Visualization Tool For Electric Vehicle Charge And Range Analysis

1.1. INTRODUCTION:

A vehicle that can be powered by an electric motor that draws electricity from a battery and is capable of being charged from an external source and have an electric motor instead of an internal combustion engine.

The Electric Vehicle (EV) is not new, but it has been receiving significantly more attention in recent years. Advances in both EV analytics and battery technologies have led to increased automotive market share. However, this growth is not attributed to hardware alone. The modern mechatronic vehicle marries electrical storage and propulsion systems with electronic sensors, controls, and actuators, integrated closely with software, secure data transfer, and data analysis, to form a comprehensive transportation solution. Advances in all these areas have contributed to the overall rise of EV's, but the common thread that runs through all these elements is data analytics.

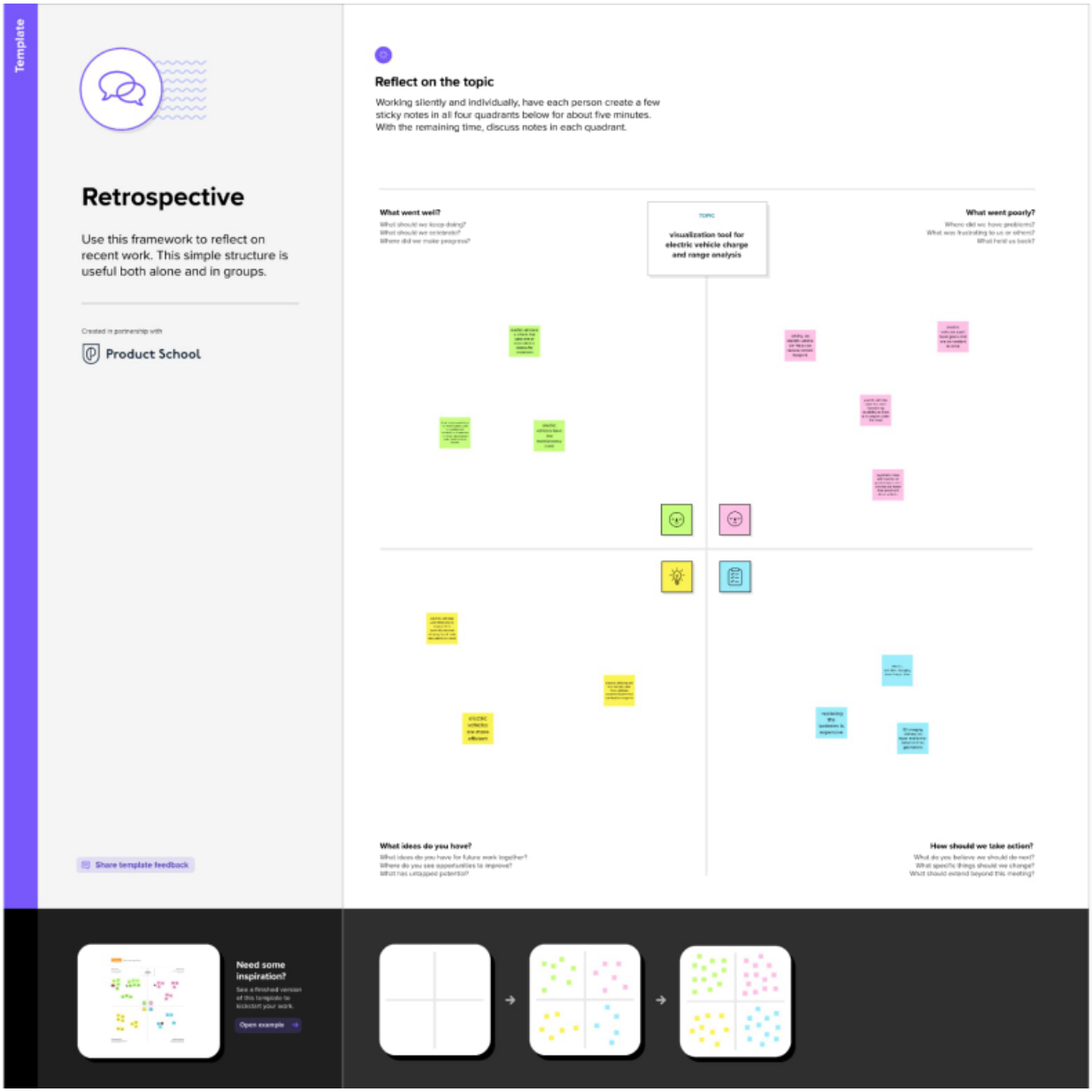
The new EV's are combined Electrical storage and propulsion systems with electronic sensors, controls, and actuators, integrated closely with software, secure data transfer to form a comprehensive transportation solution.

