Project Development

Project Development Template (Data Connectivity, Data Preperation, Dashboard, Story)

Date	11 February 2026
Team ID	LTVIP2026TMIDS80901
Project Name	Plugging in to the future : An exploration of electricity consumption patterns

Preprocessing Steps Performed On Dataset :

1. **Data Cleaning :**
   - Removed duplicate values
   - Removed Inconsistent or missing values

   Example :

   Duplicate values of same household and date were removed

2. **Column Renaming :**
   - Renamed column headers to meaningful names

   Example :

   Column “dt” was renamed to “Date”.

3. **Data Type Conversion :**
   - Converted Date column to proper Date format
   - Converted Consumption column to Number (Measure)
   - Converted State and Region fields to categorical (dimension) data types to support grouping and filtering.

   Example :

   State field converted to Dimension for region-wise grouping

4. **Created Parameters :**
   - Parameters were created to allow dynamic control of dashboard views and user interaction.
   - Top N
   - Bottom N

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5. **Filtering Irrelevant Data :**
   - Removed unnecessary columns not used for analysis

- Filtered out invalid or zero consumption values

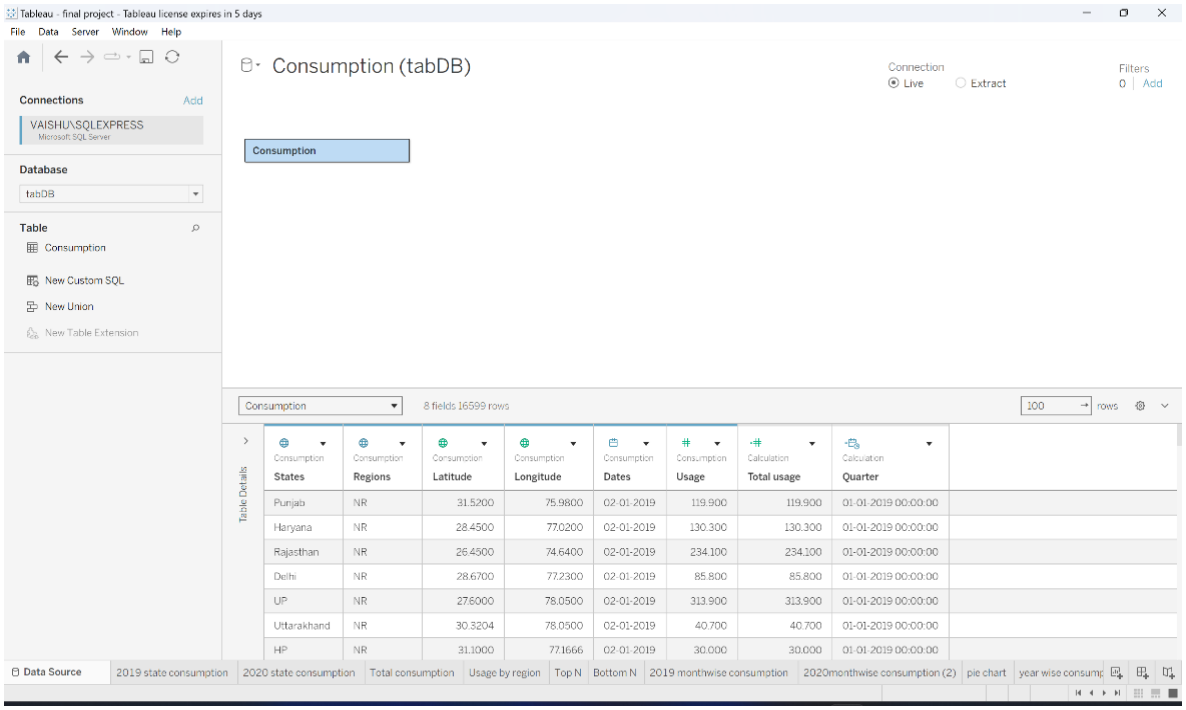
Example :

Columns unrelated to analysis were removed to simplify the dataset.

