



# one

400 FTE

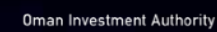
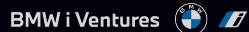
Michigan & California

Our Next Energy

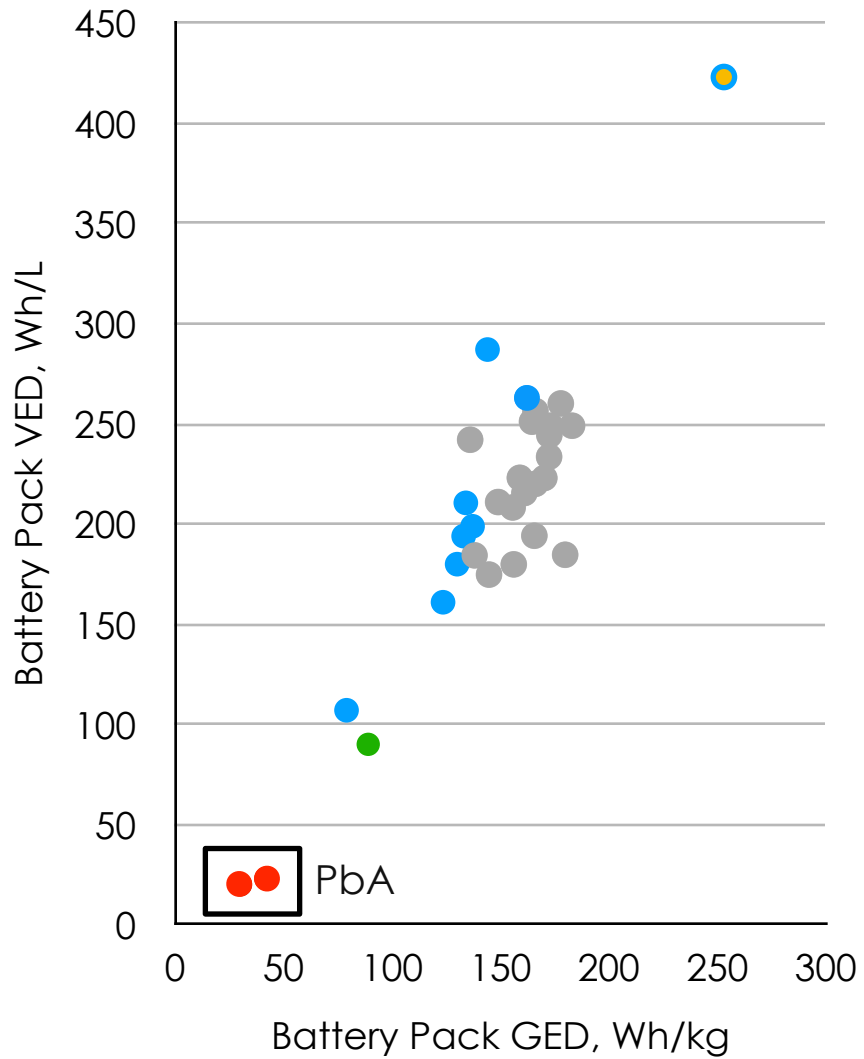
MIT Mobility | Boston, Massachusetts | Nov. 13, 2023

