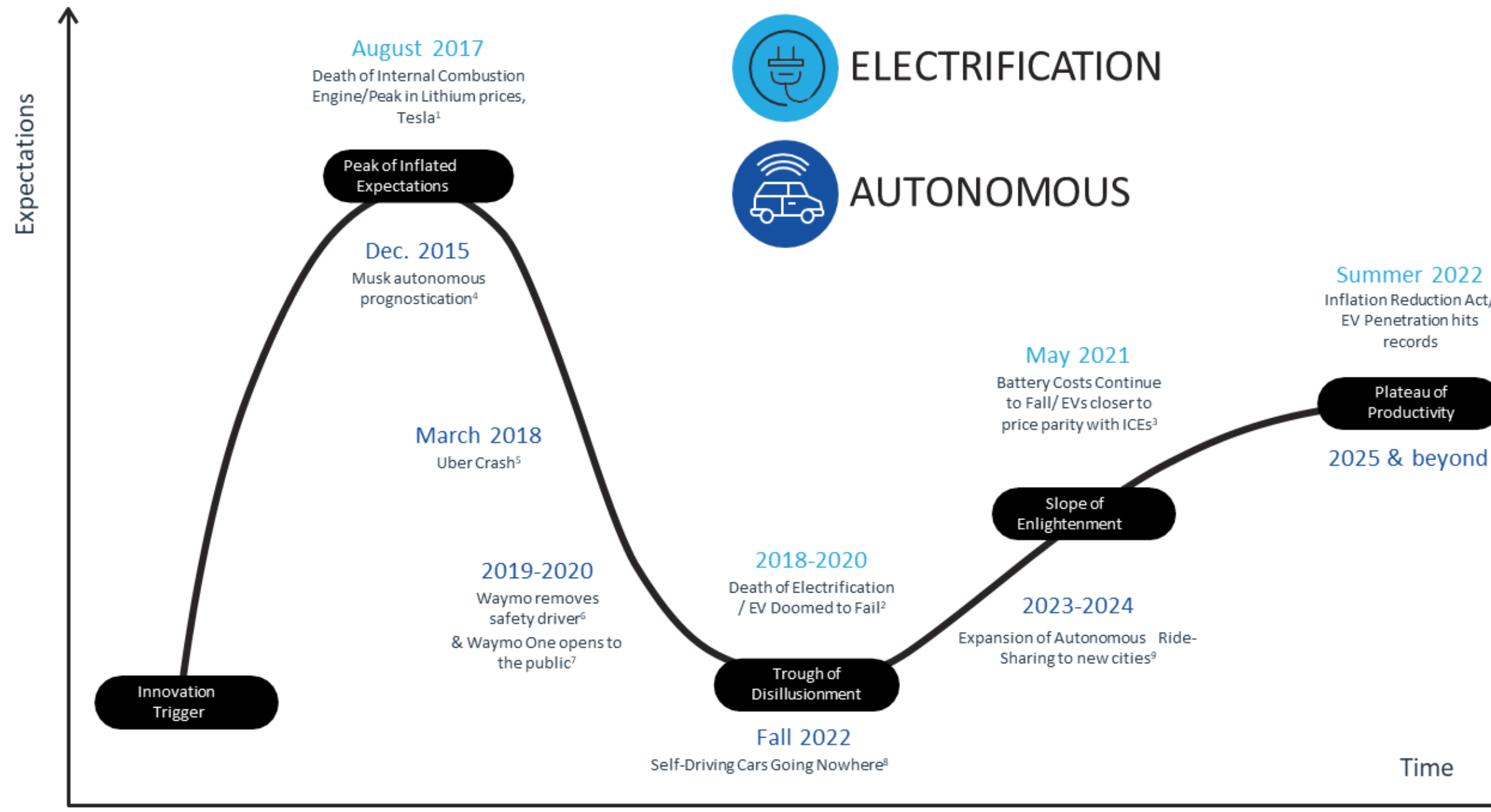
What makes us believe this is such an interesting moment for investment?

- *Higher conviction in themes*
- Mobility Universe *~bottoming*₁
- Interest rates *~peaking*₂
- Momentum *building* since *~November 2023*



1. Using HAIL as a proxy for Mobility Universe. Calculation done using data provided by Bloomberg. Data as of June 15, 2024. Data compares the highest price of HAIL over a 4-year span against the price on June 14, 2024. HAIL is an actively managed Exchange Traded Fund (ETF) that invests in domestic and foreign equity securities of companies that are relevant to the investment theme of "mobility innovation – a similar strategy to that of the Fund: investing in next generation technologies, notably mobility, via themes such as automation and electrification. There can be no guarantee that the performance of the Fund will mirror the performance of HAIL for any period.
2. <https://www.reuters.com/markets/europe/ecb-begin-cutting-rates-even-inflation-fight-continues-2024-06-05/>

Why Now?



