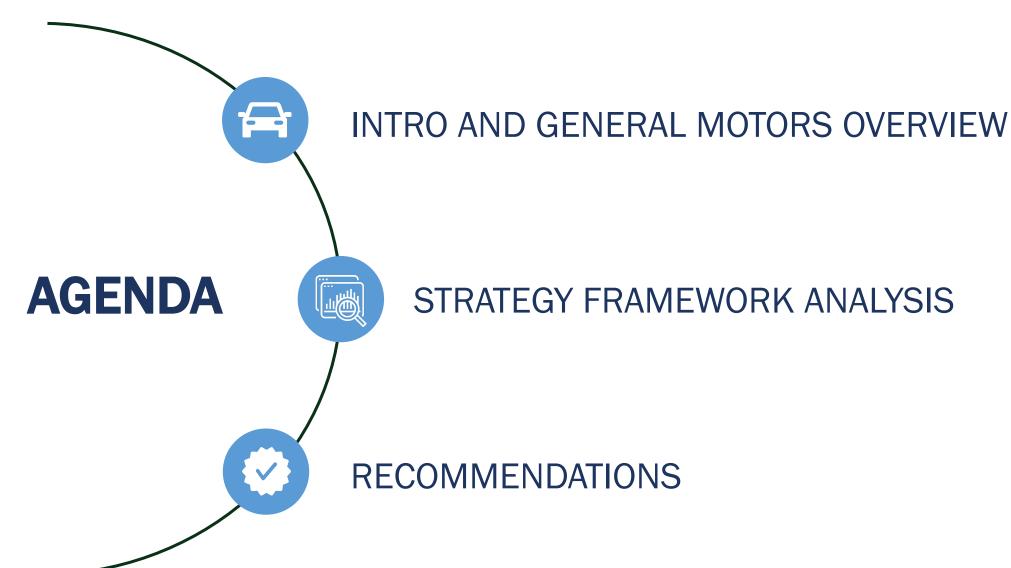
HOW CAN GENERAL MOTORS USE INNOVATION TO INCREASE ELECTRIC VEHICLE SALES?

CURRENT EVENTS DISCUSSION: THE PSYCHOLOGY OF INNOVATION.

Bobby Cunningham







CURRENT EVENT: INNOVATION AND ELECTRIC VEHICLES



EVOLVE

How GM plans to convince consumers to make the switch to electric vehicles

PUBLISHED SAT, OCT 8 2022-10:00 AM EDT

Kaitlin Balasaygun

SHARE







KEY POINTS

- GM is "all-in" on electric vehicles and is bringing out EVs across styles and brands, from the Hummer to the Cadillac Lyriq and an all-electric Silverado.
- Demand is already high at the luxury end of the car market for limited production, with the Hummer recently closing to new reservations.
- As Tesla, Ford and GM vie for the future EV buyer, GM's top marketing executive Deborah Wahl tells CNBC "We have to be even more clever. There is more

CNBC: https://www.cnbc.com/2022/10/08/how-gm-plans-to-convince-car-buyers-to-make-the-ev-switch.html

GENERAL MOTORS (GM) BY THE NUMBERS



Founded: September 16, 1908

Headquarters: Detroit, MI

Employees: 150,000+

2022 Earnings: \$127 billion

US Dealers: 4,000+

Market Share:

- Tesla retains 66% of US EV market share
- EVs make up 5.50% of total US car sales
- GM has 15.18% of car sales, Toyota 14.94%, and Tesla 2.02%

GM was the world's largest auto maker for 77 years until it was surpassed by Toyota in 2008.



