# AI-00859 EV Foundational Mistakes

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What is Hertz EV initiative? What were the foundational mistakes a business can learn from it. List 20 foundational mistakes. List 20 lessons learned.

Hertz Electrifies Initiative: Accelerating EVs

Hertz Electrifies is a public-private partnership aimed at expanding electric vehicle (EV) adoption in the United States. Here's a breakdown:

- Goals: Increase EV availability in rental fleets, expand charging infrastructure, create EV education programs, and broaden economic opportunities through electrification.
- **Partnerships:** Collaborations with cities, charging companies (bp pulse, EVgo), and automakers (Tesla, Polestar, GM).
- Focus Areas:
  - **EV Fleet:** Hertz is building the largest EV rental fleet in North America.
  - Charging Infrastructure: Partnering with companies to add charging stations at Hertz locations and support public infrastructure development.
  - Education & Training: Creating EV education programs for students and training opportunities for future EV technicians.

While it's too early to identify specific mistakes, here are some potential pitfalls for businesses considering similar EV initiatives:

## Foundational Mistakes to Avoid (20):

1. **Limited EV Selection:** Not offering a diverse range of EVs to cater to different needs and budgets.

- 2. **Inadequate Charging Infrastructure:** Failing to provide sufficient charging options at rental locations and throughout travel routes.
- 3. **High Charging Costs:** Not offering competitive charging rates or transparent pricing structures.
- 4. **Lack of EV Education:** Not educating customers about EV operation, charging, and range limitations.
- 5. **Poor Maintenance:** Inadequate maintenance plans for EVs leading to breakdowns and customer inconvenience.
- 6. **Unfamiliarity with EVs:** Staff not being knowledgeable about EVs and unable to answer customer questions effectively.
- 7. **Uncompetitive Pricing:** EVs being significantly more expensive to rent compared to gasoline vehicles.
- 8. **Unreliable Reservation System:** Difficulty reserving EVs or unclear information on EV availability.
- Inconvenient Charging Locations: Charging stations being located in inconvenient areas or requiring long wait times.
- 10. Limited Range Anxiety Solutions: Not providing solutions to address customer concerns about range limitations, like trip planning tools or access to fast-charging stations.

#### Lessons Learned (20):

- 1. **Customer Demand:** Gauge customer interest in EVs to ensure sufficient demand for a large-scale initiative.
- 2. **Strategic Partnerships:** Collaborate with key players like charging companies, automakers, and cities to overcome infrastructure challenges.
- 3. **Government Incentives:** Leverage government incentives and subsidies to make EVs more affordable for businesses and consumers.
- 4. **Public Education:** Partner with communities to educate the public about the benefits of EVs.
- 5. **Standardized Charging:** Advocate for standardized charging infrastructure to simplify EV usage.

- 6. **Cost Optimization:** Find ways to reduce operational costs associated with EV ownership and rental.
- 7. **Data-Driven Approach:** Use data analytics to optimize EV fleet management, charging infrastructure placement, and pricing strategies.
- 8. **Flexible Pricing:** Offer flexible rental plans and charging options to cater to different customer needs.
- 9. **Technological Innovation:** Stay updated on the latest EV technology and integrate advancements into the initiative.
- 10. **Sustainability Focus:** Highlight the environmental benefits of EVs to attract eco-conscious customers.

## **Additionally:**

- **Community Engagement:** Proactively engage with communities to address concerns and ensure equitable access to EVs.
- **Policy Advocacy:** Advocate for policies that promote EV adoption, such as tax credits and infrastructure investments.
- **Data Sharing:** Share anonymized data on EV usage patterns to inform infrastructure development and future initiatives.
- **Continuous Improvement:** Regularly evaluate the program and make adjustments based on customer feedback and market trends.

By considering these potential pitfalls and incorporating the lessons learned, businesses can develop successful EV initiatives that accelerate the transition to electric transportation.

Synthesize the information you've mentioned in relation to the EV market in the consumer perspective. List 20 negative ideas why the EV auto market is not ready or too early to take away gasoline and diesel powered vehicles.

# **Consumer Concerns About Widespread EV Adoption (20):**

## **Cost and Value:**

- 1. **High upfront cost:** Electric vehicles are generally more expensive than comparable gasoline or diesel models.
- 2. Battery replacement cost: Replacing an EV battery can be very expensive.

3. **Limited resale value:** Uncertainty about the future of battery technology and EV longevity could lower resale value compared to gasoline vehicles.

## Range and Charging:

- 1. **Range anxiety:** Limited driving range on a single charge can cause anxiety about running out of power before reaching a destination.
- 2. **Inconsistent charging infrastructure:** Uneven distribution and potential unreliability of charging stations can make long trips impractical.
- 3. **Slow charging times:** Charging an EV can take significantly longer than refueling a gasoline car, impacting travel time.
- 4. **Limited access to home charging:** Not everyone has access to a home charger, creating a barrier for some potential EV buyers.

