1. INTRODUCTION

1.1 OVERVIEW

This vehicle has no internal combustion engine and is powered only by the battery and electric motor. BEVs don't use gasoline and are only charged by EVSE. A BEV has the largest battery of all the vehicle types. It's also the most energy efficient and produces zero tailpipe emissions.

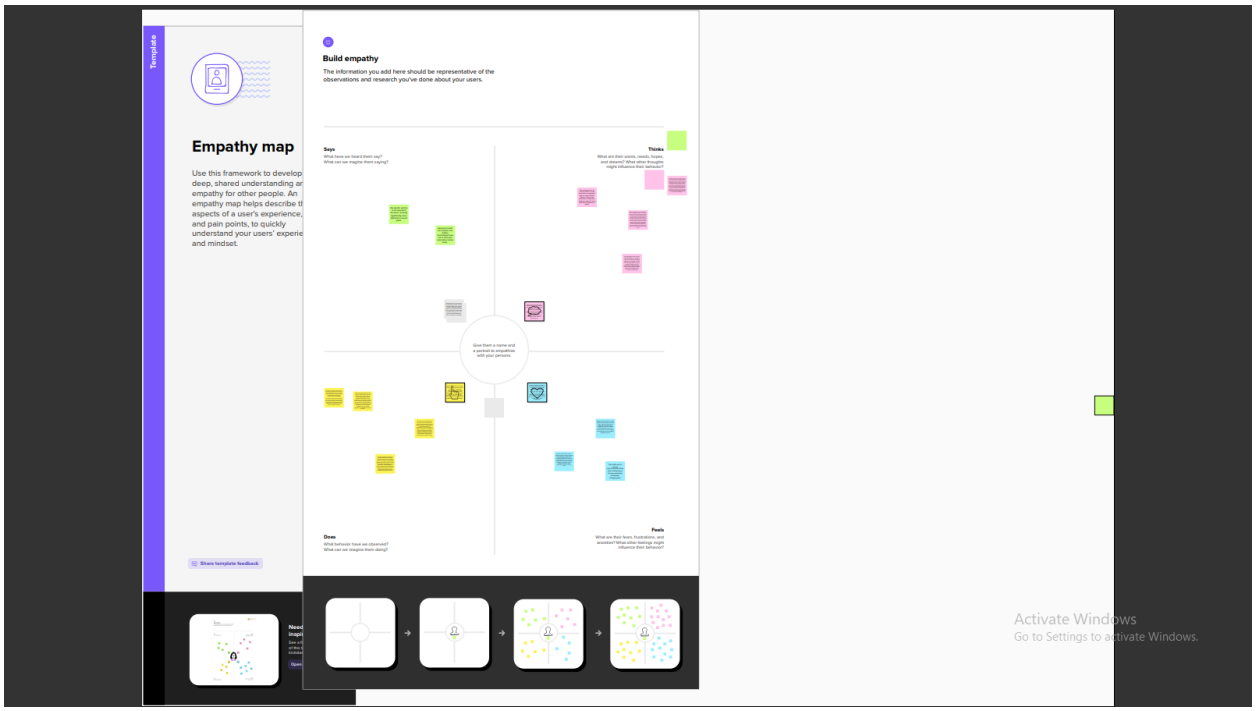
1.2 PURPOSE

THE USE OF THIS PROJECT