GM PORTFOLIO OF BRANDS





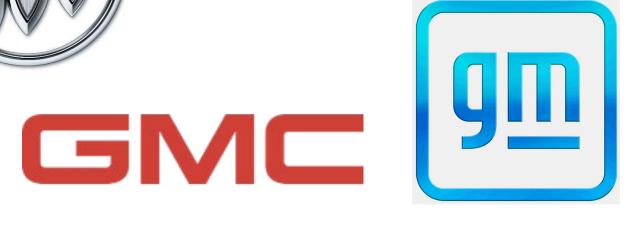


FINANCIAL

















ASSESSING THE ELECTRIC VEHICLE MARKET

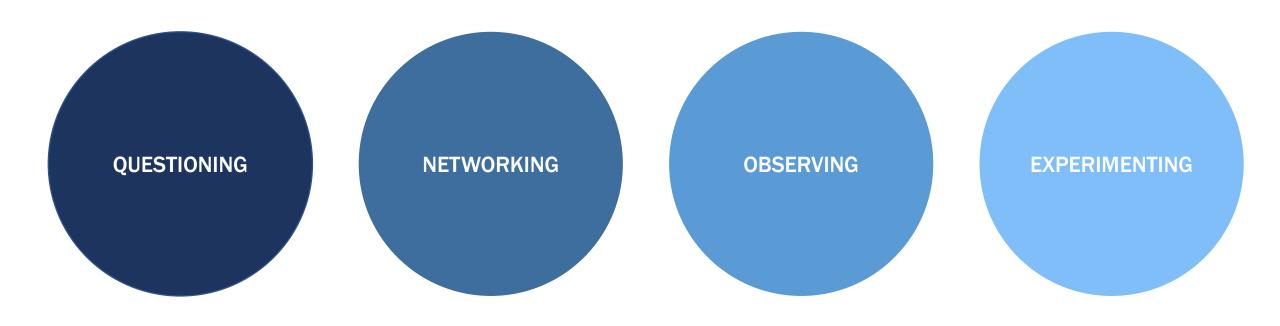


Porter's Five Forces Results: UNATTRACTIVE

- **Buyer Bargaining Power: LOW.** Customers are required to change infrastructure of garage/outlets to accommodate vehicle purchase, additional charging costs, cars last a long time and are not a frequently repurchased item.
- **Supplier Bargaining Power: HIGH.** There are only a limited number of suppliers that develop the batteries and technologies needed to power electric vehicles.
- Threat of New Entrants: MODERATE TO HIGH. There is low retaliation to new entrants, many
 of the key components needed to create cars are readily available with lots of players trying
 to succeed in the market, lack of patents in the industry (for now), tough to scale.
- Intensity of Rivalry: HIGH. Established car companies are all working to develop electric vehicles, carrying over current automobile brands and competition into the EV market.
- **Threat of Substitutes:** HIGH. There are many substitutes to electric vehicle to include both the core energy source (hydrogen, internal combustion engines, gas/petrol) and other modes of transportation (public transit, trains, bikes, motorcycles, planes).

WHERE IS GM ALONG THE KEY DISCOVERY BEHAVIOR PATH?





WHERE IS GM ALONG THE KEY DISCOVERY BEHAVIOR PATH?



QUESTIONING

GM was looking at how to set regulation and emission standards since the early 1990s, identifying constraints and opportunities.



GM hosts showrooms (e.g., EV Live) to solicit questions from consumers to gather feedback and educate on EVs. It can also review data from rental companies to track trip types, miles driven, etc. to understand customer behavior and pain points.









NETWORKING

GM's Board of Directors is full of varying backgrounds ranging from defense and government, to pharma, tech, retail, and professional sports.

EXPERIMENTING

GM is committed to experimenting with different approaches, including an EV taxi service in San Francisco.

DID YOU KNOW...JANUARY 4, 1996





History Channel: https://www.history.com/this-day-in-history/gm-announces-its-electric-car

INNOVATION IS BROADER THAN TECHNOLOGY



"We have to be even more clever. There is more competitive activity, more innovations I think, than at any other time in automotive history since we changed from horses to cars."

Deborah Whal,
 Chief Marketing Officer



WHAT DO CONSUMERS CARE ABOUT?



| 10 Most Desirable Features | | Least Desirable Features | |
|--------------------------------|-----|-------------------------------------|-----|
| Heated Seats | 66% | AR Heads-Up Display | 14% |
| Blind-Spot Monitoring | 60% | Electronic Engine Noise Enhancement | 13% |
| Front and Rear Parking Sensors | 55% | ECommerce from Vehicle | 12% |
| AWD or 4WD | 54% | Biometric Features | 9% |
| Lane-Departure Warning | 54% | Gesture Controls | 9% |
| Apple CarPlay or Android Auto | 53% | Concierge Services | 7% |
| Power Front Passenger Seat | 52% | Fully Autonomous | 7% |
| LED Accent Lights | 52% | | |
| Ventilated or Cooled Seats | 50% | | |
| Memory Driver's Seat | 49% | | |

RECOMMENDATIONS



- **1. Set a smaller target market.** Collect data from rental car sales and virtual show rooms to identify your key customers electric cars are(n't) for everyone!
- 2. Establish a "simple rule" across all GM dealerships to recommend electric vehicles first, especially with test drives or "lease to buy" options.
- 3. Set up partnerships with metropolitan city councils to establish subscriptions to EVs for city residents to rent and use cars within a certain mile radius.