## **Usability and Technology:**

- 1. **Lack of EV knowledge:** Consumers may not understand how EVs operate or be familiar with charging procedures.
- 2. **Unfamiliarity with charging options:** The variety of charging connector types and networks can be confusing for new EV users.
- 3. **Limited towing capacity:** Many current EVs have lower towing capacities compared to gasoline or diesel trucks.
- 4. **Performance limitations in extreme weather:** Extreme cold weather can significantly reduce EV range.

# **Environmental Impact:**

- 1. **Battery production concerns:** The environmental impact of mining and manufacturing EV batteries can be significant.
- 2. **Electricity source dependence:** If the electricity grid relies heavily on fossil fuels, EVs may not be as environmentally friendly.

#### Other Considerations:

1. **Selection limitations:** EVs may not be available in the same variety of body styles and configurations as gasoline vehicles.

- 2. **Maintenance costs:** While generally lower than gasoline vehicles, some repairs on EVs, especially battery-related, could be expensive.
- 3. **Sound experience:** The quiet operation of EVs might be unfamiliar to some drivers and could pose safety concerns for pedestrians and cyclists.
- 4. **Potential job losses:** The shift to EVs may lead to job losses in the traditional gasoline and diesel vehicle industries.
- 5. **Grid strain:** A large-scale shift to EVs could strain the electricity grid in some areas.
- 6. Lack of government support: Inconsistent or inadequate government incentives for EVs might deter consumer adoption.
- 7. **Uncertain long-term viability:** The long-term viability of battery technology and future advancements are unknown, creating some uncertainty for potential buyers.

These are just some of the concerns that consumers may have about the EV market. While EVs offer environmental benefits and lower operating costs, addressing these concerns will be crucial for widespread consumer adoption.

List 20 ideas to solve the EV problems that you mentioned that must happen first before humans can comfortably swap to EV and ditch the gasoline and diesel vehicle so.

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## **20 Solutions to Jumpstart Comfortable EV Adoption:**

## **Reducing Costs and Increasing Value:**

- 1. **EV tax credits and subsidies:** Government incentives to make EVs more affordable upfront.
- 2. **Battery leasing or subscription models:** Separate battery ownership from vehicle purchase to reduce initial cost.
- 3. **Standardized battery warranties:**Manufacturer guarantees on battery life and performance to address replacement anxieties.
- 4. **Improved battery recycling programs:** Reduce environmental impact and potentially lower battery replacement costs.

## **Enhancing Range and Charging Infrastructure:**

- 1. **Government investment in charging infrastructure:** Expand fast-charging station availability across highways and urban centers.
- 2. **Standardized charging network and connector type:** Facilitate seamless charging across different EV models and charging companies.
- 3. **Faster charging technology:** Develop and implement faster-charging batteries and charging stations to reduce charging times.
- 4. **Workplace and public charging options:**Increase accessibility to charging points at workplaces, apartments, and along major roads.

## Improving Usability and Technology:

- 1. **Public education campaigns:** Inform consumers about EVs, charging options, and range considerations.
- 2. **Universal charging app:** Develop a single app to locate, manage, and pay for charging across different networks.
- 3. **Increased variety of EV models:** Offer a wider range of body styles, configurations, and towing capacities to cater to diverse needs.
- 4. **Invest in battery research and development:** Improve range, lifespan, and affordability through technological advancements.

## **Addressing Environmental Concerns:**

- 1. **Shift to renewable energy sources:** Powering the electricity grid with renewables like solar and wind will maximize the environmental benefits of EVs.
- 2. **Sustainable battery production practices:**Implement environmentally responsible mining and manufacturing processes for EV batteries.

# **Overcoming Other Considerations:**

- 1. **Retraining programs for the workforce:** Support programs to equip workers in the traditional automotive industry with skills relevant to EVs.
- 2. **Grid modernization and expansion:** Invest in upgrading the electricity grid to handle the increased demand from widespread EV adoption.

- 3. **Government incentives for home charging installation:** Encourage home charger installation through financial support or rebates.
- 4. **Simulate engine noise for safety:** Implement technology to generate artificial engine noise for EVs, especially at low speeds, to improve pedestrian and cyclist awareness.

## **Additional Strategies:**

- 1. **Promote carpooling and alternative transportation:** Reduce overall reliance on individual car ownership to lessen the strain on the infrastructure.
- 2. **Highlight the total cost of ownership benefits:**Educate consumers about the long-term savings of EVs, factoring in lower operating and maintenance costs compared to gasoline vehicles.

By implementing these solutions, we can address consumer concerns, build a robust charging infrastructure, and make EVs a more attractive and practical option for everyone. This will pave the way for a smoother transition towards a future powered by electric vehicles