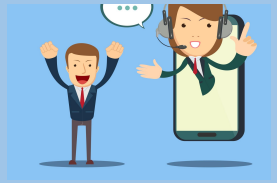


Call Centre Dashboard – Power BI Project Presentation

Submitted By :

SAGAR SS

Data Analytics

Call Centre Dashboard using Power BI

Objective:

To analyze call centre operations and provide insights into performance, customer experience, and efficiency for **October 2020**.

Introduction

This Power BI project analyzes **Call Centre operations for October 2020**, focusing on the following performance categories:

- Total Calls Received
- Calls Resolved vs. Unresolved
- Customer Satisfaction Scores
- Average Call Duration
- Agent and Call-Centre Performance
- Call Topics (Billing, Payment, Service, etc.)
- Call Channels (Call-Centre, Chatbot, Email, Web)
- Customer Sentiment

The analysis includes insights across **agents, call types, call centres, and time periods within October 2020**, and uses various visualizations to explore **operational efficiency, customer experience, and productivity patterns**.

Dataset Description

Dataset Period: October 2020
Dataset Source: [From Kaggle]
Dataset Size: Contains records of call centre operations (calls, agents, customer feedback) for one month.

Key Columns & Fields:

- **Call-Centres** – Locations of call centres.
- **City** – Customer city.
- **State** – Customer state.
- **Channel** – Communication channel (Call-Centre, Chatbot, Email, Web).
- **Reason** – Call type (Billing, Payment, Service, etc.).
- **Sentiment** – Customer sentiment (Positive, Negative, Neutral, etc.).
- **Response Time** – Time taken to respond.
- **Csat Score** – Customer satisfaction rating.
- **Date Table** – Date, Day, Day No.

Data Model

The data model consists of:

- **Fact Table:** Call records (calls, duration, sentiment, resolution, etc.)
- **Dimension Tables:** Date Table (Date, Day, Day No.)
- Relationships link call records with date and other attributes.

Measures & Calculations (DAX)

The following measures were created in Power BI for this dashboard:

- **Total Calls**
- **Total Call Duration in Minutes**
- **Call Duration in Hours**
- **Average Call Duration (Min)**
- **Response Time %**

These measures power the KPIs and visualizations in the dashboard.

Dashboard Walkthrough - HOME PAGE

The dashboard consists of multiple visualizations:

- **KPI Cards:**
  - Calls **(Total Calls)**
  - Call Duration **(Hrs)**
  - Call Duration **(Min)**
  - Avg Call Duration **(Min)**
  - Response Time **%**

CHARTS :

- **Bar Chart:** Calls by Day (Sun–Sat).
- **Map Chart:** Calls by State.
- **Treemap:** Calls by Reason (Billing, Payment, Service).
- **Donut Chart:** Calls by Channel (Call-Centre, Chatbot, Email, Web).
- **Bar Chart:** Calls by Sentiment (Negative, Neutral, Positive, Very Negative, Very Positive).
- **Bar Chart:** Calls by Call-Centres (Los Angeles, Baltimore, Chicago, Denver).

“In addition to visualizations, the dashboard includes **navigation buttons (Home & Grid)** that allow users to switch between views seamlessly. This improves user experience and makes the report more interactive.”

Dashboard Walkthrough – Grid Page

Purpose

- Shows detailed **call-level data** for deeper analysis.
- Complements the summary view by enabling drill-down.

Key Features

- **KPIs**: Calls, Call Duration (Hrs/Min), Avg Call Duration, Response Time %.
- **Filters**: Date Range, Channel, City.
- **Detailed Table**: Call ID, Customer, Channel, State, Reason, Response Time, City, Call Duration.
- **Navigation**: Switch easily between Home ↔ Grid.

Value

- Enables managers to analyze individual calls.
- Identifies patterns in response time & call reasons.
- Supports both high-level and granular decision-making.

Insights & Findings (October 2020)

- Total of **32.94K calls** were handled in October 2020.
- Average call duration was around **25 minutes**.
- **Billing questions** were the most common call reason.
- Majority of calls came through the **Call-Centre channel (32.3%)**, followed by Web and Email.
- Negative sentiment calls (11.1K) were higher than positive ones.