20 GWh

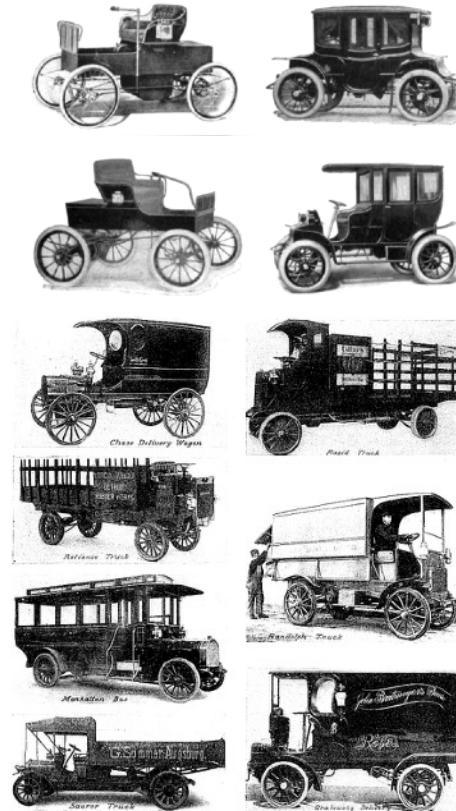
\$1B+ Capital Raised



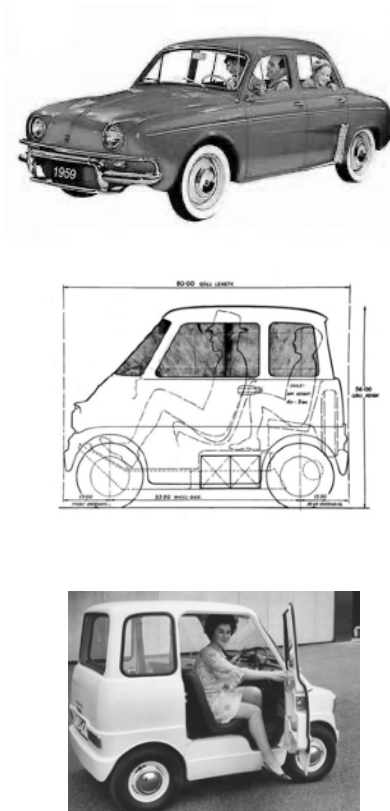
# Lead Acid - The 100 km era



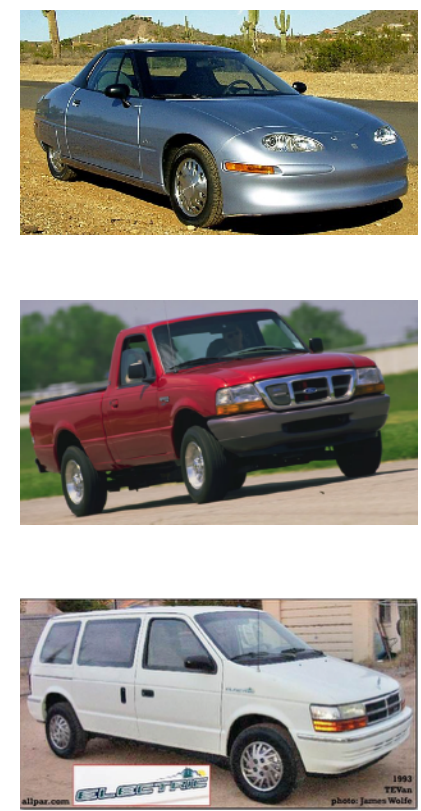
1900-1920



1950-1970

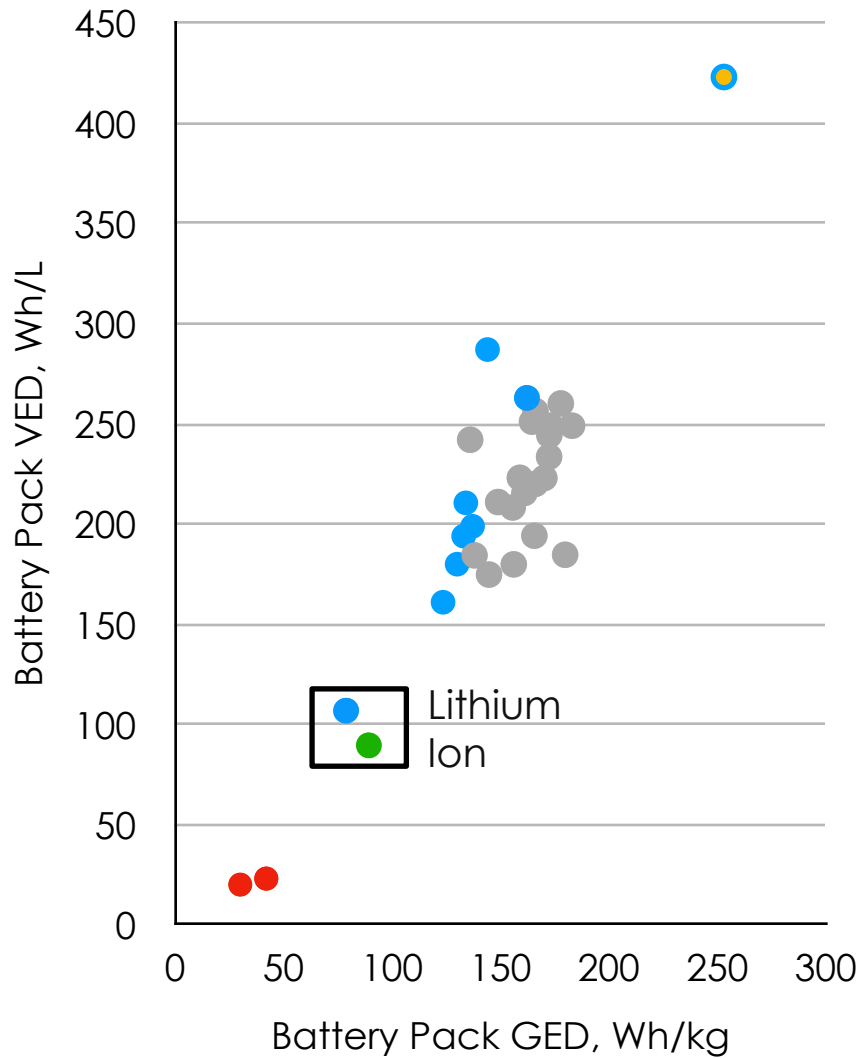


1990-2000



\* Benchmarking Data Source: A2MAC1

# Lithium Ion - 200 km Era



2000 - 2010



GM Spark EV



20 kWh, 110 L, 254 kg



