1. INTRODUCTION

1.1 Overview

India is the world's third-largest producer and third-largest consumer of electricity. The national electric grid in India has an installed capacity of 370.106 GW as of 31 March.2020. Renewable power plants, which also include large hydroelectric plants, constitute 35.86% of India's total installed capacity. During the fiscal year (FY) 2019-20, the total electricity generation in the country was 1,598 TWh, of which 1,383.5 TWh generated by utilities. The gross electricity consumption per capita in FY2019 was 1,208 kWh.

In 2015-16, electric energy consumption in agriculture was recorded as being the highest (17.89%) worldwide. The per capita electricity consumption is low compared to most other countries despite India having a low electricity tariff. In light of the recent COVID-19 situation, when everyone has been under lockdown for the months of March to June the impacts of the lockdown on economic activities have been faced by every sector in a positive or a negative way. The dataset is exhaustive in its demonstration of energy consumption state wise. Analysing Electricity Consumption in India from Jan 2019 till 5th December 2020. This dataset contains a record of Electricity consumption in each states of India, here we are going to analyse State wise , Region wise and Overall Electricity consumption in India.

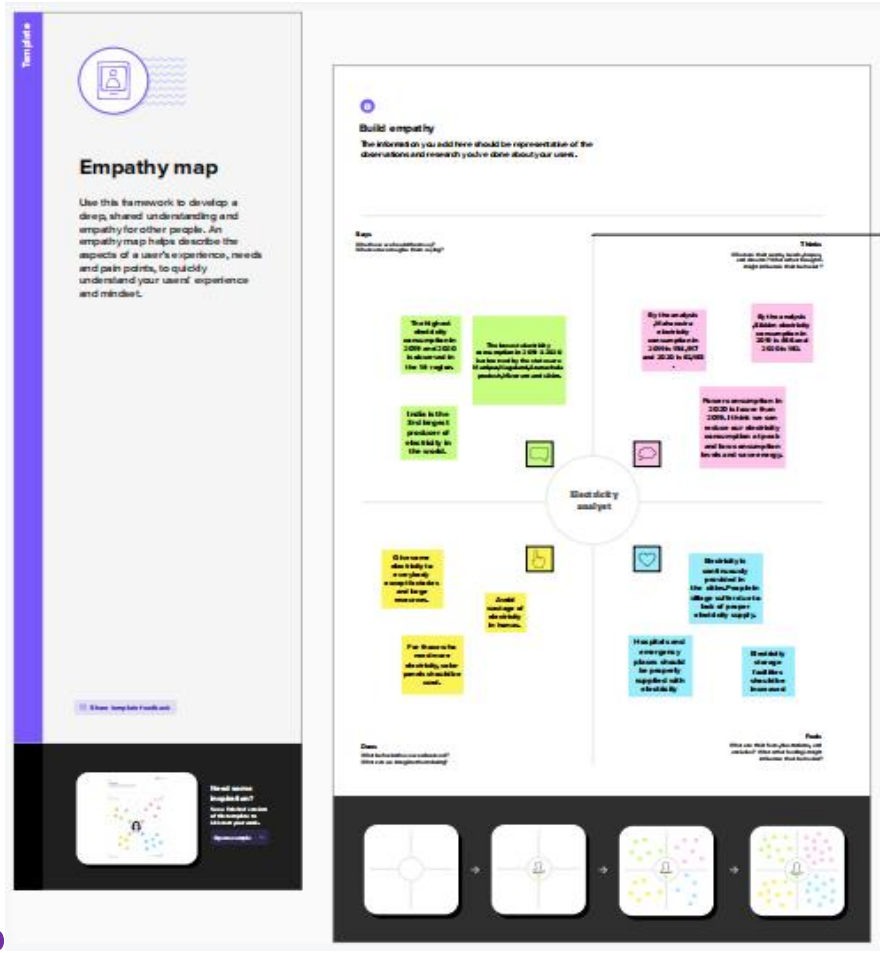
1.2 Purpose

In this project we analyze the power consumption between 2019 and 2020. The purpose of this program is to know how much our electricity consumption is, how to use it, and the benefits of saving electricity. An analysis of your energy data allows you to breakdown energy consumption and costs based on department segments and asset silos within a business or organization. It allows you to view specific energy use by utility, whether it's oil, electricity or gas, to strategize how to manage usage moving forward.