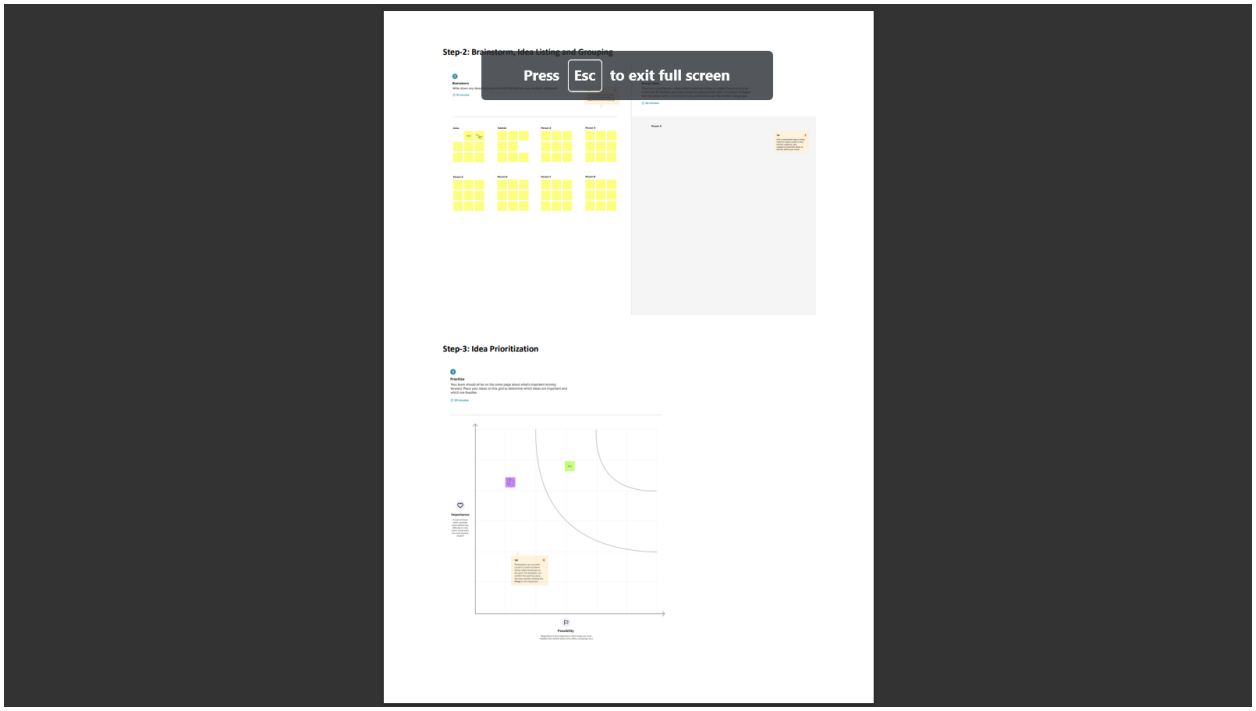
Electric vehicles use electricity to charge their batteries instead of using fossil fuels like petrol or diesel. Electric vehicles are more efficient, and that combined with the electricity cost means that charging an electric vehicle is cheaper than filling petrol or diesel for your travel requirements.

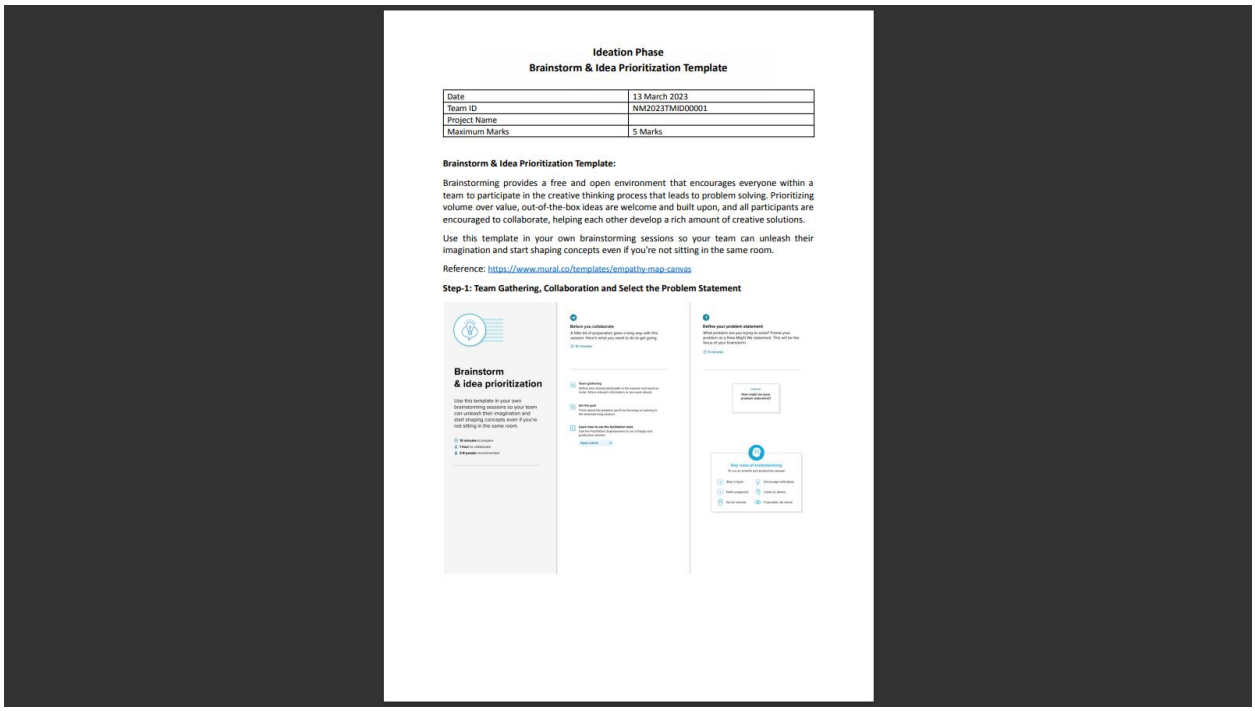
2. PROBLEM DEFINITION AND DESIGN THINKING