1.The Death of the Internal Combustion Engine (The Economist)
 2.What's Happened to US Electric Vehicle Sales? (Forbes)
 3.Behind the Three Decade Collapse of Lithium-Ion Battery Costs (IEEE)
 4.Elon Musk Says Tesla Vehicles Will Drive Themselves in Two Years (Fortune)
 5.Self-Driving Uber Car Kills Pedestrian in Arizona, Where Robots Roam (NYTimes)
 6.Waymo is telling customers it will start offering rides in its autonomous cars without safety drivers (Business Insider)

7.Waymo is opening its fully driverless service to the general public in Phoenix (Waymo)
 8.Even After \$100 Billion, Self Driving Cars Are Going Nowhere (Bloomberg)
 9.Cruise Announces Expansion to Phoenix and Austin And More Plans (Forbes)
 10.By The Numbers (The White House)
 11.Global EV sales up 63% in H1 2022, with 57% of vehicles sold in Mainland China (Canalys)



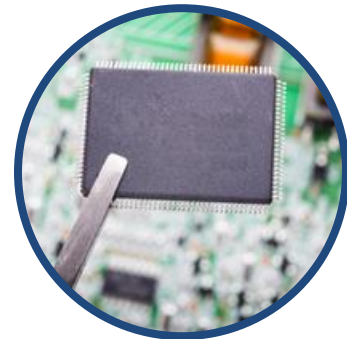
COVID-19



Russia/Ukraine



China/Taiwan



CHIPS+
Act



Inflation
Reduction Act



European
Energy Stimulus



Bill to incentivise the
reshoring of the
semiconductor supply
chain, notably
manufacturing

An Energy &
Transportation bill, with
particular incentives for
EV infrastructure and
purchases

Energy subsidies to
consumers and businesses,
along with a step up of
spending on Energy &
Defense

Trend Acceleration

EV Adoption Is Accelerating Globally

As EV sales grow, ICE sales decline. It's zero-sum in no-growth unit market. We are at kink in the S-curve for EV adoption.

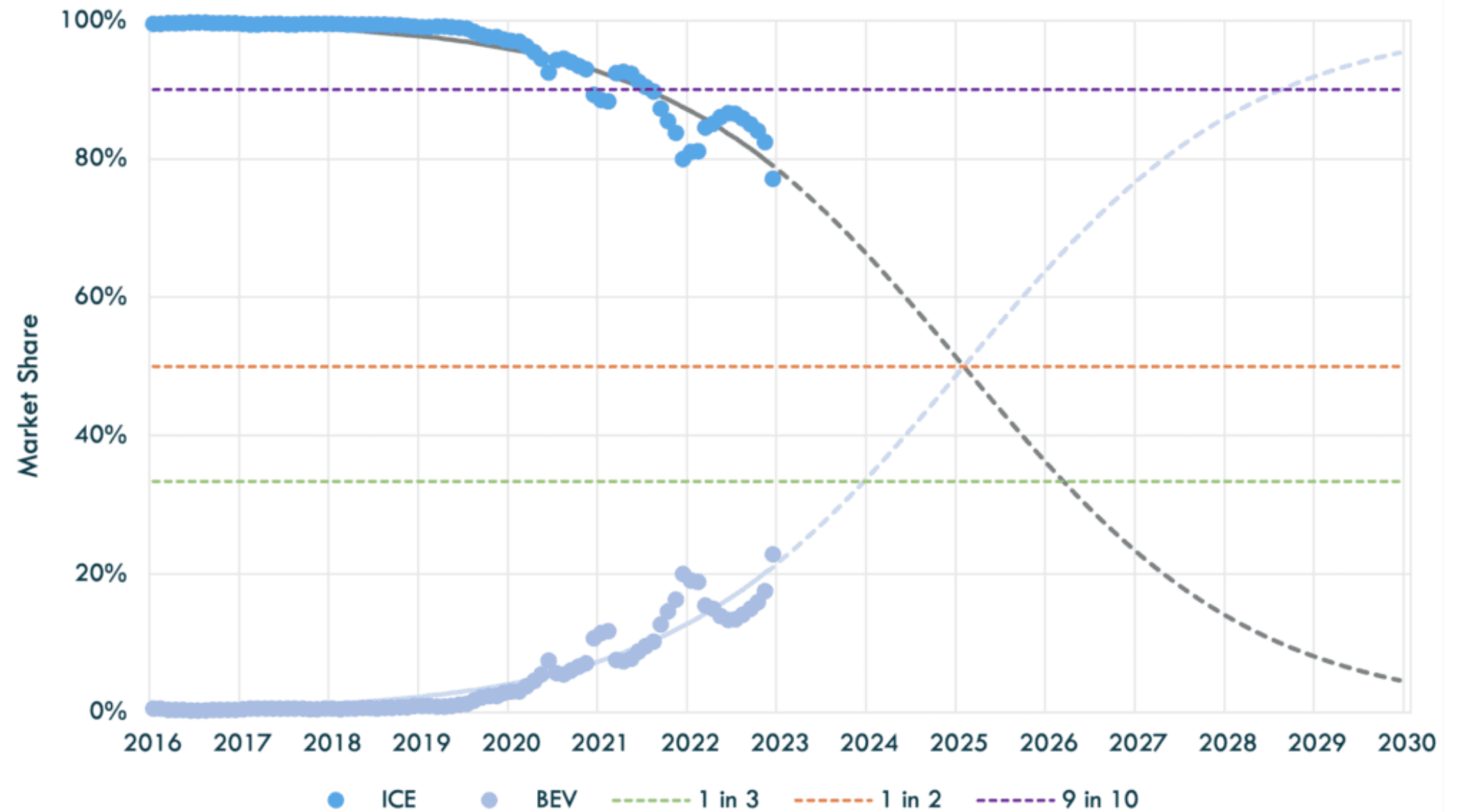
Exposure Example (+)

TESLA

Exposure Example (-)



UK New Vehicle Sales – BEV and ICE Market Share – Adoption S-Curves



ELECTRIC VEHICLES REACHING COST PARITY

Tesla's two best selling models are now cheaper than the average internal combustion engine car.