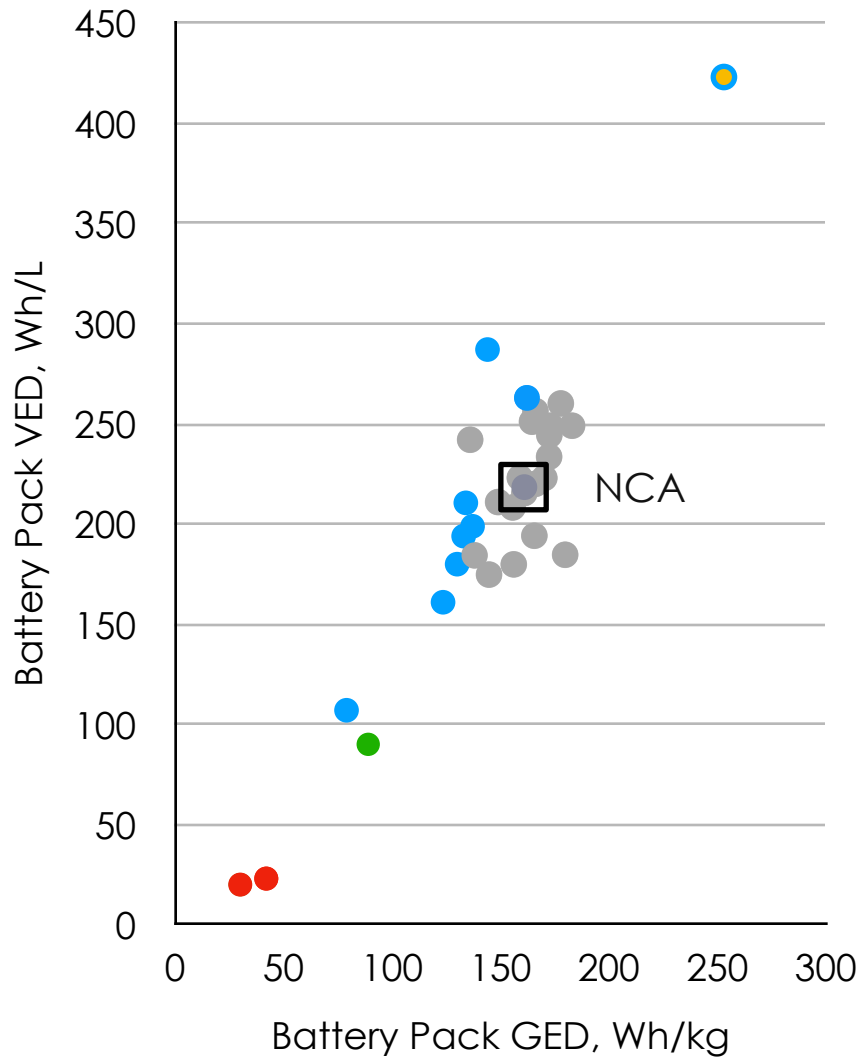
Nissan Leaf



24 kWh, 266 L, 294 kg

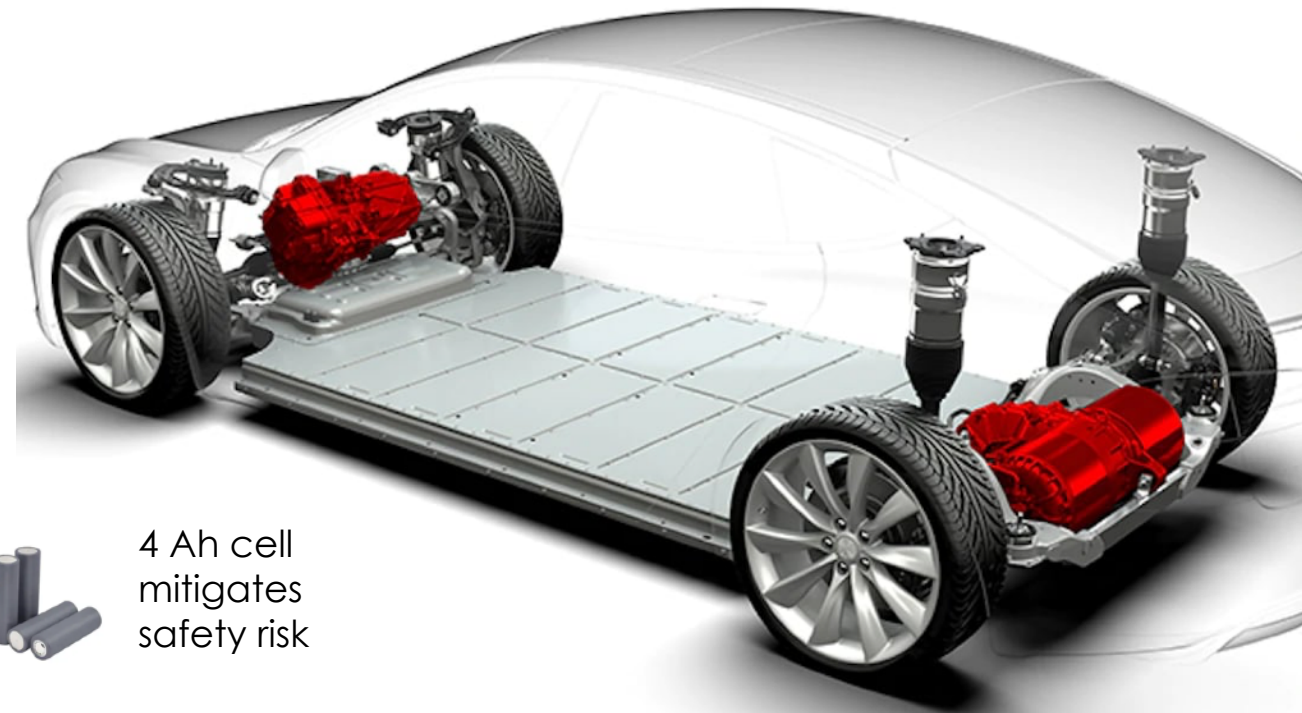
\* Benchmarking Data Source: A2MAC1

# Breakthrough: Platform + Cell VED



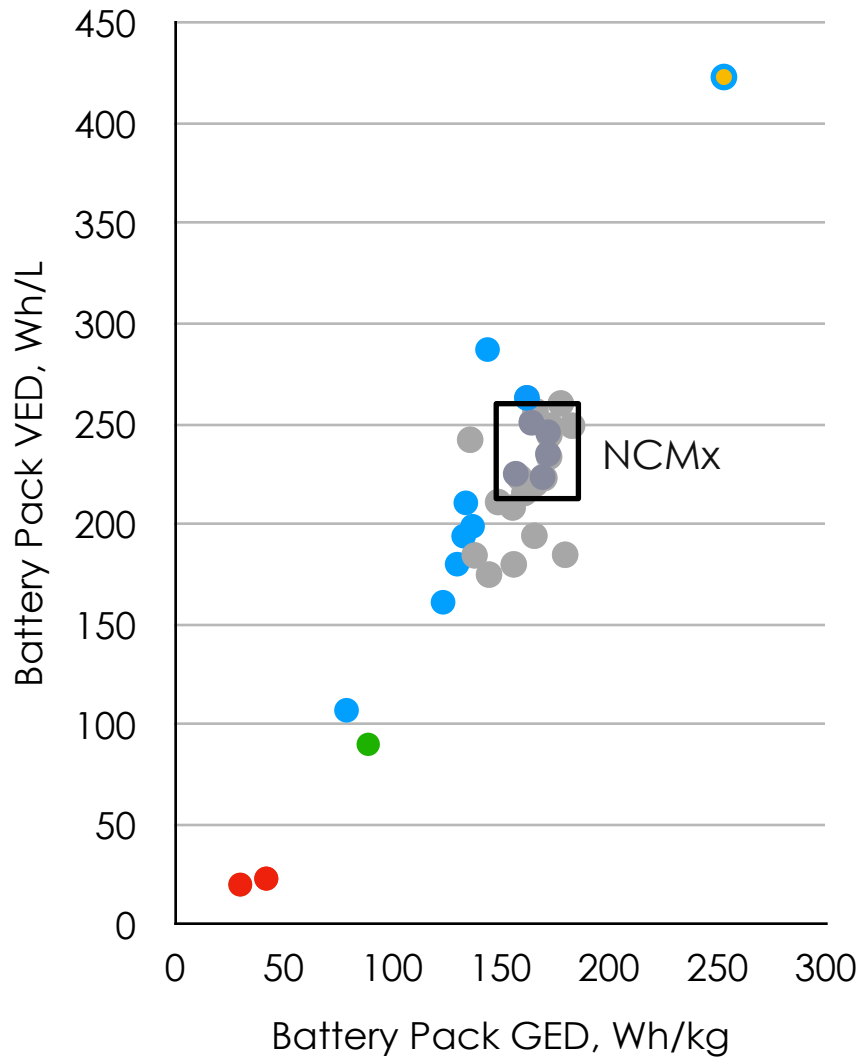
## 2015 - 500 km platform architecture

- Efficient platform ( $C_d=0.21$ )
- Large battery (424 liters, 540 kg)
- High energy chemistry (700 Wh/L)