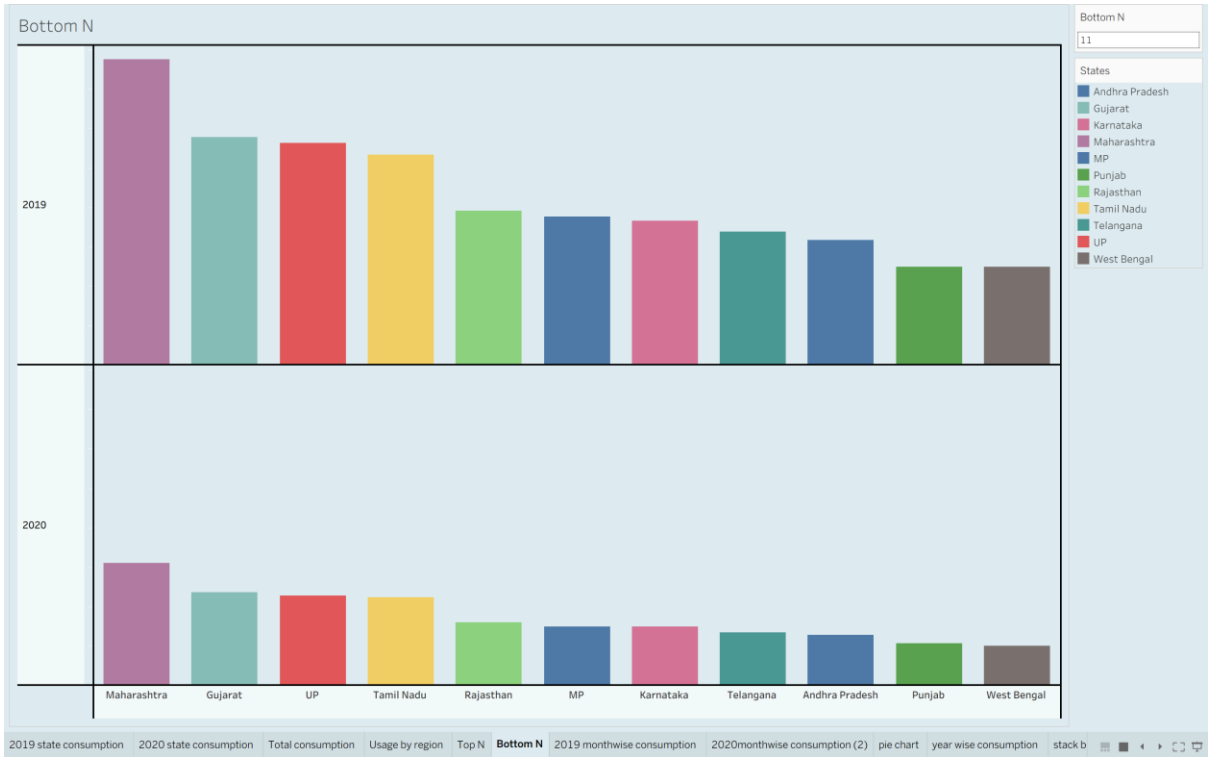
6. **Created Calculation Fields :**
    - Created Calculation Field for Quarter
    - Created Calculation Field for Total Usage

Proofs for few preprocessing steps :