2.1 EMPATHY MAP



2.2 Ideation and brainstorming map





Ideation Phase
Brainstorm & Idea Prioritization Template

Date	13 March 2023
Team ID	NM2023TMID00001
Project Name	
Maximum Marks	5 Marks

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference: https://www.mural.co/templates/empathy-map-canvas

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Brainstorm
& idea prioritization

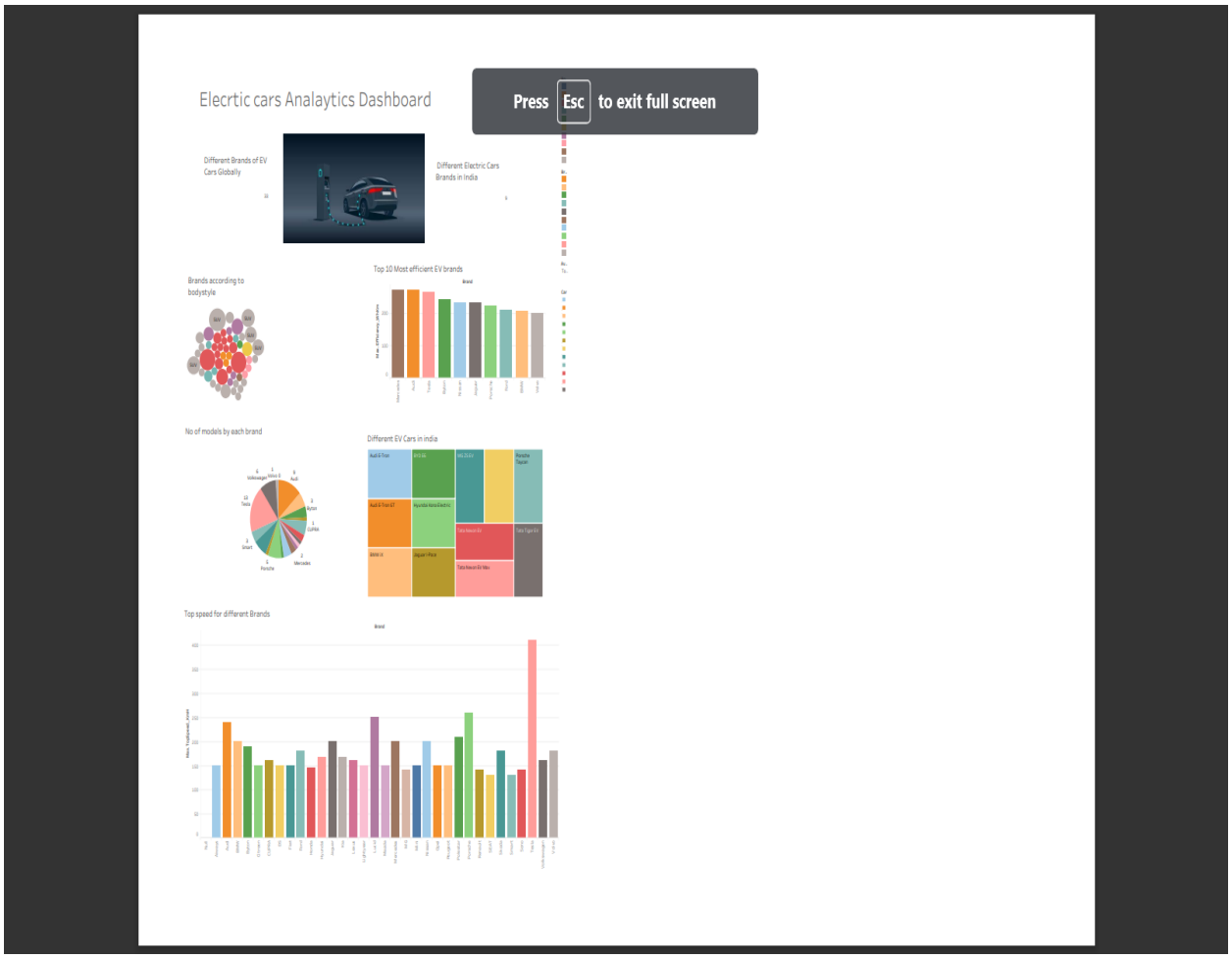
Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