1.2. PURPOSE:

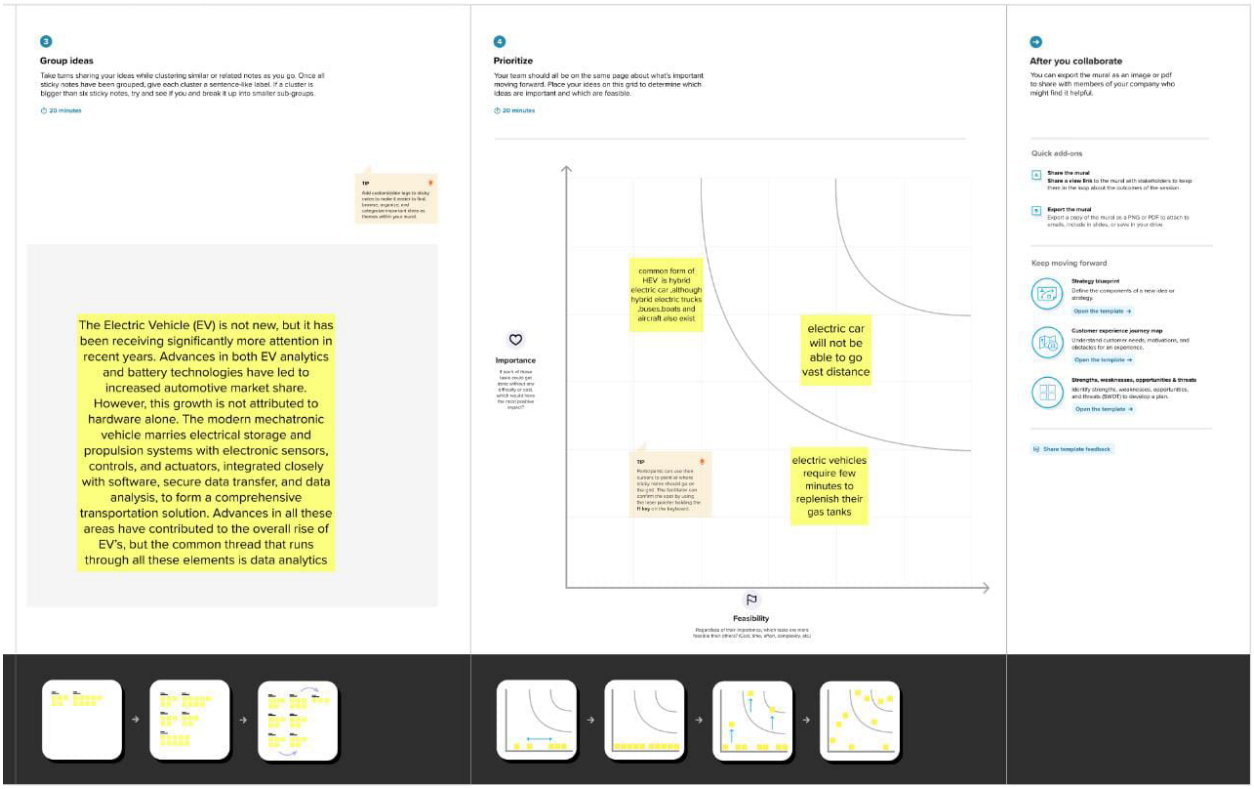
In this project we have analyzed the various aspects of visualization tool for electrical vehicle charge and range analysis. The outcome can be used to know about the electric vehicles brands, top most ranges and brands in India.

