

Will Luxury Lead Sustainable Energy by 2030?

Prediction

- Luxury manufacturers will lead the development of sustainable energy and influence other manufacturers to adapt similar principles by the year 2030.

- Luxury manufacturers such as Tesla, Mercedes-Benz, Porsche and McLaren are marketing sustainable vehicles.

Four Major Innovation Trends

- Technology advancements to traditional internal combustion engine by increasing fuel efficiency by the use of turbocharge engines and downsizing the liter per cylinder.
- Hybrid technology becoming more advanced and used in larger vehicles.
- Vehicles becoming much lighter in weight by using aluminum, carbon fiber, agricultural sources.
- Research and developing the use of alternative and advanced fuels such as electric, sustainable biofuels, and fuel cells.

Who is the target audience?

- Who are they?
- What do they want?
- Where do they live?
- What is the appeal?



Who are the key players?

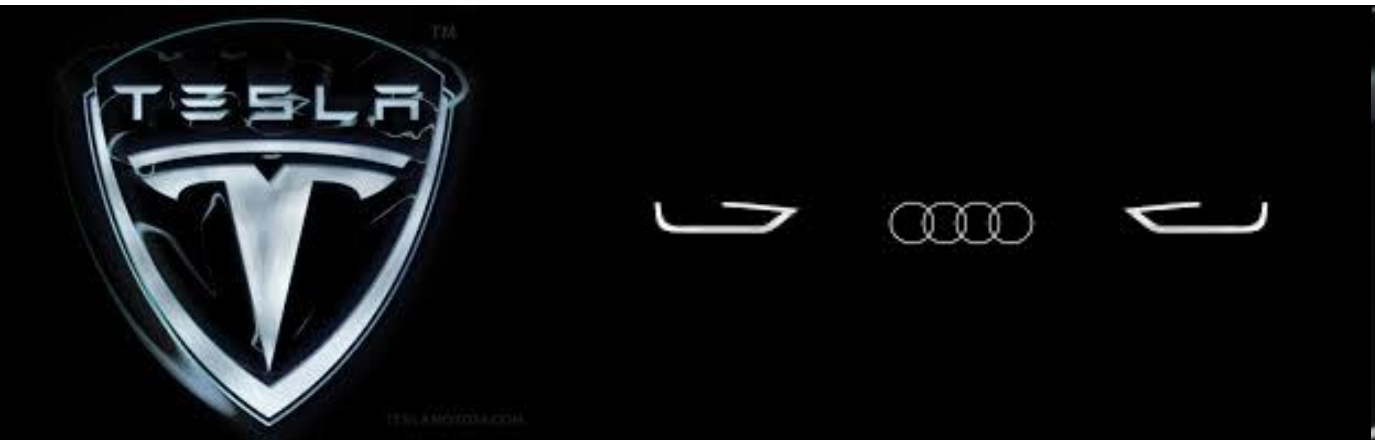






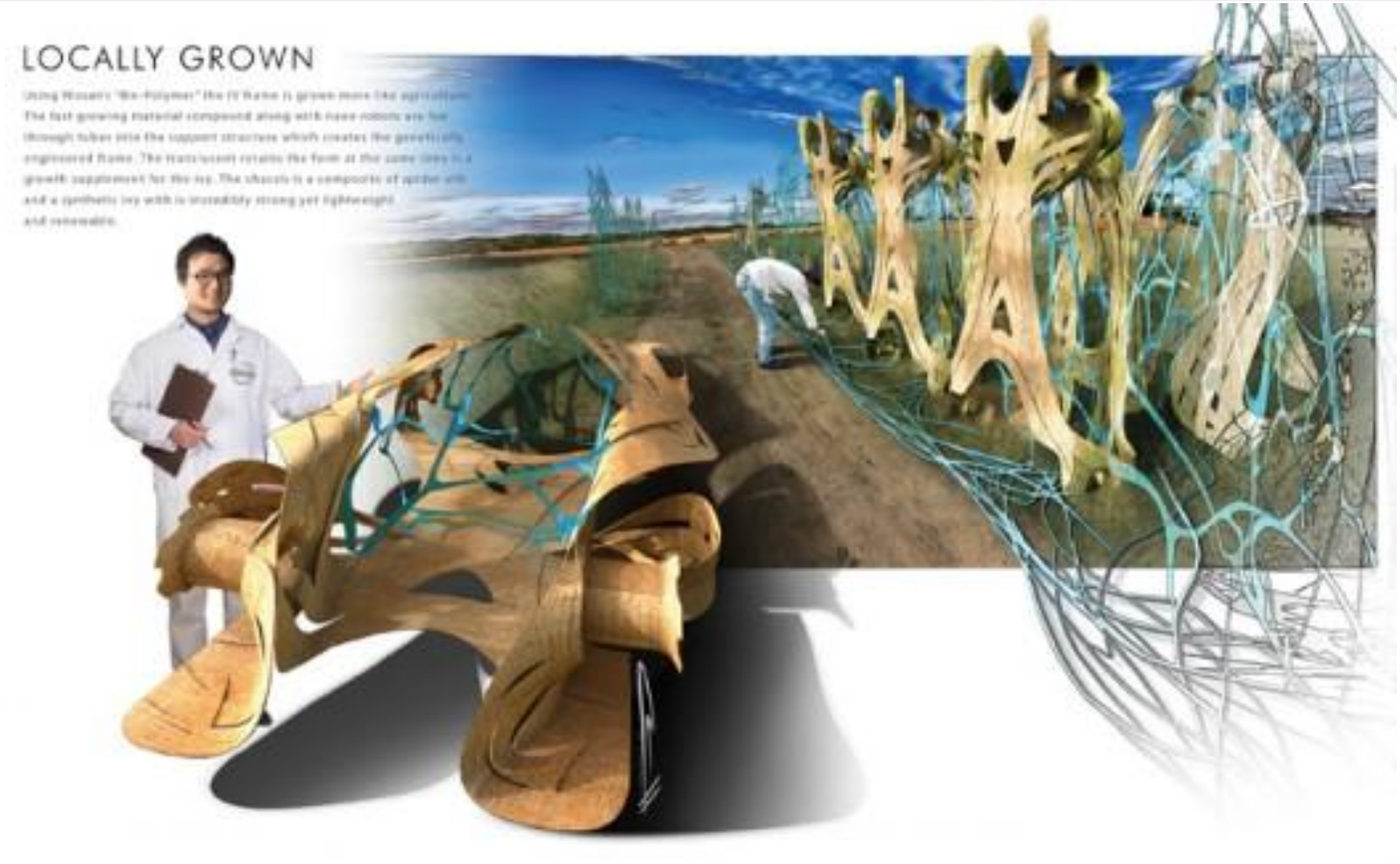








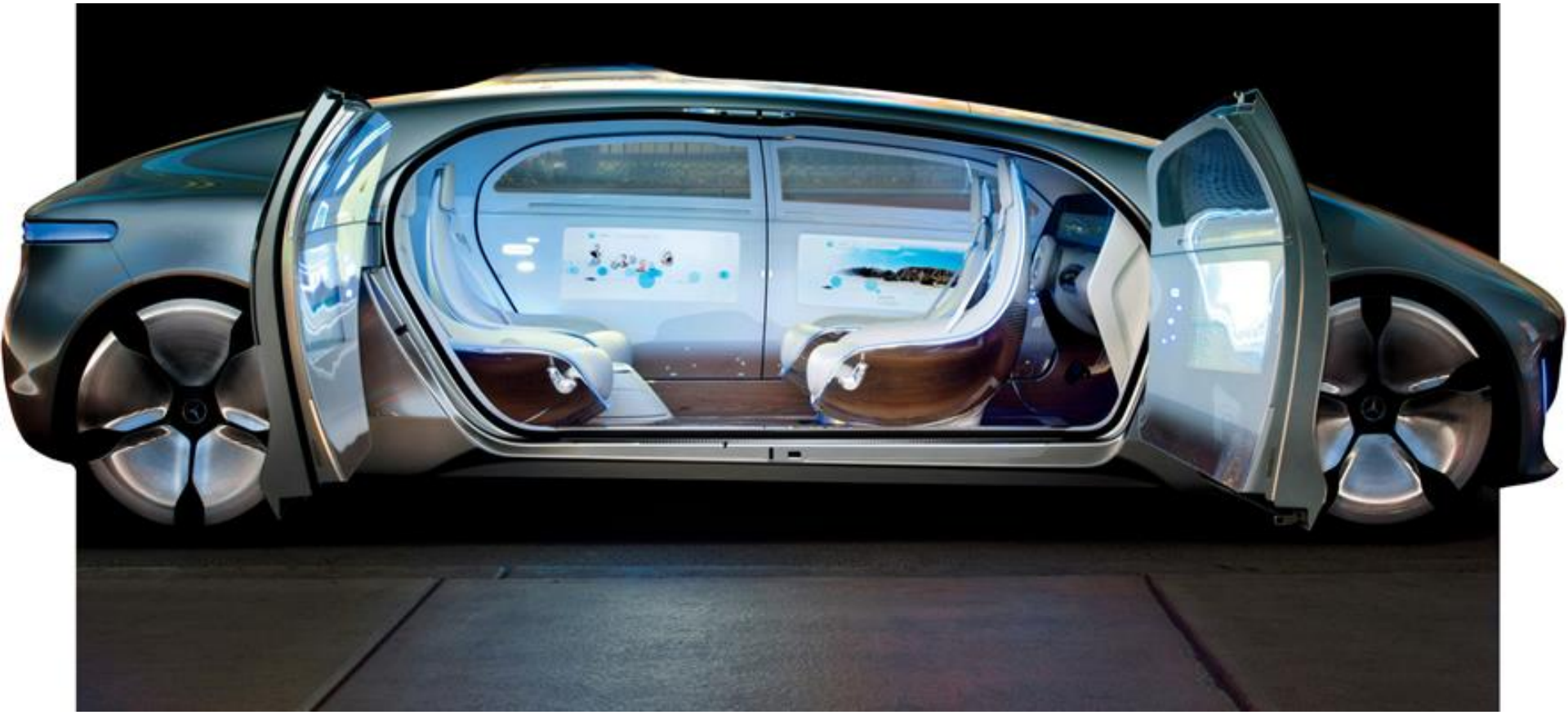
Design Inspiration



Design Concept



Mercedes-Benz F015



Cadillac Aera



Autonomous Vehicles



2015

ASSIST