Tesla Model 3



Tesla Model Y

Elon Musk's Price War

How Tesla's top sellers have compared to the average new car in the US



Data: Tesla.com, Bloomberg Intelligence, Edmunds Note: Differential shows the price of each Tesla base model minus the average price paid for a new car in the US.

TESLA, NVIDIA, & AUTONOMOUS DRIVING

yahoo!finance



<https://youtu.be/sqYpsecsCdOc?si=j6VWR8d-UiVHq96b>

NEWS

Cathie Wood Sets 5-Year Expectation For Tesla Stock At \$2,600 Per Share

[f](#) [t](#) [in](#) [e](#) Licensing

KIT NORTON | 04:03 PM ET 06/12/2024

Cathie Wood and her Ark Invest firm updated its Tesla (TSLA) stock price target to 2,600 by 2029 on Wednesday, the day before the EV company holds its annual shareholder meeting with a key vote on Chief Executive Elon Musk's \$56 billion 2018 compensation package. TSLA shares advanced Wednesday.

<https://www.investors.com/news/cathie-wood-tesla-stock-best-case-scenario/>

TESLA IS NOT A CAR COMPANY

Source: <https://www.youtube.com/watch?v=dzcIVbyNDLk>



Semiconductors and
Semiconductor Equipment

Battery Materials
and Components

Rare Earth
Elements

Telecommunications
Infrastructure



INVESTING ALONG THE PATH TO ELECTRIFICATION

Supply Chain Buildout has Begun

Exposure Example (+)