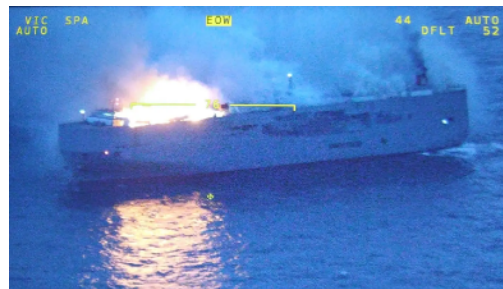


4 Ah cell  
mitigates  
safety risk

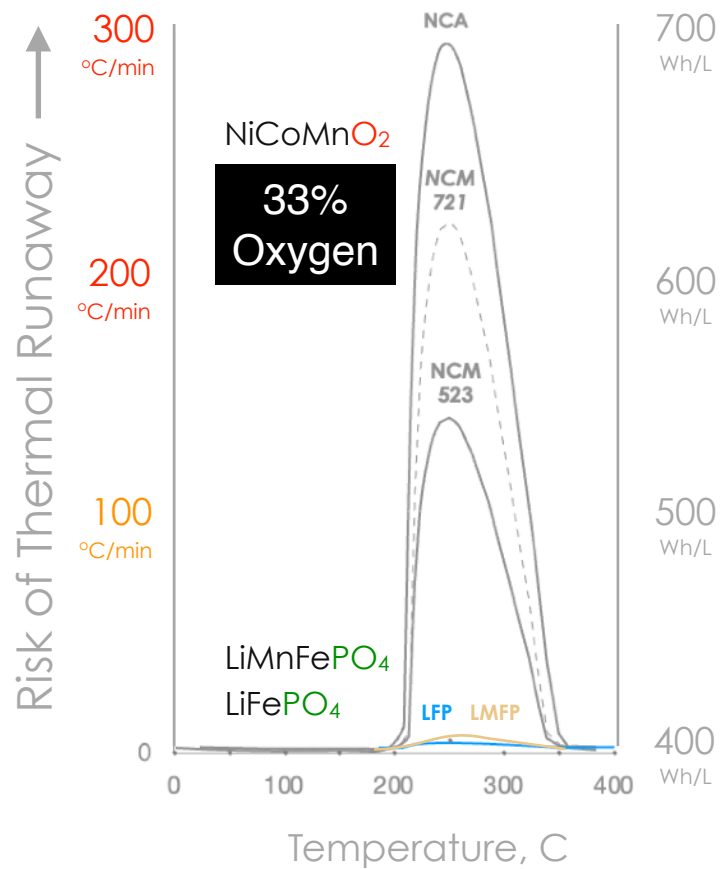
# Recalls: Nickel - Cobalt Thermal Runaway



2020 - 2023: 6 NHTSA recalls due to thermal runaway



# Thermal Runaway: NCM made of 33% O<sub>2</sub>

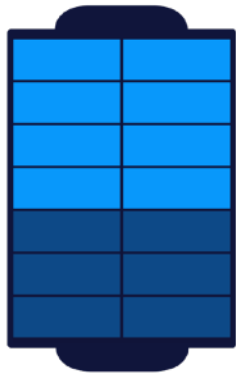


# Mission: Accelerate Electrification



## Range

Double EV range by  
advancing energy density



## Safety

Avoid Nickel & Cobalt  
thermal runaway



## Supply

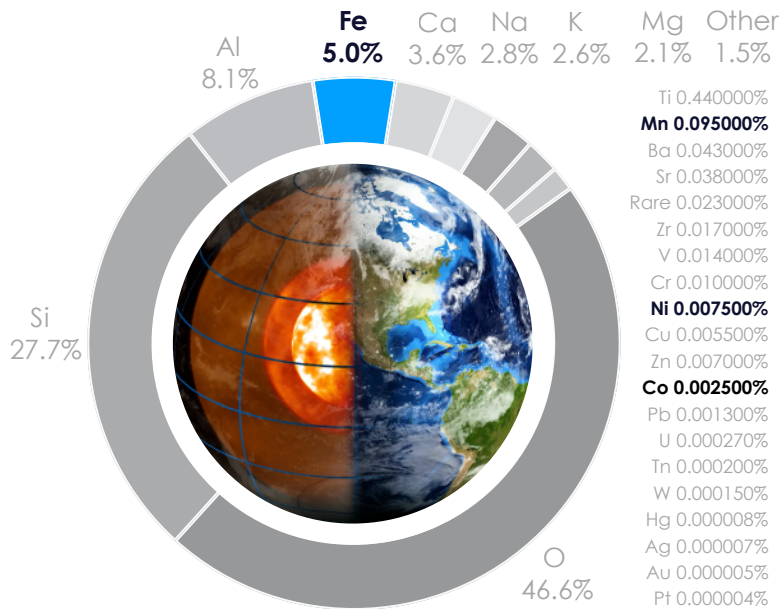
Develop a Sustainable NA  
cell and material supply