- SENSOR
- DRIVER ACTIVE
- FAIL SAFE



2020

AUTOMATE

- SENSOR FUSION
- CO-PILOT
- DEPENDABLE



2030

AUTONOMOUS

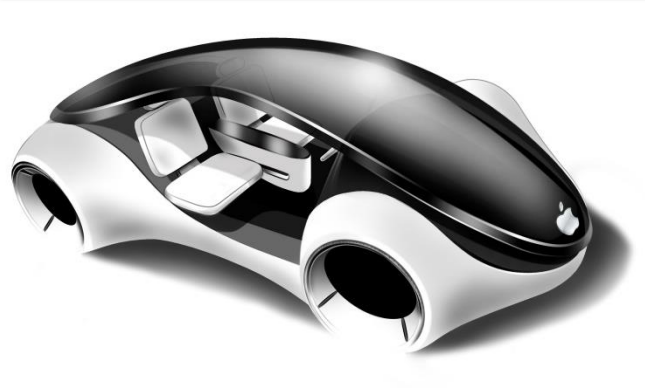
- HIGH ACCURACY MAPS
- DRIVERLESS
- SAFETY COCOON



Benefits of Autonomous Vehicles

- Could greatly decrease greenhouse gas emissions in urban traffic because Car-sharing services could offer local mobility for a highly competitive price based on a fleet of smaller, lighter cars which therefore cause fewer emissions
- Local car sharing fleets would be ideal adopters for alternative, low-emission drives (electric cars, hydrogen, fuel cells
- Autonomous cars used for local trips would be an ideal application for getting electric cars into operation in high numbers. Increased use of car-sharing for local transport reduces the overall demand for vehicles which in turn reduces greenhouse gas emission for manufacturing automobiles.
- Autonomous cars would establish an optimal link between individual and mass transit; small, local driverless vehicles could serve as feeders for the last mile by transporting individuals to/from local bus stations, train stations etc.
- Driverless cars use roads more efficiently (fewer emissions because of less road construction), can reduce emissions by driving in convoys and don't induce traffic jams.
- Overall, autonomous vehicles could be a major technology to fight against climate change. The technology can even pay for itself: It is probably the only technology which lowers overall costs (of mobility, maintaining the infrastructure etc.).

Collaborations













What is sustainable energy?

Sustainable energy is the form of energy obtained from non-exhaustible resources, such that the provision of this form of energy serves the needs of the present without compromising the ability of future generations to meet their needs.

- Why is it important?
- What impact does it have on the world, customer and company?
- Give an example of a luxury company and how sustainability helped the company.

Red Flags

- Fuel cost, air quality, impact, production and destruction.
- The environmental impact of a vehicle contributes to one-third of all U.S. air population. Smog, carbon monoxide and many other toxins once extracted in the air lead to people inhaling them.
- Automobiles contribute about 80 to 90% due to the fuel consumption, emissions air pollution and greenhouse gasses which cause global warming.