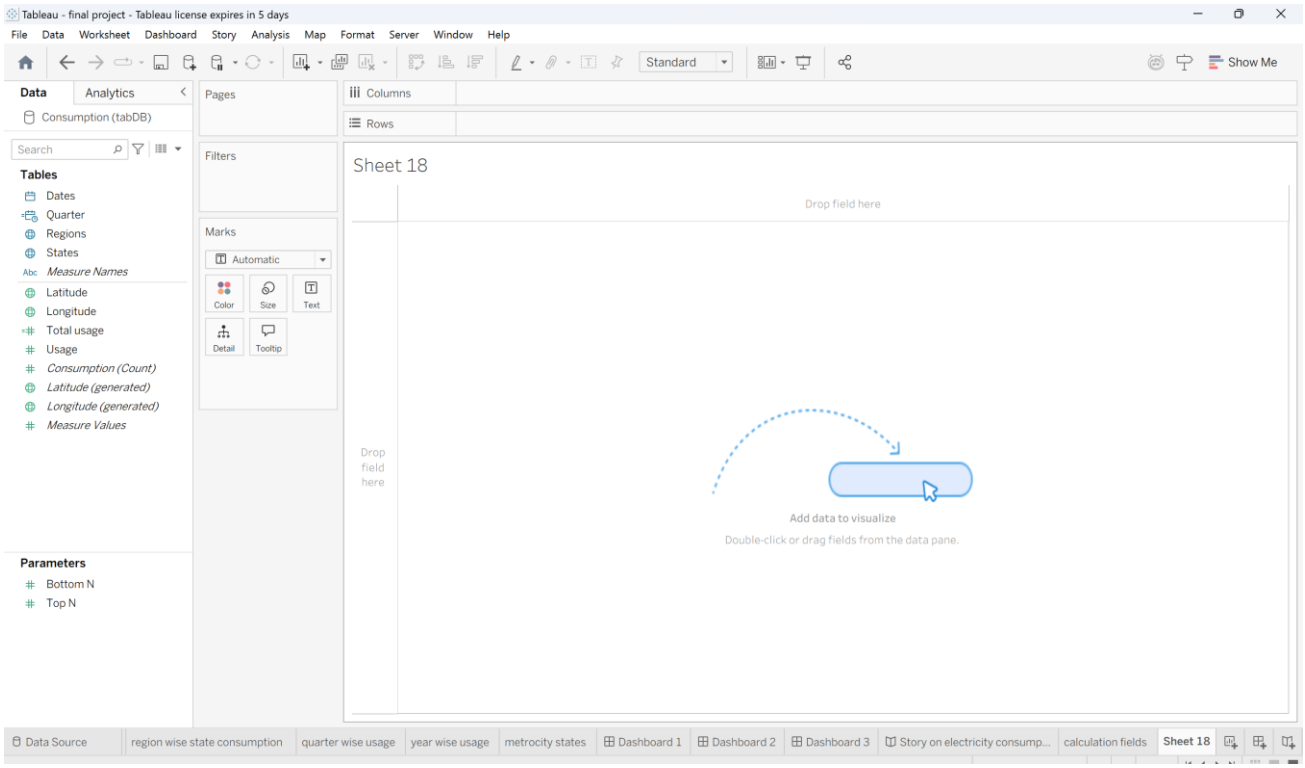
Here the image shows that I removed unwanted columns then I load the dataset in to tableau and also I changed the data types of region and states