We all know that through this project we can reduce our electricity consumption.

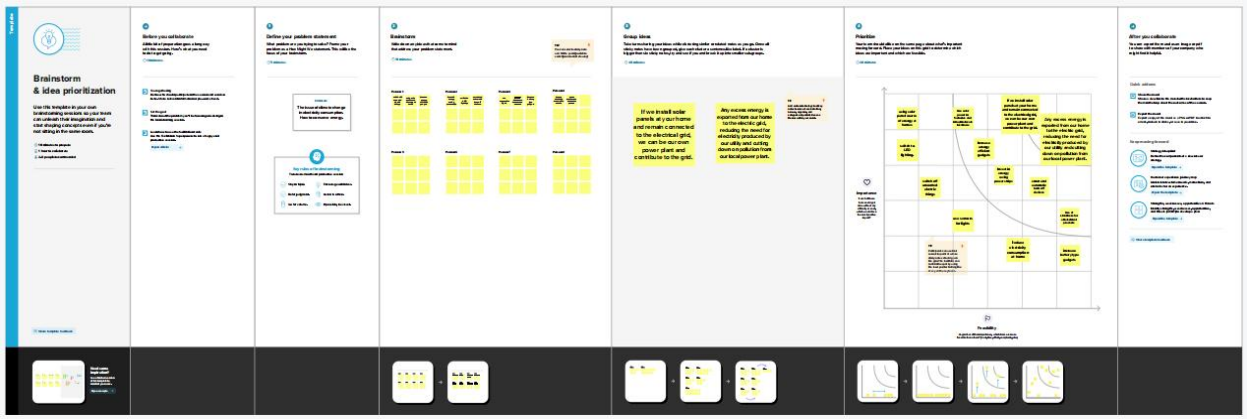
2. Problem Definition & Design thinking

2.1 Empathy

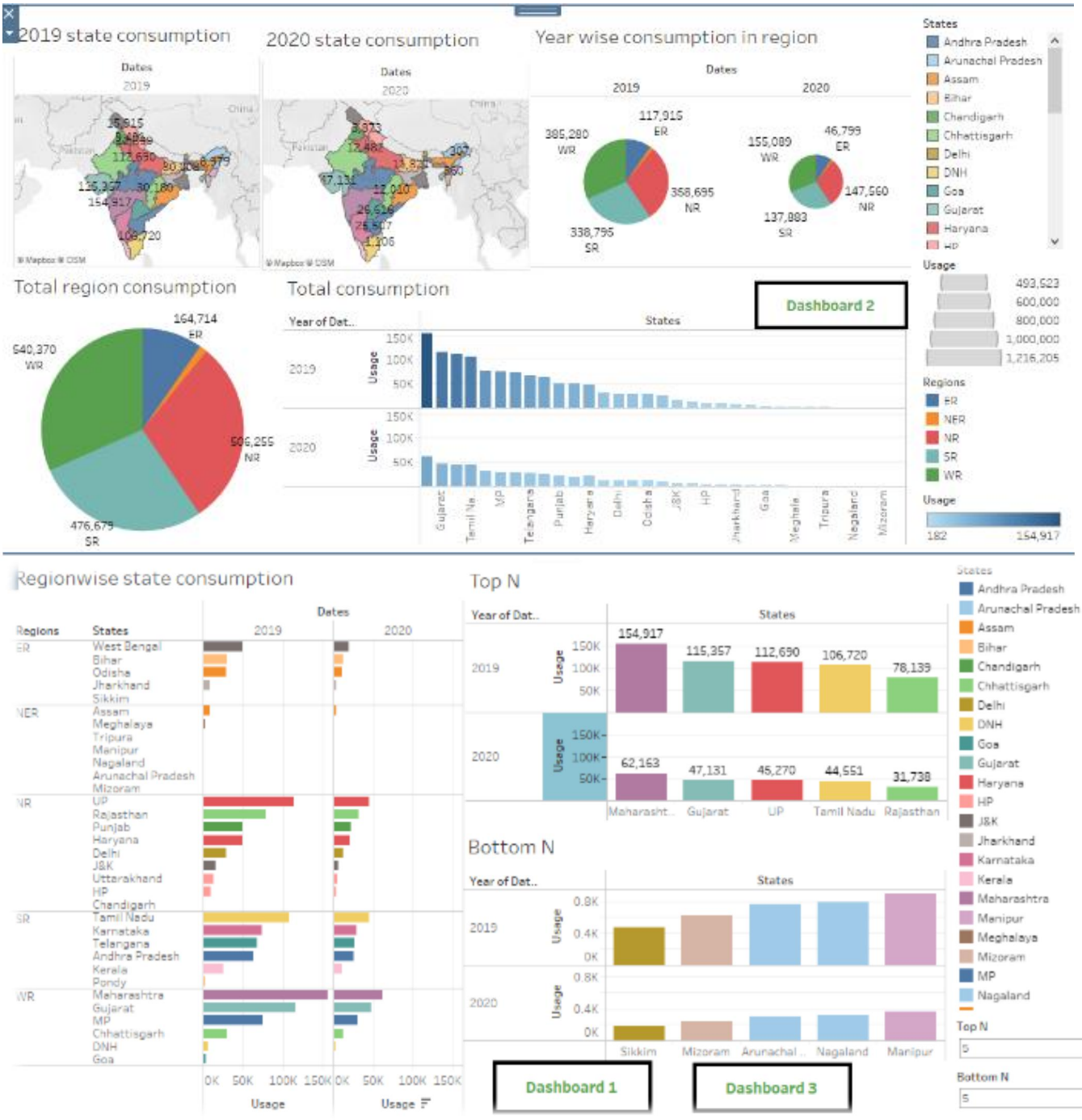


map

2.2 Ideation & Brainstorming map

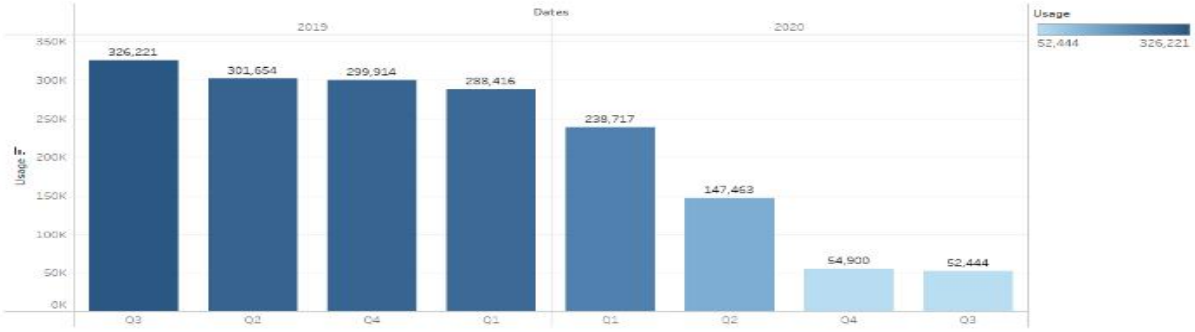


3. Result


2019 state consumption
2020 state consumption
Year wise consumption in region
Dates
2019
2020
States
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Delhi
DNH
Goa
Gujarat
Haryana
Usage
Total region consumption
164,714
ER
640,370
WR
506,255
NR
476,679
SR
Total consumption
Year of Dat..
States
Dashboard 2
Regions
ER
NER
NR
SR
WR
Regionwise state consumption
West Bengal
Bihar
Odisha
Jharkhand
Sikkim
Assam
Meghalaya
Tripura
Manipur
Nagaland
Arunachal Pradesh
Mizoram
UP
Rajasthan
Punjab
Haryana
Delhi
J&K
Uttarakhand
HP
Chandigarh
Tamil Nadu
Karnataka
Telangana
Andhra Pradesh
Kerala
Pondy
Maharashtra
Gujarat
MP
Chhattisgarh
DNH
Goa
Top N
154,917
115,357
112,690
106,720
78,139
62,163
47,131
45,270
44,551
31,738
Maharasht..
Gujarat
UP
Tamil Nadu
Rajasthan
Bottom N
Sikkim
Mizoram
Arunachal ..
Nagaland
Manipur
Dashboard 1
Dashboard 3