TERADYNE

A feast of chips and greens

United States, manufacturing investments announced*, 2021-22, \$bn

- Semiconductor factories
- Electric vehicles & battery plants
- Other†

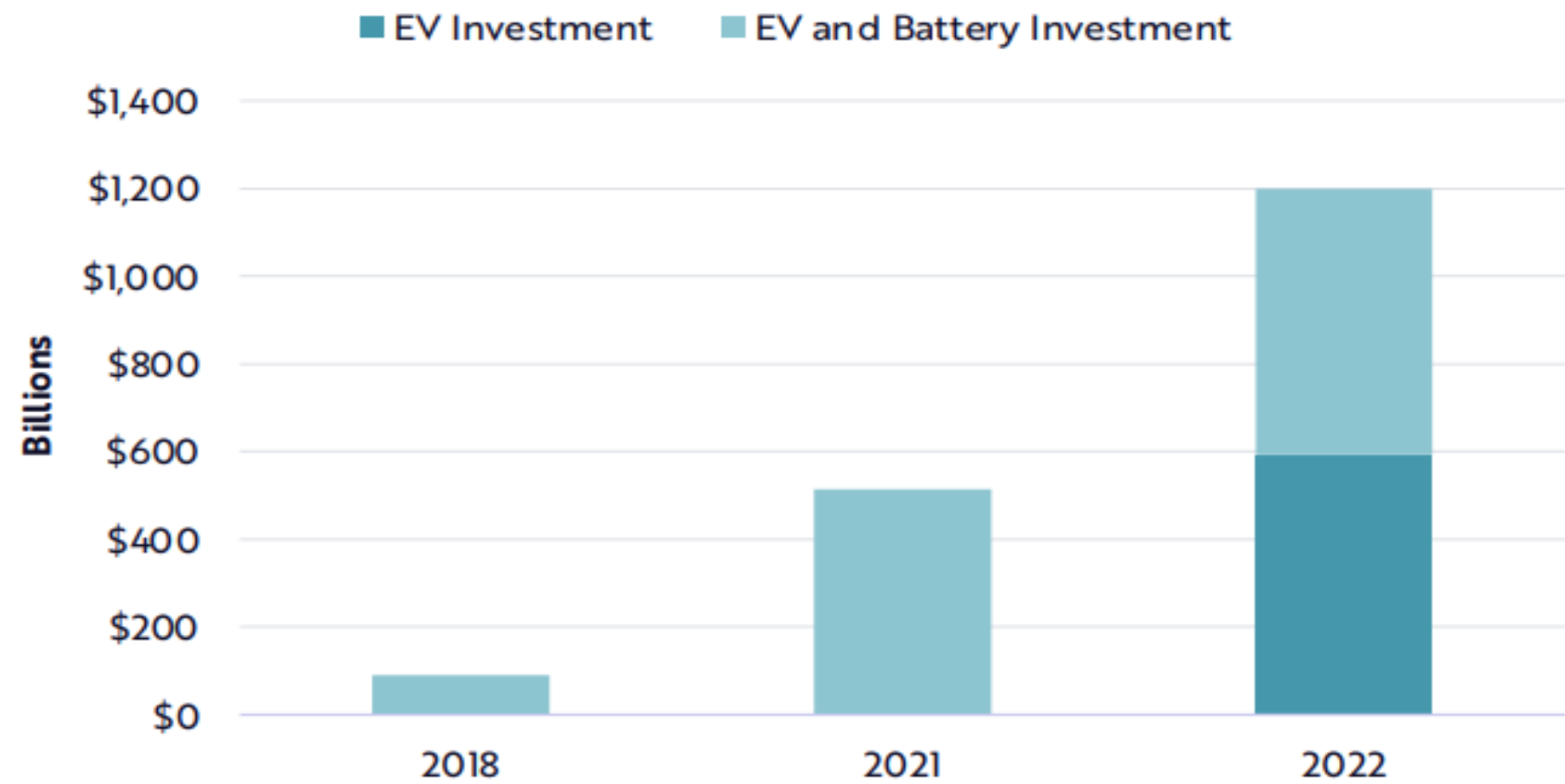


*Over \$1bn

†Clean energy, heavy industry and biomanufacturing

Source: White House

Global Automaker Investment Plans for Electric Vehicles and Batteries Over The Next Ten Years



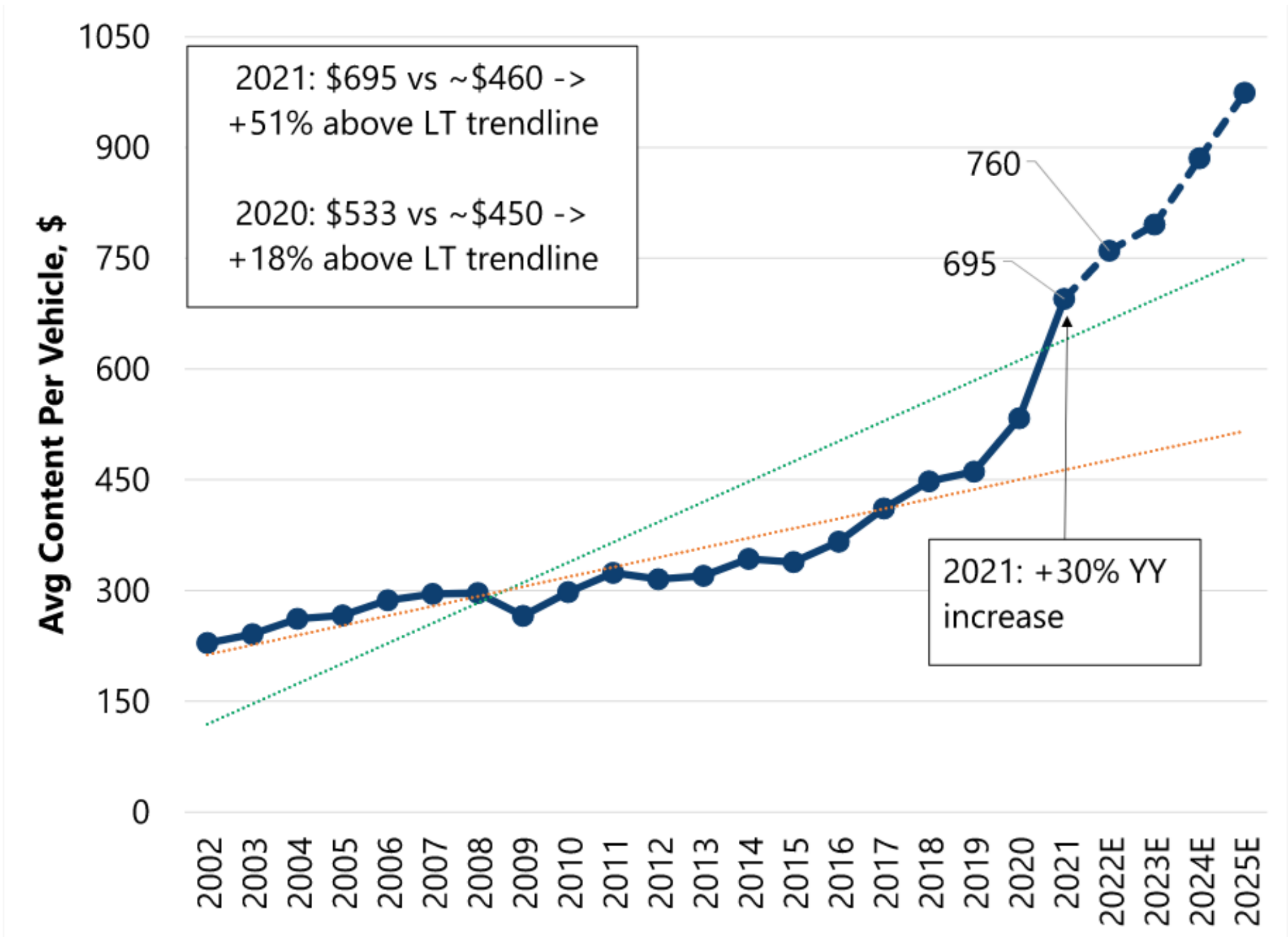
The Economist



Source: America's government is spending lavishly to revive manufacturing (2023) The Economist. <https://www.economist.com/briefing/2023/02/02/americas-government-is-spending-lavishly-to-revive-manufacturing>. <https://ark-invest.com/big-ideas-2023/>