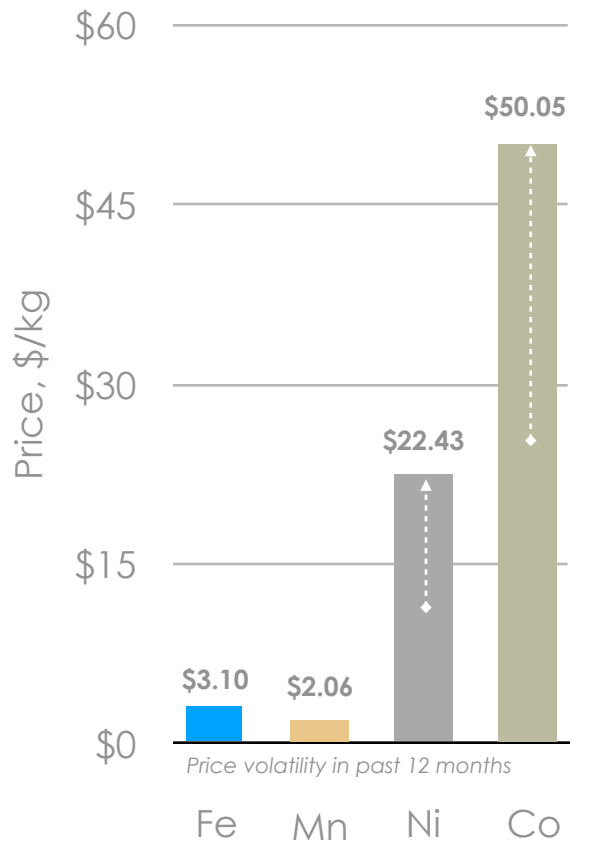
# Strategy: Abundant, sustainable, safe materials