Energy Comparison

Gasoline ICE

- Frequent Emissions
- Imported Fuels
- Quick Refueling
- Long Range
- Limited Impact on Weather

Hybrid

- Fewer Emissions
- Increased Gas Mileage by 5 miles
- Decreased Fuel Demand

EV's

- Limited Range
- Long Charge Time
- Zero Emissions
- Quiet
- Domestic Fuel Source

Fuel Cells

- Long Range
- Quick Refueling
- Limited Impact on Weather
- Quiet
- Zero Emissions
- Fuel Efficient
- Domestic Fuel Source

Trickle Theory



Bubble Up Hybrid's



Fisker Karma Hybrid



BMW Active 7 Hybrid



Lexus GS460 Hybrid



Honda Insight Hybrid

Electric Vehicles



Tesla Model S (Luxury)



Cadillac ELR (Premium)



Nissan Leaf (Entry)

Fuel Cell Vehicles



Rolls Royce Phantom



Mercedes-Benz F015



Lexus LS600



Toyota Mirai

Luxury Supercars





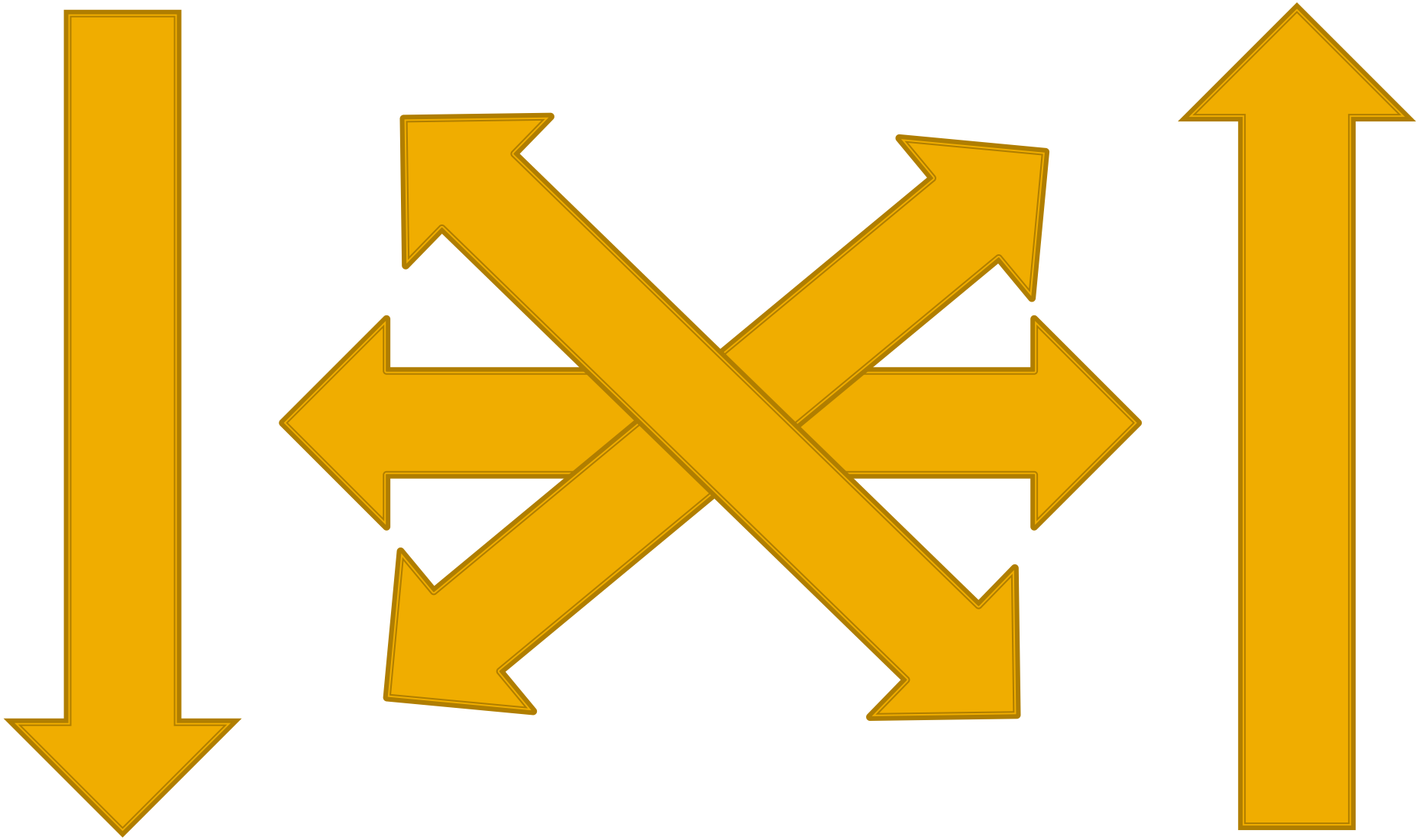




Dilemma of Branding

- Most manufacturers like Ferrari, Lamborghini or Maserati don't want to be known for taking the sustainable energy route.
- Supercars are rare, making them collectors items.
- Consumers demand performance!!!

Dilemma of Consumer Acceptance



Sustainable Manufacturing









Conclusion

- This niche market wants a luxury brand they can purchase that is unattainable to most and available to them first.
- Bridge the gap of the Trickle Theory
- Apple will be the influential luxury manufacturer for entry level brands


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