Semiconductors are the New Oil

Semiconductor Content per Vehicle



Exposure Example (+)



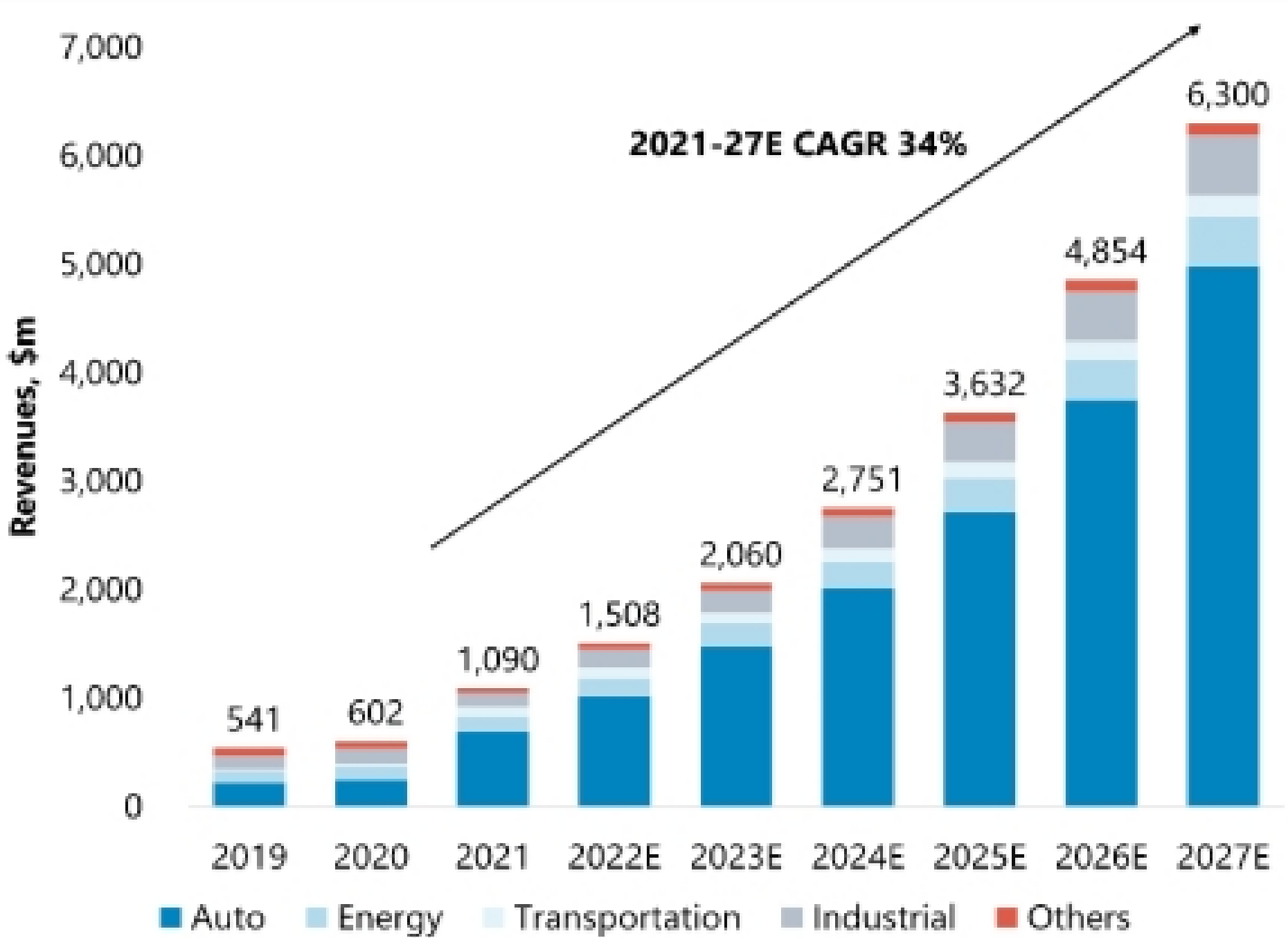
Source: <https://javatar.bluematrix.com/links2/secure/html/24b94371-411b-4c91-9c31-3bef70b400ea>

Semiconductors are the New Oil

Exposure Example (+)



Silicon Carbide (SiC) Market by Application



Source: <https://javatar.bluematrix.com/links2/secure/html/36bea17f-d8d9-43a6-b2a1-c363a2053e39>



