**Summary & Recomandation**

**Introduction**

The purpose of this analysis is to evaluate the performance of call center agents by analyzing customer feedback and operational metrics, such as the total number of calls, resolved issues, and agent-specific performance. The dataset used was derived from a call center and includes details about calls answered, rejected, and resolved, with a focus on improving overall customer satisfaction. The analysis was conducted using Power BI for data cleaning, visualization, and insights generation.

**Data Cleaning**

Data cleaning was a critical step in ensuring the quality and reliability of the analysis. The following operations were performed using Power BI:

* **Changed Type**: Data types were standardized for consistency.
* **Removed Columns**: Irrelevant columns were removed to focus on key metrics such as calls, agents, and resolutions.
* **Replaced Values**: Inconsistent or incorrect values were corrected to ensure accuracy.
* **Inserted Values**: Missing or incomplete entries were filled with appropriate values.
* **Filled Null Values**: Null values were addressed by filling them with relevant data points.
* **Merged Columns**: Multiple columns were merged where necessary to simplify the dataset.

These steps ensured that the dataset was clean and ready for analysis.

**Data Analysis and Visualization**

A comprehensive dashboard was created in Power BI to visualize and analyze key metrics. Several types of charts were used to represent various aspects of call center performance:

1. **Card Charts**:
   * Total number of calls
   * Total number of agents
   * Total calls answered
   * Total calls rejected
   * Percentage of calls answered
   * Percentage of calls rejected
   * Highest number of calls answered by a single agent

**Key Insights**:

* + The total number of calls and agent count provide an overview of the call center's operational capacity.
  + The high percentage of answered calls suggests a strong performance, but the rejected calls indicate areas for improvement.

1. **Stacked Column Chart**:
   * Displayed the total number of **resolved** and **not resolved** calls.

**Key Insights**:

* + The number of unresolved calls can be further analyzed to understand if specific issues or agents are contributing to this gap.

1. **Stacked Bar Chart**:
   * Showed total calls categorized by **topic**.

**Key Insights**:

* + The most frequent topics can be identified, enabling targeted training for agents or improving FAQ documentation for common issues.

1. **Slicer**:
   * Allowed filtering of total calls by **months**, giving insights into time-based trends.

**Key Insights**:

* + Certain months may have seen spikes or drops in call volumes, helping in resource planning and workforce management.

1. **Pie Chart**:
   * Illustrated the **sum of calls answered by agents**.

**Key Insights**:

* + The pie chart highlighted top-performing agents, providing a clear view of the distribution of workload and agent efficiency.

1. **Stacked Column Chart**:
   * Displayed the **sum of call duration by agent**.

**Key Insights**:

* + Agents with longer call durations could be handling more complex cases or may require training for efficiency improvements.

1. **Donut Chart**:
   * Represented the **sum of rejected calls by agent**.

**Key Insights**:

* + This chart clearly identified which agents had higher rejection rates, which may indicate technical issues or training needs.

**Recommendations for Improvement**

Based on the analysis, the following recommendations are suggested for improving call center performance and customer satisfaction:

1. **Reduce Rejected Calls**:
   * Agents with high rejection rates should undergo further training or troubleshooting to identify potential technical issues. Ensuring that calls are handled promptly will improve customer experience.
2. **Focus on Unresolved Calls**:
   * The analysis of unresolved calls shows that a significant number of issues remain open. Implementing more effective call resolution strategies, such as improved training for complex topics, can help reduce this number.
3. **Optimize Call Duration**:
   * Agents with longer call durations may benefit from efficiency training or tools to help them handle calls more quickly while still resolving issues satisfactorily.
4. **Monitor High-Volume Periods**:
   * Calls filtered by month show patterns in call volume. During high-volume periods, additional staffing or automated systems can help handle the increased load and improve customer satisfaction.

**Conclusion**

This analysis highlights key areas of strength and opportunities for improvement within the call center. By addressing agent performance, rejected calls, and unresolved issues, the call center can continue to enhance its overall efficiency and customer satisfaction. Regular monitoring through the provided Power BI dashboard will enable management to make data-driven decisions to optimize both agent performance and customer service quality.