# DATA PREPARATION

Clean, transform, and organize the connected data to ensure consistency and accuracy. Create calculated fields, handle null values, and structure the data appropriately for effective visualization and insightful analysis in Tableau.

## ACTIVITY 1 : PREPARE THE DATA FOR VISUALIZATION

In this step, we focus on preparing the dataset for visualization in Tableau. Fortunately, the dataset we're working with has already been pre-cleaned, meaning major cleaning steps such as handling missing values, removing duplicates, and correcting inconsistencies have already been taken care of.

However, even with a clean dataset, it's still essential to go through a brief review process to ensure it's truly ready for analysis:

- Data Review & Exploration
  While the dataset is clean, it's good practice to explore it briefly—checking data types, value ranges, and distributions. This helps us understand the structure, identify any potential outliers, and gain familiarity with the data we'll be visualizing.

- Filtering and Structuring for Purpose
  Depending on the business question, we may still need to filter the data to focus on specific subsets—such as certain time periods, regions, or product categories. Structuring the data to match the visualization goal helps ensure relevance and clarity.

- Field Renaming & Final Formatting
  To enhance clarity in Tableau, we ensure field names are intuitive and consistent. We also check for proper data types (e.g., date fields, numeric values) and relationships if the dataset spans multiple tables.

- Optional Calculated Fields
  If needed, we can create calculated fields (e.g., profit margin, growth rate) to support deeper analysis. Even with a clean dataset, these additions can make our visualizations more insightful.

- Validation for Accuracy
  Lastly, a quick validation against the source or summary metrics ensures

everything is accurate. This final step helps maintain trust in the insights generated.