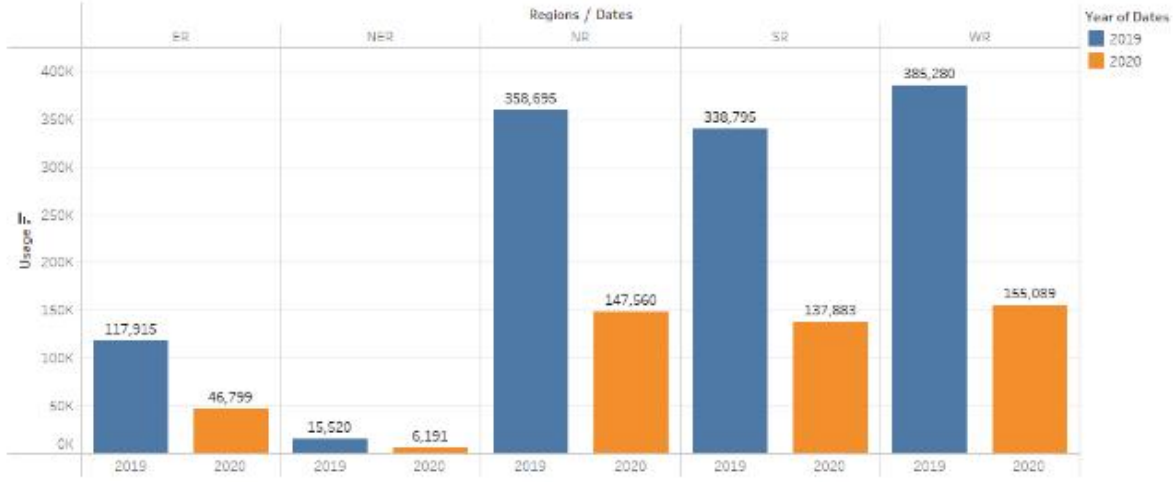
Story on electricity consumption in india

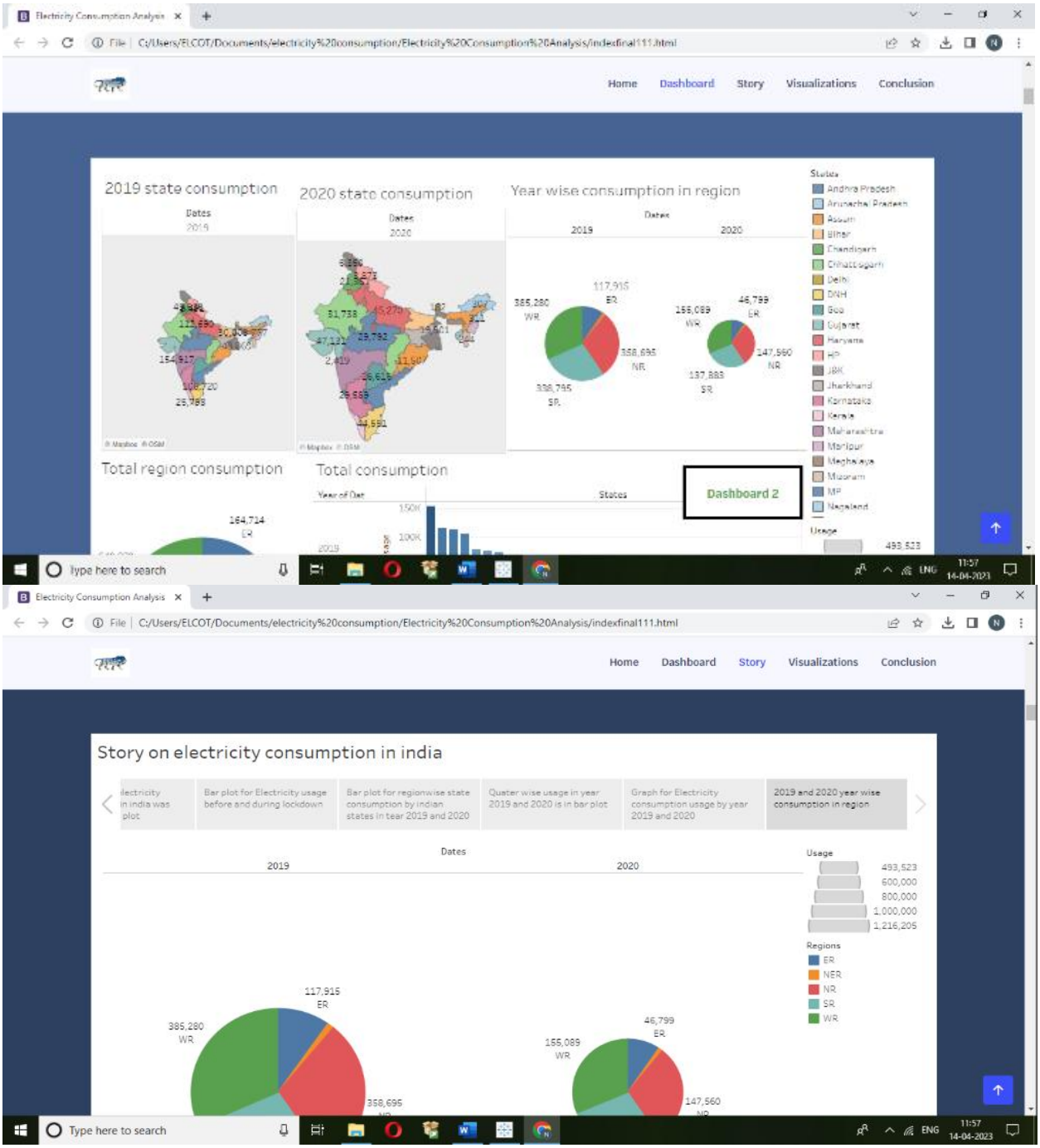
In year 2020 electricity consumption in india was defined in bar plot | Bar plot for Electricity usage before and during lockdown | Bar plot for regionwise state consumption by indian states in year 2019 and 2020 | **Quater wise usage in year 2019 and 2020 is in bar plot** | Graph for Electricity consumption usage by year 2019 and 2020