Localized supply chain requires abundant materials

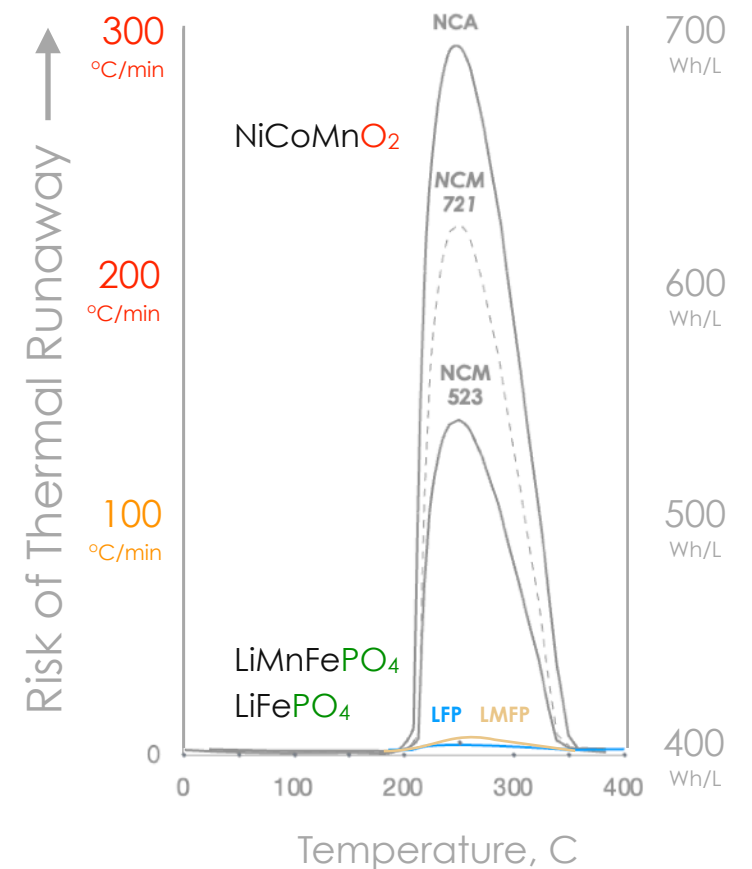


Iron's abundance translates to price stability



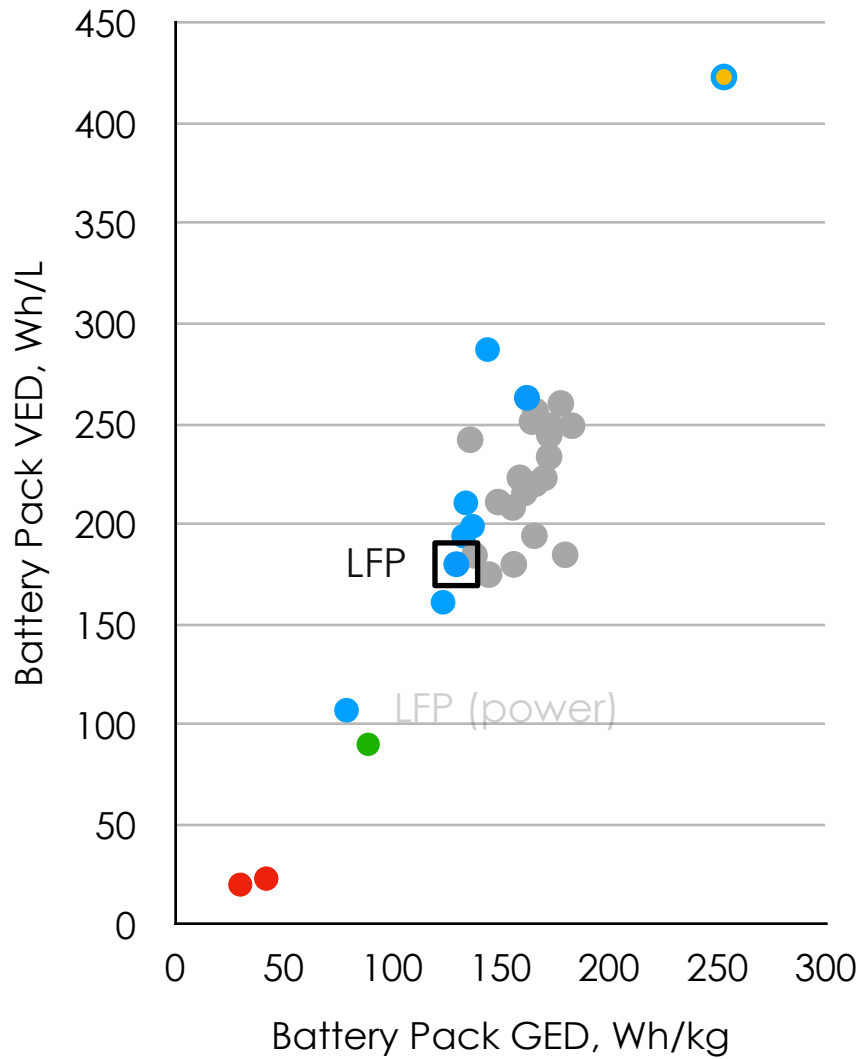
Earth's Crust: 5.0% 0.1% 0.008% 0.003%

LFP avoids self oxidation; however, has 40% less energy





# LFP 2.0: Improving LFP Energy Density



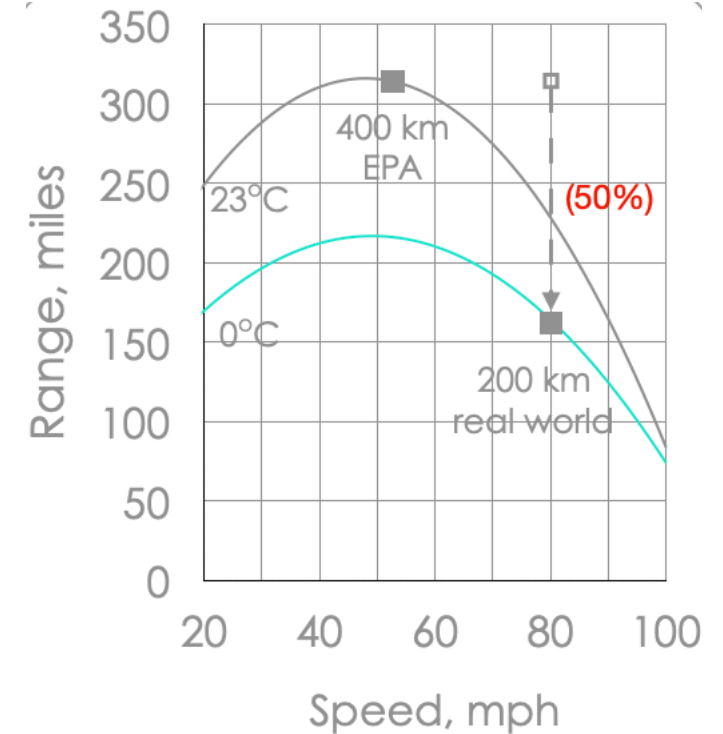
## 2020 - 400 km re-introduction of LFP

**2021 Model 3** → **\$34,400**  
 Model 3 Standard Range Plus Rear-Wheel Drive  
 24,558 mile odometer Walnut, CA  
 \$532 /mo ⓘ  
 Est. Transport Fee: \$2,000



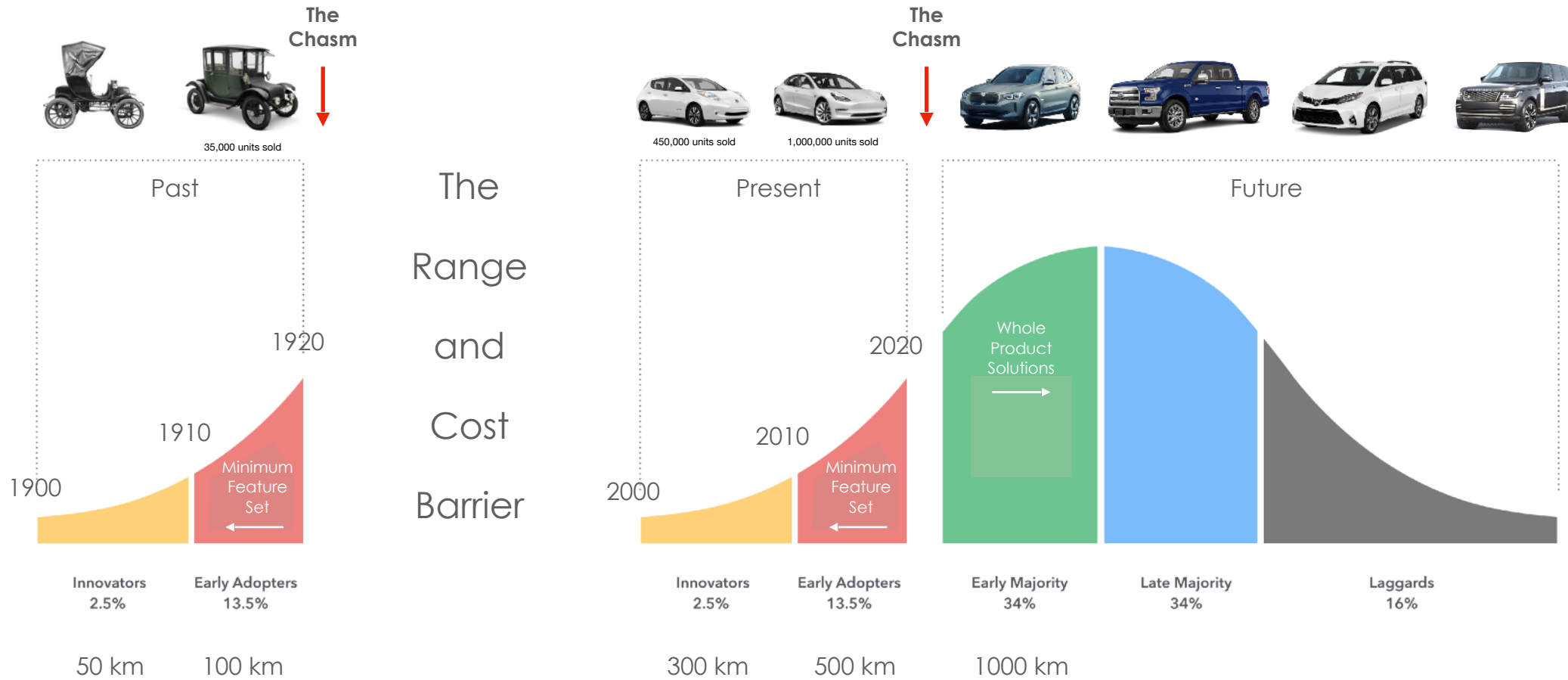
→ **262mi** Range (EPA est.) | **140mph** Top Speed | **5.3s** 0-60 mph