The below image shows parameter which one I used in my project i.e Bottom N



The below image shows that calculation fields in left side of the worksheet

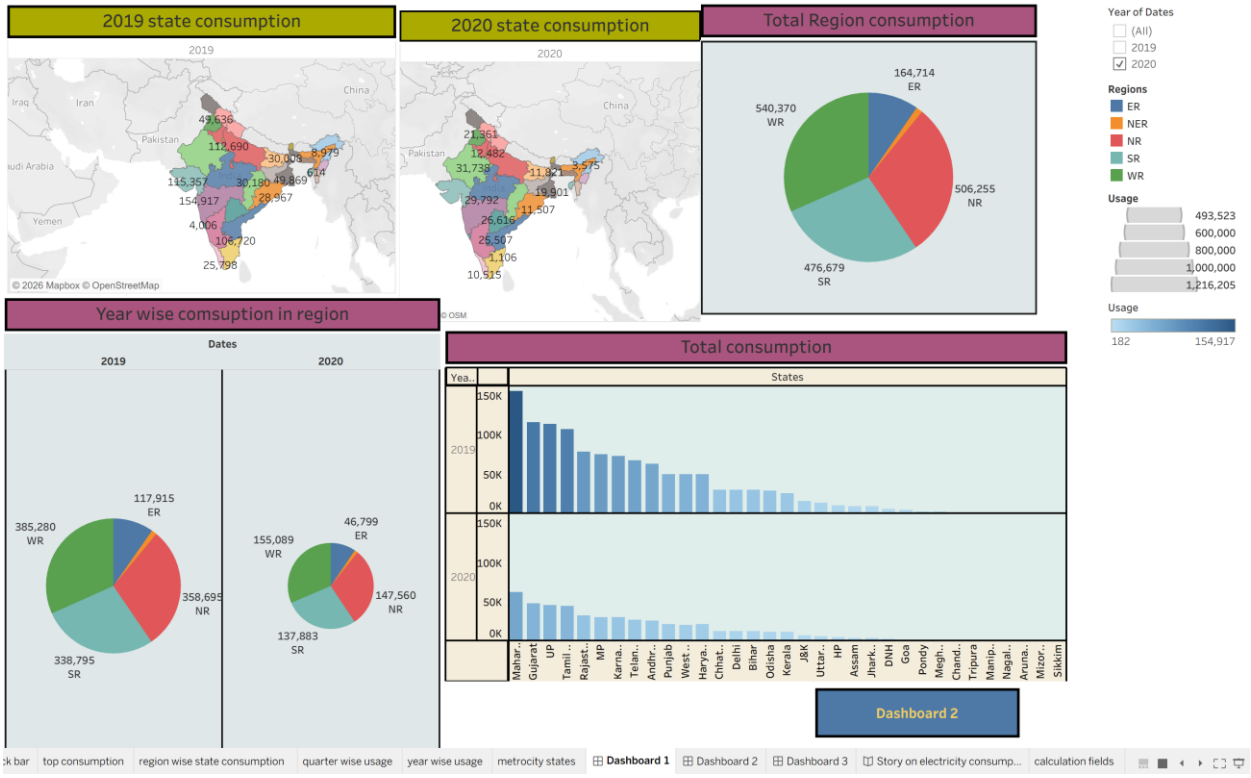


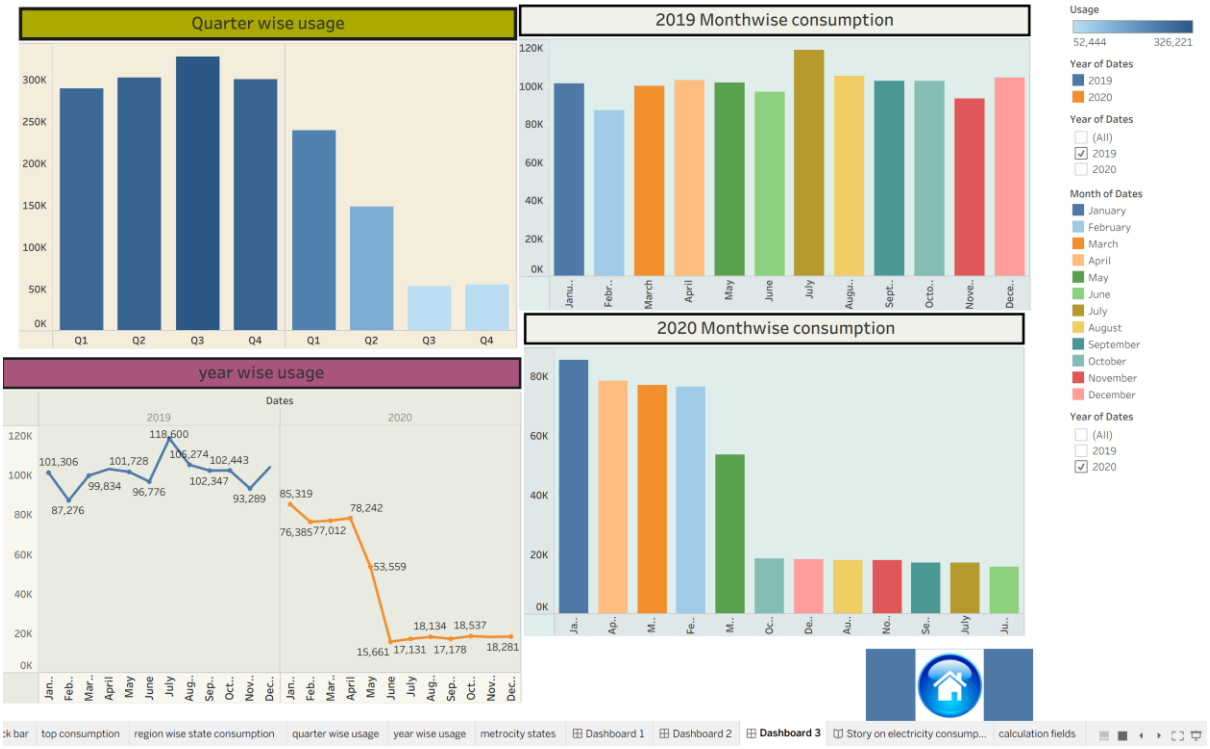
Dashboard Implementation :

A dashboard was created in Tableau to analyze electricity consumption patterns using trend charts, regional comparison views, and interactive filters for time period and region selection.