2. PROBLEM DEFINITION AND DESIGN THINKING

2.1. Empathy Map:



2.2 BRAINSTORMING MAPPING:

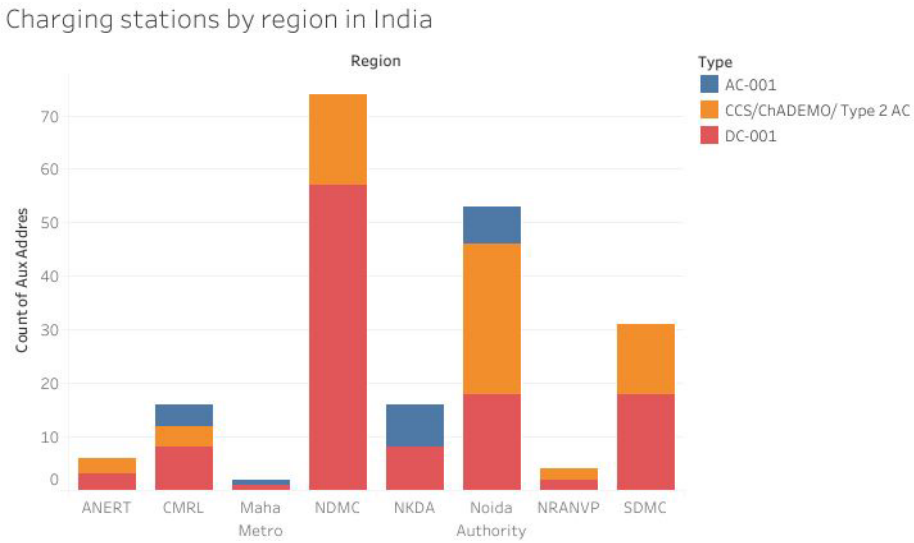


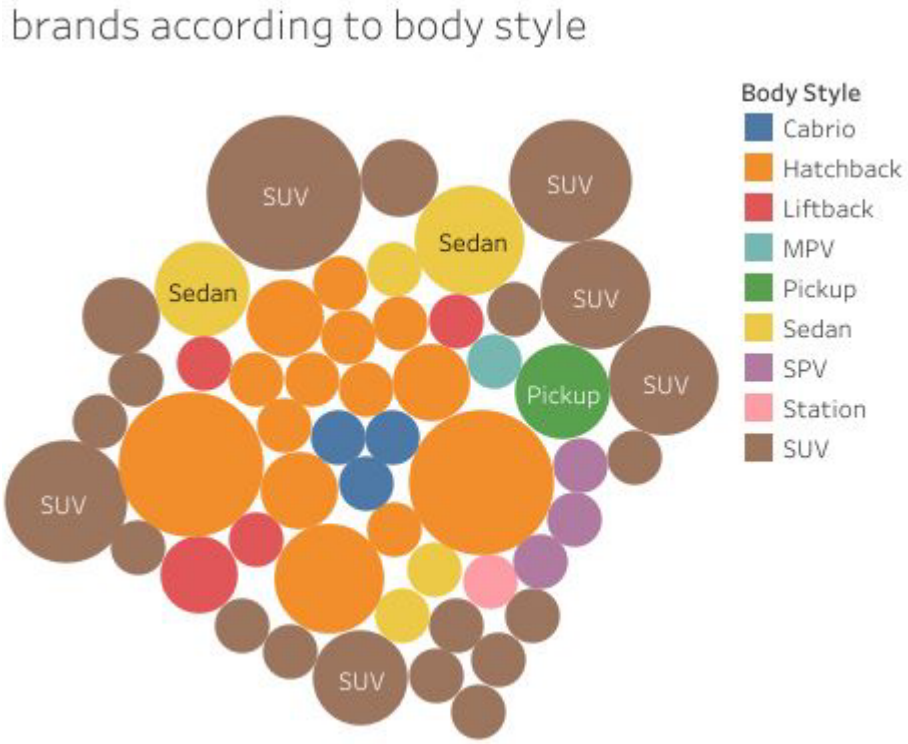
3. RESULT:

1. Electric vehicles are mostly used in other countries when compared to india.

2. Electric vehicles are more efficient.

3. Electrical vehicles take less fuel wastage.





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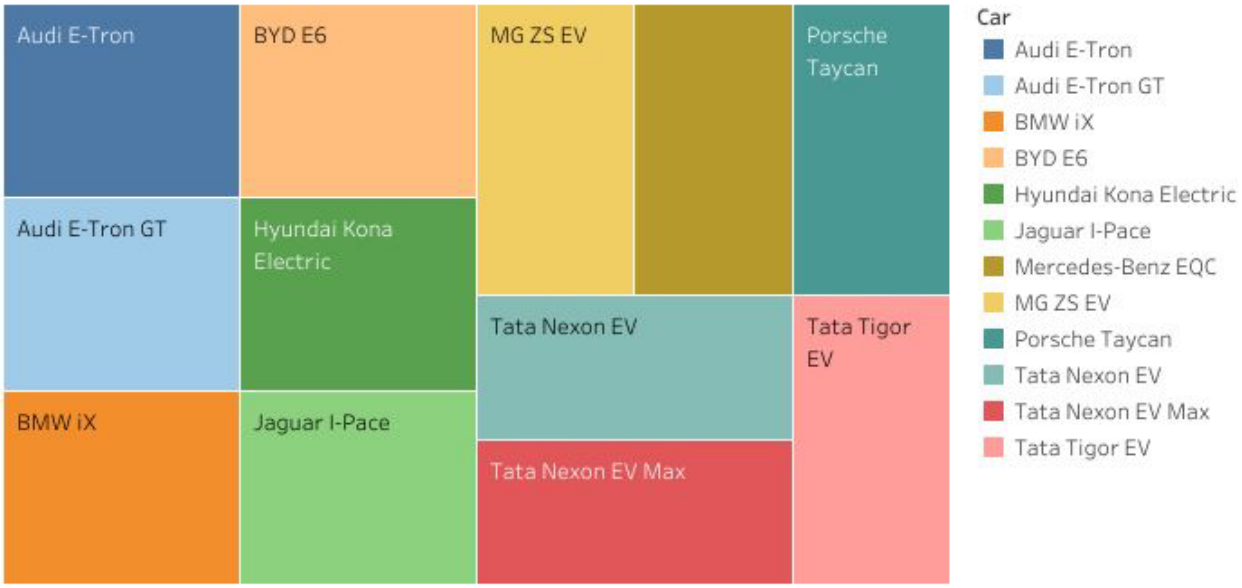
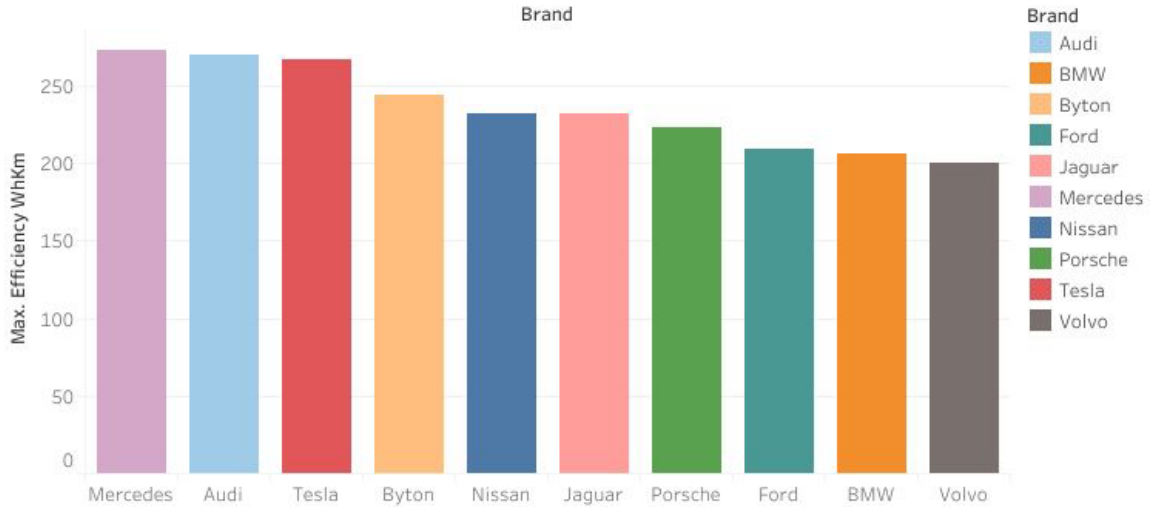
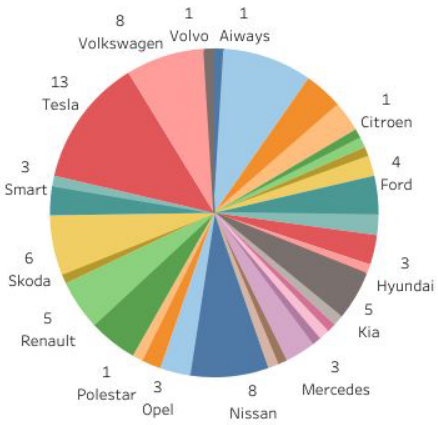