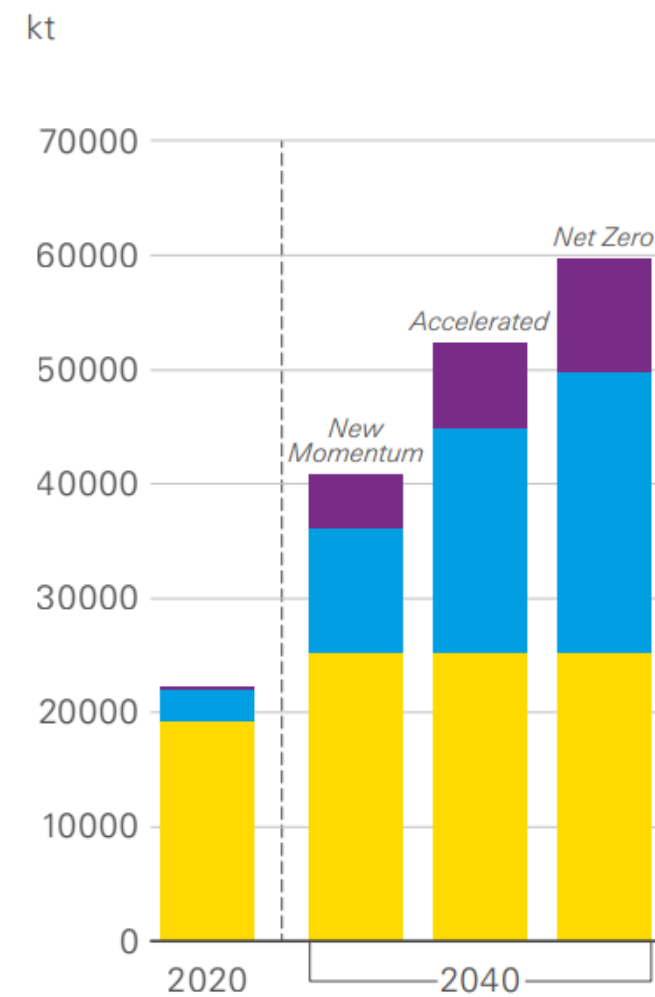
Mineral Demand Inflecting

Exposure Example (+)

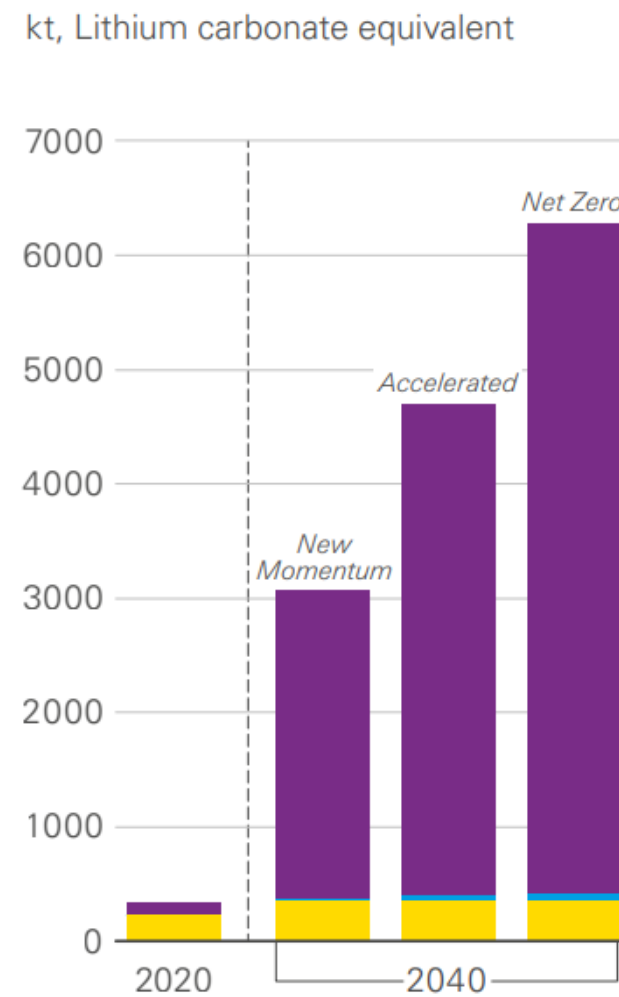
Teck

The energy transition leads to a significant increase in the demand for critical minerals