Examples:

- Monthly electricity consumption trend visualization
- Region-wise electricity consumption comparison



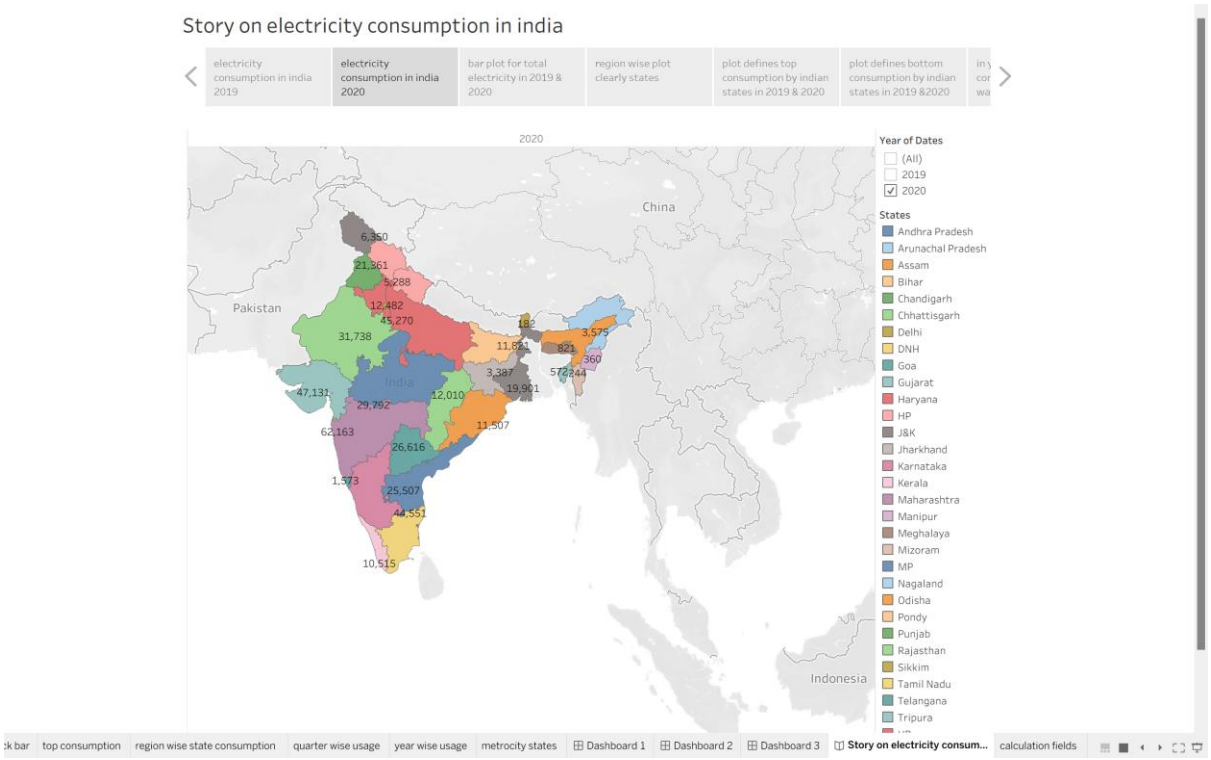


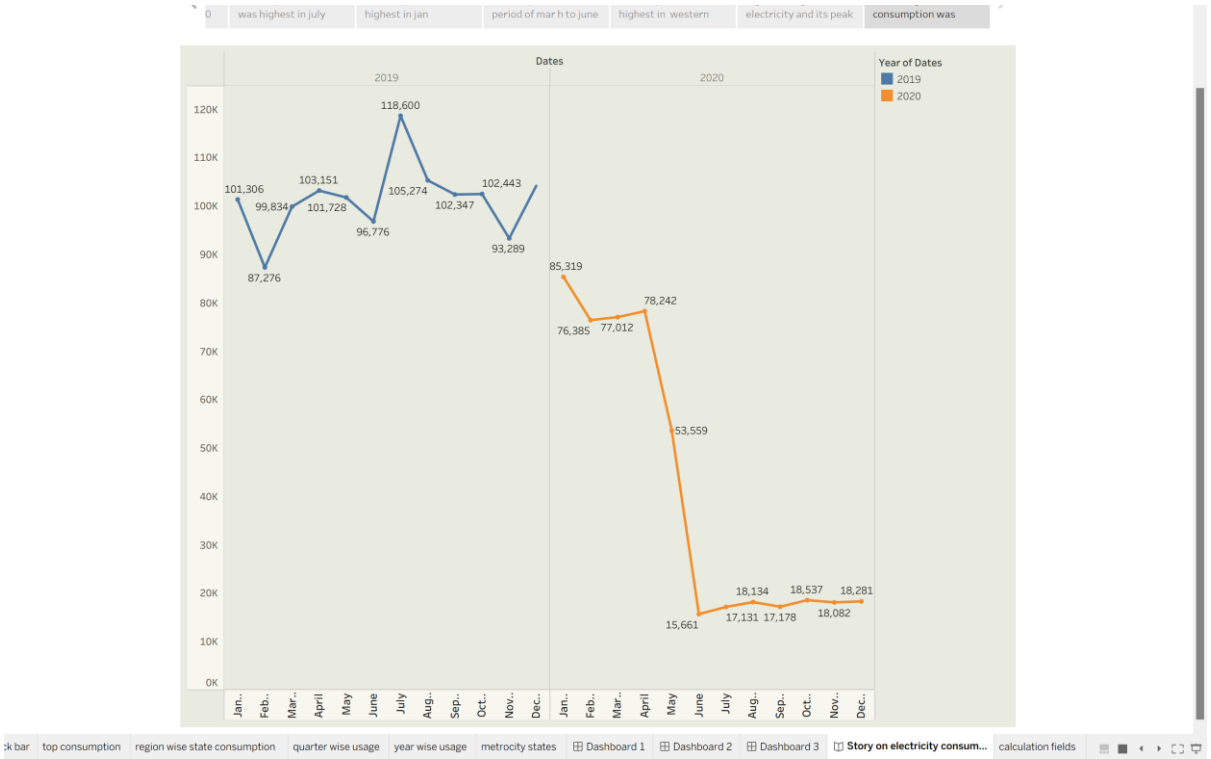
Story Implementation :

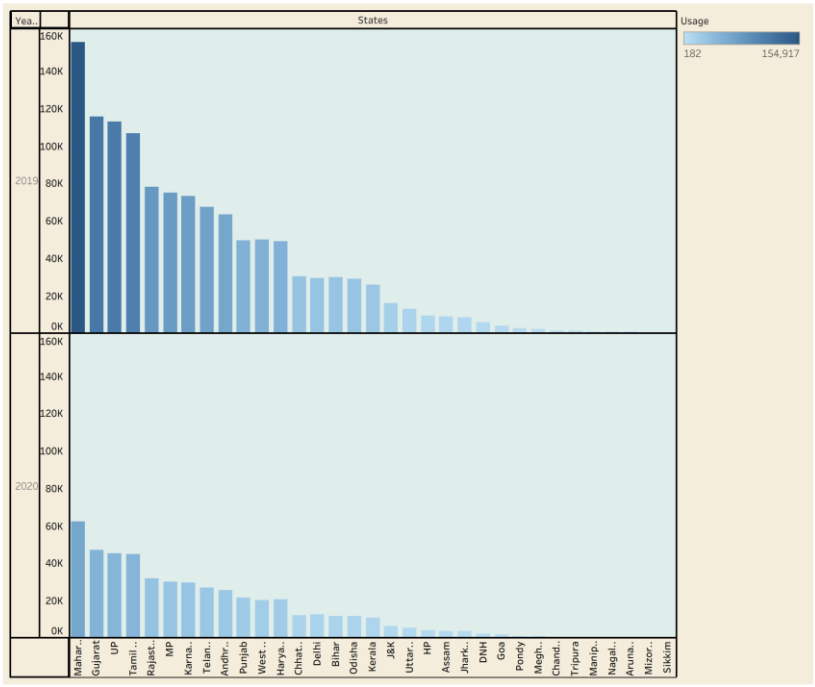
A Tableau Story was created to present insights in a step-by-step flow including overall trends, peak consumption periods, and regional usage patterns.

Examples:

- Story point showing yearly electricity consumption trend
- Story point highlighting peak usage months







ck bar | top consumption | region wise state consumption | quarter wise usage | year wise usage | metrocity states | Dashboard 1 | Dashboard 2 | Dashboard 3 | Story on electricity consum... | calculation fields