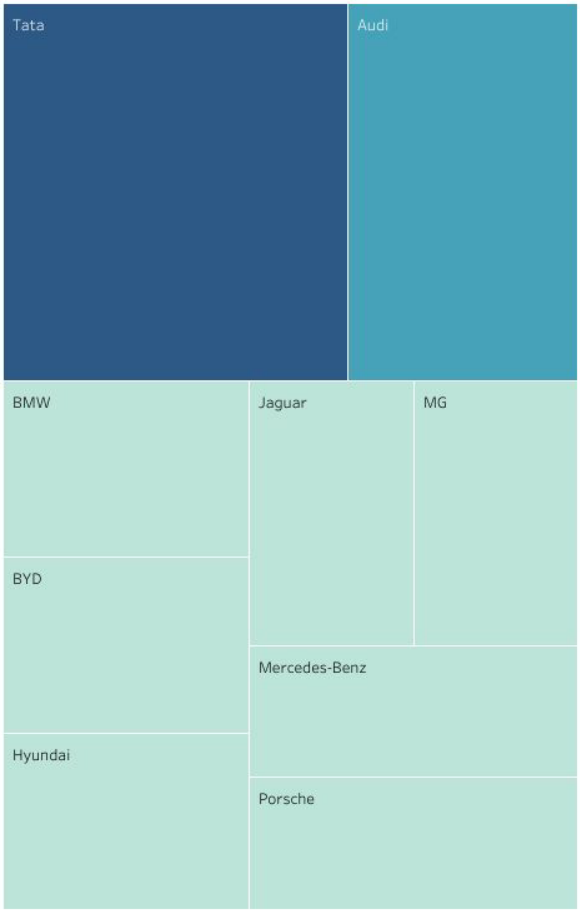
Top 10 most efficie nt brands



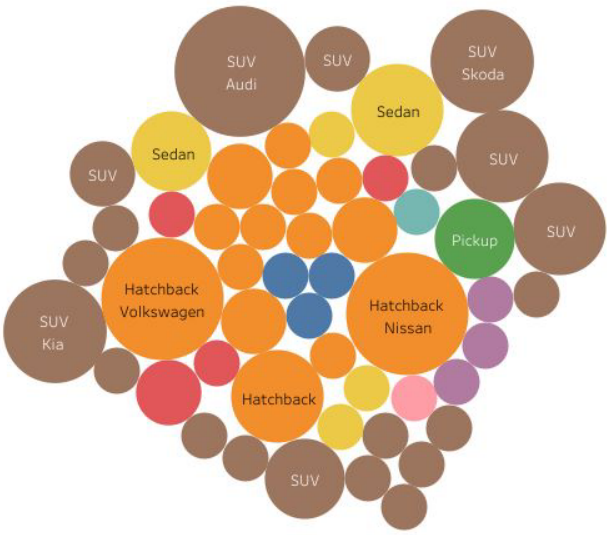
Brand filtered by power train type



Different EV cars in India



brands according to body style



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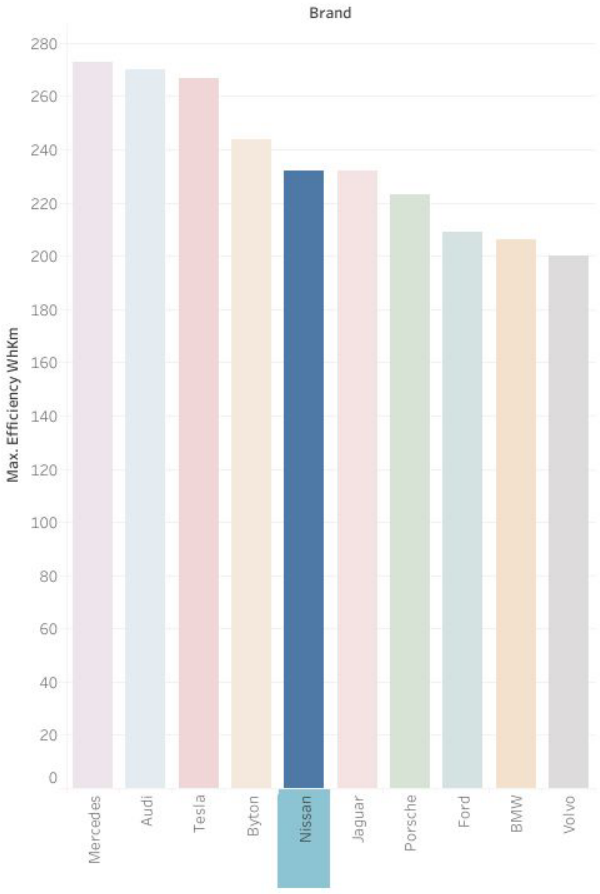