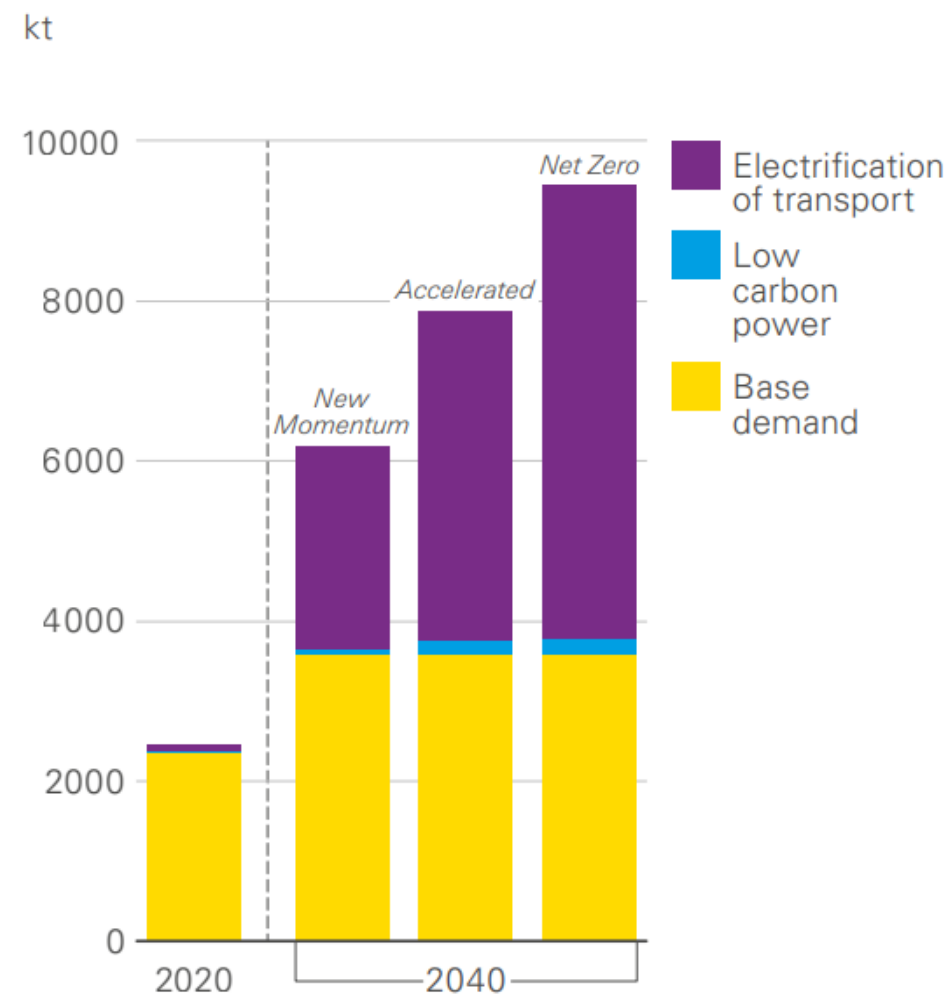
Copper demand



Lithium demand



Nickel demand



- Electrification of transport
- Low carbon power
- Base demand



Lithium Pricing ~Bottoming

Exposure Example (+)



Source: Bloomberg; <https://www.marketwatch.com/story/lithium-royalty-says-prices-may-have-hit-bottom-commodity-comment-a6e43e55>

ROBOTAXI MODEL IS SCALING

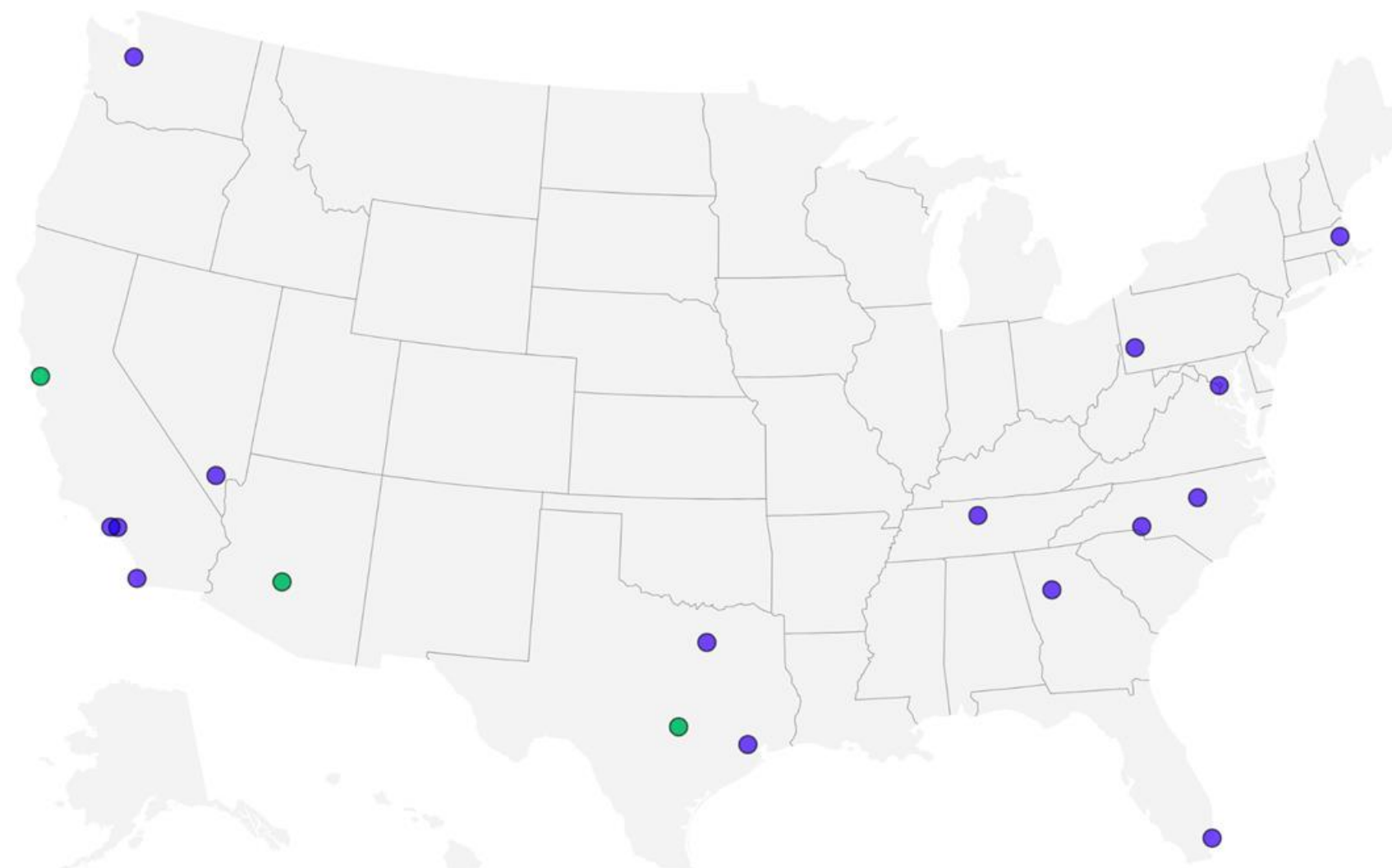
Autonomous vehicles – via the Robotaxi model – are scaling faster than people appreciate