Story on electricity consumption in india

Electricity Consumption by Indian states in 2019 | Electricity consumption by Indian states in 2020 | Bar plot for Total electricity consumption by indian states in year 2020 and 2019 | **Regionwise plot clearly states consumption in 2019 is more as compared to 2020** | Plot defines top consumption by indian states in year 2019 and 2020 | Plot defines bottom consumption by indian in year 2019 and 2020





4.Advantages & Disadvantages

- **It is a clean, safe, cheap and convenient source of energy.**
- **Lower maintenance cost.**

- More efficient.
- No tailpipe emission.
- We all know that it can be set up in many sizes.
- It doesn't require as many employees.
- Reduces greenhouse emission.

Advantage of electric power is its reliable and uninterrupted supply runs the equipment efficiently and continuously. The transportation of electricity is easy once the transmission lines are functional. They work for years and need no or very less maintenance.

Power plants that burn biomass release sulfur dioxide and nitrogen oxides, two undesirable pollutants, into the air. Power plants that burn fossil fuel pump carbon dioxide into the atmosphere. Carbon dioxide is a greenhouse gas that causes Earth's temperature to rise.

5.Applications

The data analysis is used to calculate the power consumption in India in 2019 and 2020 respectively, especially during the lockdown period.

In this project data analytics with tableau is used to easy understanding visualizations through pie,bar,maps etc.

6.Conclusion

Maharashtra is the Highest Electricity consumption user of India.Gujarat is the Second Highest Electricity consumption user of India. Sikkim is the Lowest Electricity Consumption user of India . Electricity Consumption before and during Lockdown in India.Electricity consumption was more in 2019 in month of March-June before Lockdown.Electricity Consumption was less in 2020 in month of March-June during the Lockdown Electricity Consumption in Quarters.

Electricity Consumption in 2019 for Quarter 3 was Highest. Electricity Consumption in 2019 for Quarter 1 was Lowest.Electricity Consumption in 2020 for Quarter 3 was Lowest. Electricity Consumption in 2020 for Quarter 1 was Highest.

7. Future scope

Electricity will largely replace petrol and diesel as a fuel for road vehicles. It will also replace the natural gas and oil we burn to heat our homes and run our industries. In short, electricity will grow in importance as a carbon-free energy carrier. Batteries and similar devices accept, store, and release electricity on demand. Batteries use chemistry, in the form of chemical potential, to store energy, just like many other everyday energy sources. For electricity to become emissions-free, we must move further towards renewable energy solutions such as wind, solar, and biofuels. This alone could eliminate as many as 7 million deaths a year from air pollution and slow (or reverse) the effects of global warming.