- Pearl White Paint
- 18" Aero Wheels
- All Black Partial Premium Interior
- Ⓜ Autopilot
- ✓ No Reported Accidents/Damage
- 📶 30-Day Premium Connectivity Trial

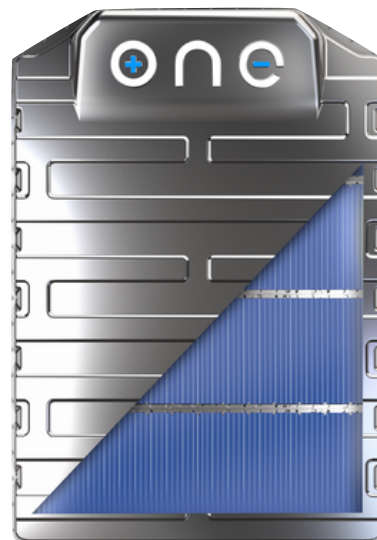
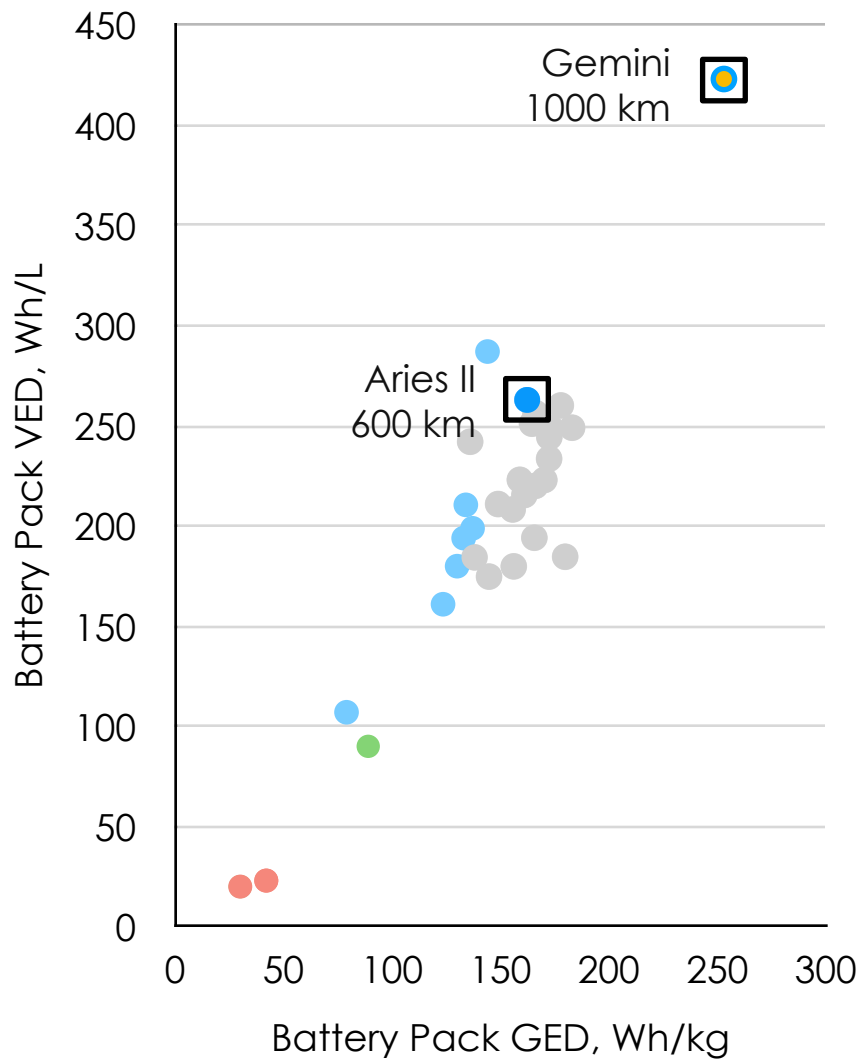


\* Benchmarking Data Source: A2MAC1

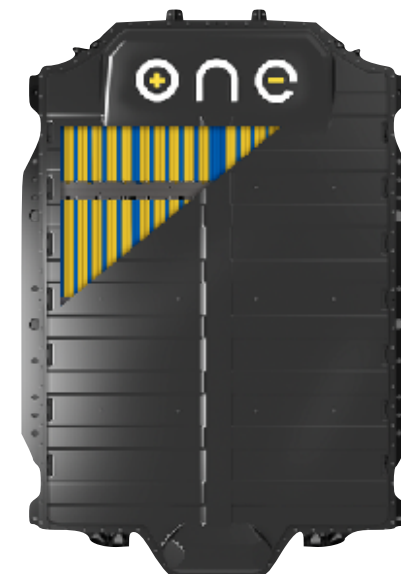
# Crossing the Chasm - this time!



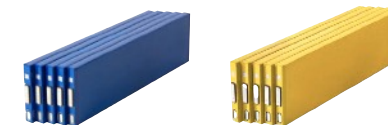
# Iron. What's Next in Electric.