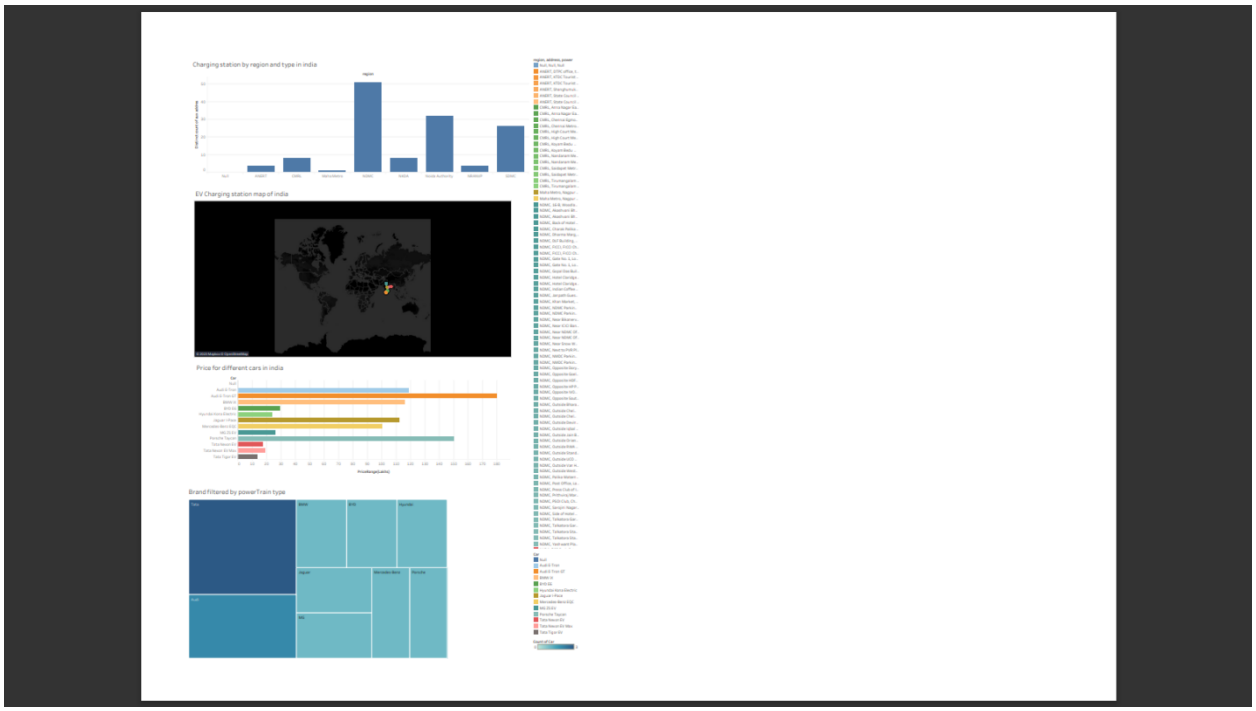
3.RESULTS

3.1 DATA MODEL

Object name	Fields in the object	Data type
Obj 1 Tableau public	Dimension measure	String integer
Obj 2 SQL server	Column	Char

3.2 ACTIVITY AND SCREENSHOTS





4.TRAILHEAD PROFILE PUBLIC URL:

TEAM LEADER : https://trailblazer.me/id/ashish1330

MEMBER 1: https://trailblazer.me/id/mnachiyar

MEMBER2: https://trailblazer.me/id/karpagam95

MEMBER3: https://trailblazer.me/id/basri15

MEMBER4: https://trailblazer.me/id/jenis45

5. ADVANTAGES AND DISADVANTAGES

ADVANTAGES:

1.Eco-friendly: Because electric vehicles do not utilize fuel for combustion, there are no emissions or gas

exhaust. Vehicles that run on fossil fuels contribute significantly to hazardous gas accumulation in the environment, thus driving an electric car can help contribute to a cleaner environment.