Waymo & Cruise are leading the way in the US, now scaling to multiple cities

Robotaxi rollout, by city

As of Aug. 28, 2023

Operational Testing



And Waymo is now available via the Uber app in Phoenix

Waymo vehicles have been deemed significantly safer than human drivers by a Swiss Re (reinsurer) study

In the 'background,' Tesla has millions of vehicles collecting data on the roads today, and feeding it through their end-to-end algorithm...

**FIGURE 01 + OPENAI
SPEECH-TO-SPEECH REASONING**



ROBOT + LLM = HUMAN-LIKE



Top Picks For 2024+

Hertz



Volkswagen



AutoNation

Top Short Ideas For 2024+

Takeaways – We believe:

The Mobility Universe is ~bottoming¹

Why Now?

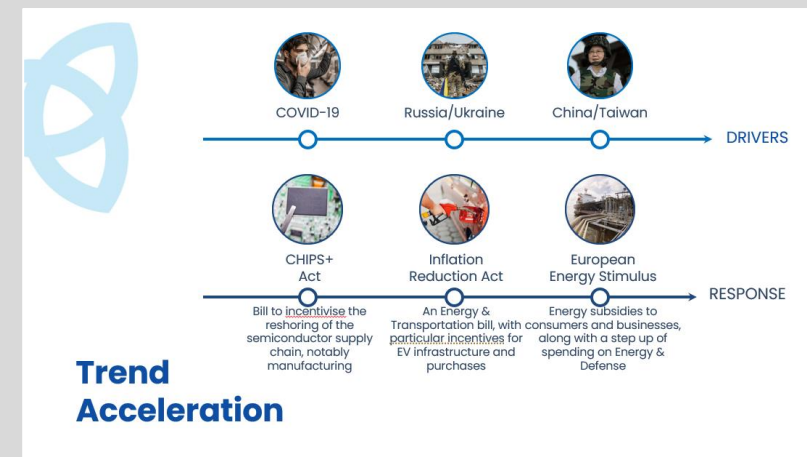
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2. <https://www.investor.com/news/etfs/etf-cutting-risks-when-inflation-high-continues-2024-06-16/>

The trends are accelerating



We've narrowed down the winners

TOP PICKS FOR 2024+

Now is the time...

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PORTFOLIO MANAGER

RYAN MAHON



Ryan Mahon is an investor, technologist, and outdoor enthusiast. Ryan recently founded Aquavis Advisors – an investment advisory firm that acts as the sub-manager for the Tamim Global Mobility Strategy. Prior to that, Ryan ran the Mobility Strategy at Ibex Investors, and worked as a Sector Head (Internet) and Associate Portfolio Manager at Millennium Management and as an Investment Analyst (Global Technology) at Folger Hill Asset Management.

He graduated magna cum laude from Georgetown University, McDonough School of Business, with a BSBA in Finance, Accounting, and Psychology, and is a CFA Charterholder. Born in Cleveland and living in Denver, he loves the outdoors and sports, and is passionate about investing in and applying technology to improve the world and drive sustainability.

TAMIM GLOBAL MOBILITY – KEY FACTS

Investment Structure:	Unlisted unit trust
Minimum investment:	A\$100,000
Applications:	Monthly
Redemptions:	Monthly, with 30 days notice
Unit pricing frequency:	Monthly
Distribution frequency:	Semi-annual
Management fee:	1.50% p.a.
Performance fee:	20% of performance in excess of hurdle
Hurdle:	Greater of: RBA Cash Rate + 2.5% or 4%
Lock up period:	12 months
Buy/Sell Spread:	+0.35%/-0.35%
Exit fee:	Nil
Administration & expense recovery fee:	Up to 0.35%
APIR code:	CTS3757AU

See the Fund's Information Memorandum for more information





TAMIM

www.tamim.com.au

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