Aries II

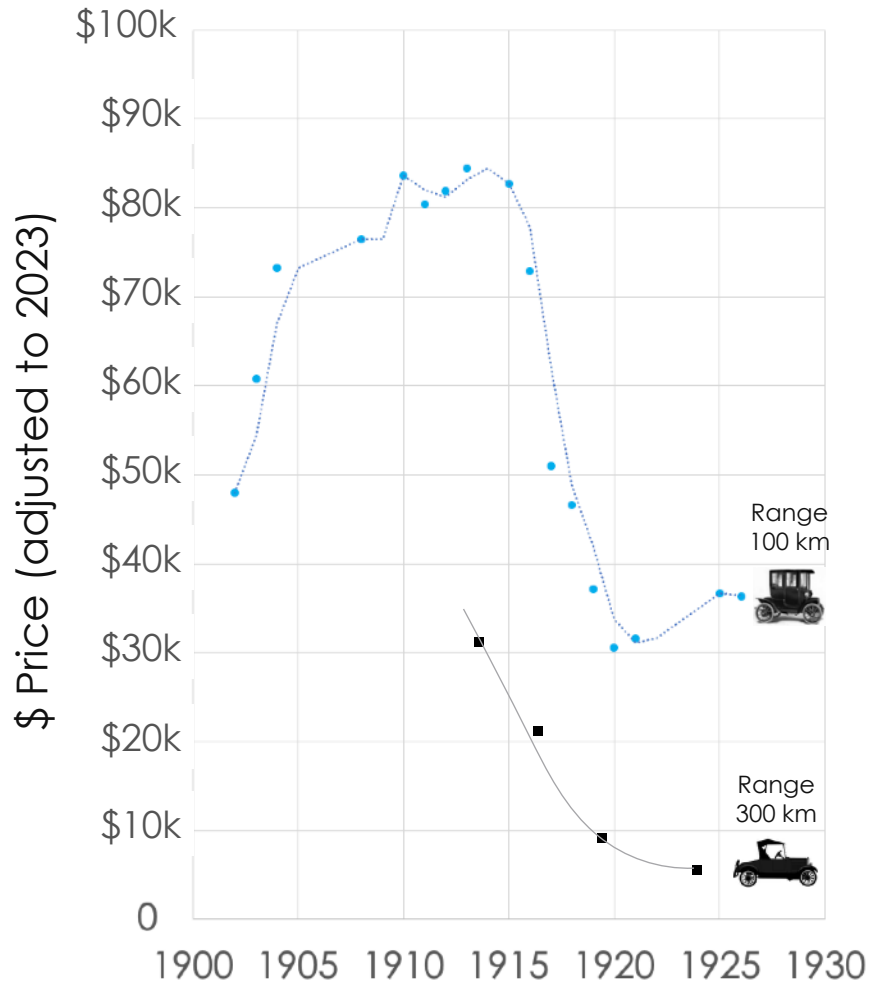


Gemini



\* Benchmarking Data Source: A2MAC1

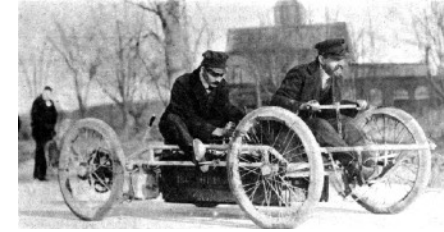
# Disruptive Cost through Manufacturing



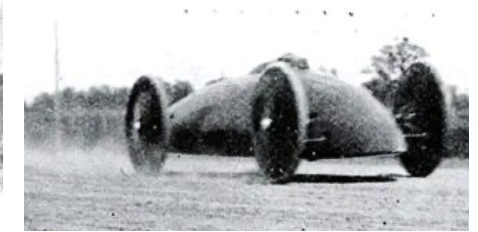
1900 - 1st in 50 mi race



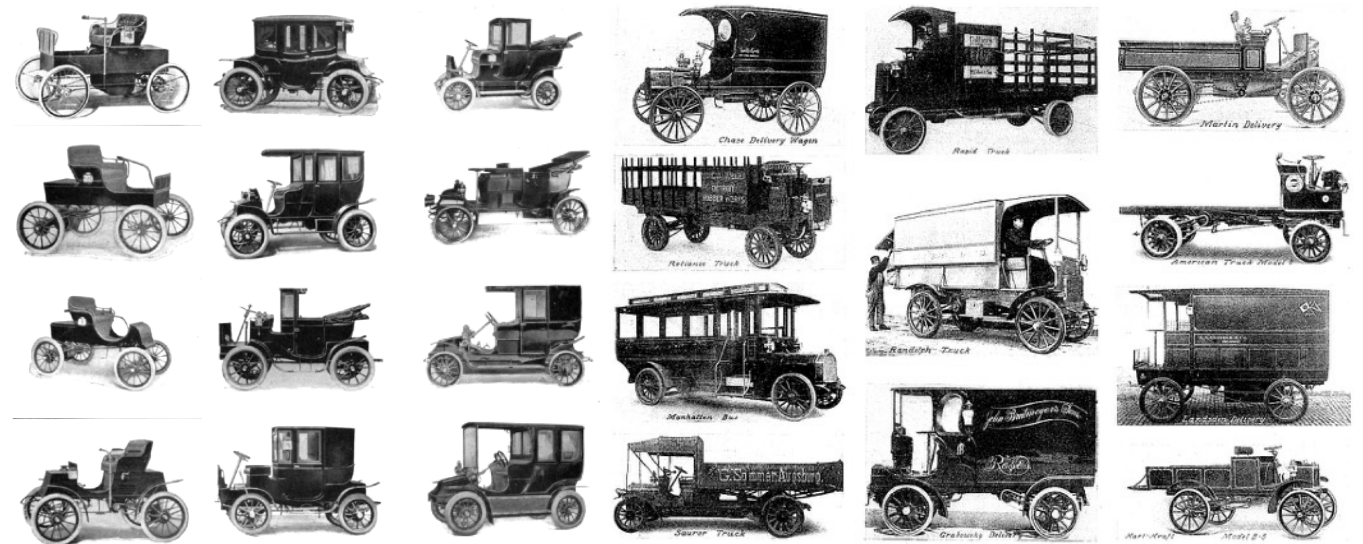
1901 - 1st to 57 mph



1902 - 1st to 100 mph



1907 - Over 100 models sold; EVs reach 38% of market



# Markets: Commercial, Grid, Automotive



## Commercial Truck, Bus, & Marine 300-900V Auto Series- Parallel BMS



Aries LFP



## Utility Grid Stationary Storage 3.5 MWh DC or AC System - 4-12 hour duration



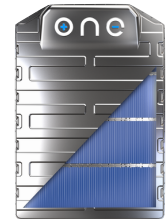
Aries Grid



## Passenger Automotive 100-400 kWh solutions for passenger automotive



Gemini



Aries II