2. Renewable energy source: Electric vehicles run on renewable power, whereas conventional automobiles function on the combustion of fossil fuels, which reduces the world's fossil-fuel stocks.

3.Less noise and smoother motion: Driving an electric car is significantly smoother. Because they lack fast-moving elements, they are quieter and produce less noise.

4.Cost-effective: Electricity is far less expensive than fuels such as gasoline and diesel, which are subject to regular price increases. When solar electricity is utilized at home, battery recharging is cost-effective.

5.Low maintenance: Because electric cars have fewer moving components, wear and tear is reduced when compared to traditional auto parts. Repairs are also simpler and less expensive than combustion engines.

6.Government support: Governments throughout the world have granted tax breaks to encourage people to drive electric vehicles as part of a green program.

DISADVANTAGES:

1.High initial cost: Electric vehicles continue to be quite expensive, and many buyers believe they are not as inexpensive as traditional automobiles.

2.Charging station limitations: People who need to travel long distances are concerned about finding adequate charging stations in the middle of their journey, which are not always accessible.

3.Recharging takes time: Unlike conventional automobiles, which require only a few minutes to replenish their gas tanks, charging an electric vehicle takes many hours.

4.Limited options: Currently, there aren't many electric car models to pick from in terms of appearance, style, or customized variations.

5.Less driving range: When compared to conventional automobiles, electric vehicles have a shorter driving range.

6.Electric cars can be convenient for short-distance travel but are inconvenient for long-distance travel.

6.APPLICATION:

Architecture

See the latest application of copper and copper alloy

materials in all aspects of architecture, both exterior and interior.

Automotive

Copper is an essential component of many of the latest design elements in today's cars.

Electrical

Copper's high conductivity makes it the ideal material in a wide variety of electical applications including:

Electrical Energy Efficiency

Power Quality

Building Wire

Tube, Pipe & Fittings

Copper tube is the highest quality material available today for a variety of building applications including plumbing, fire sprinklers and more.

Fuel Gas

Copper tube is an excellent choice for natural gas piping systems.

Industrial

Copper serves as an essential material in a vast number of industries including electronics.

Marine

Copper's unique properties make it ideal for many applications in the harsh environments of marine.

Machined Products

Copper alloy rod and bar products are well suited for.

Telecommunications

Communications are the backbone of today's fast-paced businesses, and copper wiring is at the core of those systems.

7.CONCLUSION:

The progress that the electric vehicle industry has seen in recent years is not only extremely welcomed, but highly necessary in light of the increasing global greenhouse gas levels. As demonstrated within the economic, social, and environmental analysis sections of this webpage, the benefits of electric vehicles far surpass the costs. The biggest obstacle to the widespread adoption of electric-powered transportation is cost related, as gasoline and the vehicles that run on it are readily available, convenient, and less costly. As is demonstrated in our timeline, we hope that over the course of the next decade technological advancements and policy changes will help ease the transition from traditional fuel-powered vehicles. Additionally, the realization and success of this industry relies heavily on the global population, and it is our hope that through mass marketing and environmental education programs people will feel incentivized and empowered to drive an electric-powered vehicle. Each person can make a difference, so go electric and help make a difference

8.FUTURE SCOPE:

Most Indian buyers believe that an electric vehicle will be ready by 2023, but the majority also believe that it would no longer be available until 2025. Consumers in India are

looking for a lower price for EVs than those in other countries, with the global average tipping price for EVs being $36,000. (around Rs27 lakh).

The cost of lithium-ion batteries is roughly $250/kWh globally, which translates to approximately Rs5.7 lakh in battery prices alone. Currently, lithium-ion batteries account for half of the cost of an electric vehicle, making them more expensive than conventional vehicles.

The safety of the batteries against explosion serves as a stumbling block for Li-ion batteries. Charging is a significant barrier for EVs in India, and a lack of charging stations may also be considered, rendering them impracticable or significantly less feasible for long-distance rides.

Furthermore, some EVs are slower than standard gas-powered engines.

At a critical moment, as many nations are working to free Mother Earth from the clutches of carbon emissions and CO2, India should take the lead by transitioning to EV mobility, making the country a greener and cleaner ecosystem.