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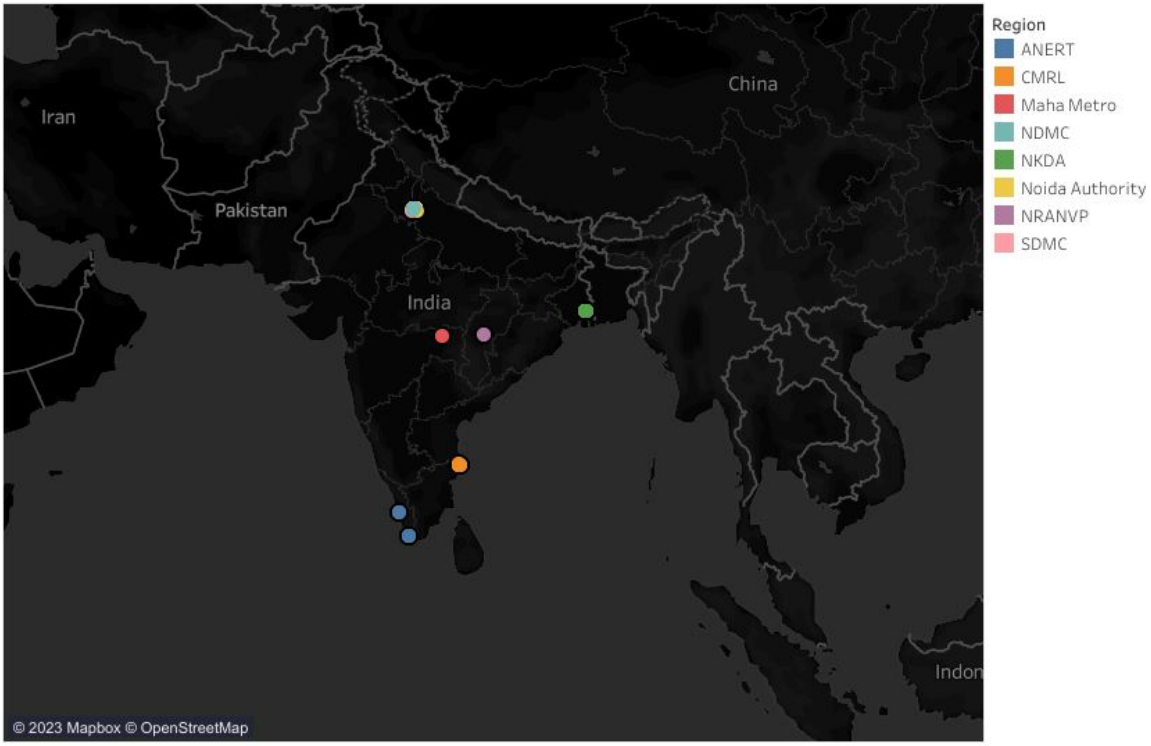

4. ADVANTAGES AND DISADVANTAGES:

4.1. ADVANTAGES:

1. Running cost of electrical is lower than diesel vehicle.
2. Electric vehicles have very low maintenance cost.
3. Driving an electric vehicle can help you reduce your carbon footprint.

4.2. DISADVANTAGES:

1. Battery life span concerns.
2. Low top speeds.
3. More expense to buy.
4. Long charging times.
5. Environmental impacts.

5. APPLICATIONS:

It is used in the electric motors, batteries, invertors, wiring and in charging stations because of its durability, reliability and superior electrical conductivity.

6. CONCLUSION:

The basic conclusion is that when it comes to climate change and air quality, electric cars are clearly preferable to petrol or diesel cars. Contrary to some public doubts and uncertainties about the environmental benefits of electric cars, the science is increasingly clear.