Among call centres, **Los Angeles** handled the most calls (14K), followed by **Baltimore** (11K).

➢ Response Time % stood at **75%**, showing scope for improvement.

Conclusion

The Call Centre Dashboard provides an interactive and visual way to monitor call centre performance for **October 2020**.

Key Benefits:

- Clear tracking of call volumes, call duration, and response time.
- Insights into customer satisfaction and sentiment.
- Visibility into channel-wise and location-wise performance.
- Data-driven support for improving call centre operations.

Future Scope:

- Predictive analysis for call volume forecasting.
- Deeper sentiment analysis using text mining/AI.

“The inclusion of navigation buttons enhances interactivity, ensuring that stakeholders can easily move across different report pages and focus on specific analyses.”

CALL CENTRE DASHBOARD | HOME

MENU

Home

Grid

FILTERS

Date

01-10-2020

31-10-2020

Channel

All

City

All

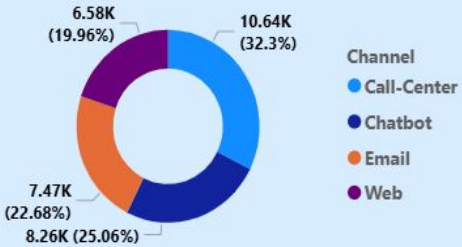
Calls	Call Duration (Hrs)	Call Duration (min)	Avg Call Duration (Min)	Response Time %
32.94K	13.74K	824.22K	25.02	75%

Calls by Day

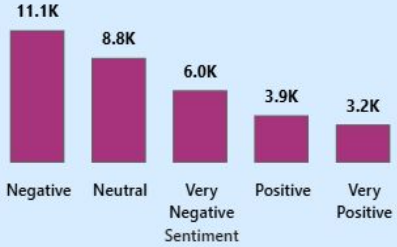
Calls by State

Calls by Reason

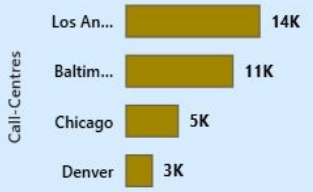
Calls by Channel



Calls by Sentiment



Calls by Call-Centres



Home | Grid | +

CALL CENTRE DASHBOARD | GRID

Home

Grid

Date

09-10-2020

23-10-2020

Channel

Call-Center

City

Albany

Calls	Call Duration (Hrs)	Call Duration (min)	Avg Call Duration (Min)	Response Time %
29.00	12.53	752.00	25.93	76%

Id	Customer Name	Channel	State	Reason	Response Time	City	Call Duration (min)
AND-39733170-I-001991-k9	Lanni Garoghan	Call-Center	New York	Payments	Within SLA	Albany	34.00
CGA-22892085-C-371334-Wg	Sansone Nayshe	Call-Center	New York	Billing Question	Within SLA	Albany	42.00
DLE-72620402-I-928798-Bo	Cacilie Goodbanne	Call-Center	New York	Payments	Within SLA	Albany	24.00
EGA-80173578-f-534574-fb	Carver Foulger	Call-Center	New York	Payments	Within SLA	Albany	27.00
EPH-65237484-N-471000-ti	Guglielmo Lacaze	Call-Center	New York	Payments	Below SLA	Albany	21.00
FJG-47933370-u-648990-V5	Lynnelle Flippen	Call-Center	New York	Payments	Within SLA	Albany	21.00
GHT-94923526-r-835439-Ji	Zaccaria Biaggioli	Call-Center	Georgia	Payments	Within SLA	Albany	15.00
GUU-35534837-L-130788-am	Sile Kalaher	Call-Center	New York	Billing Question	Within SLA	Albany	32.00
IHO-42545894-8-795440-Ma	Adrea Van't Hoff	Call-Center	New York	Payments	Below SLA	Albany	33.00
JFX-46734040-I-642986-BG	Kameko Burchess	Call-Center	New York	Payments	Within SLA	Albany	41.00
KSN-93901841-g-827773-ru	Darcy Cromwell	Call-Center	Georgia	Billing Question	Within SLA	Albany	19.00
MBK-95585707-k-892138-la	Abbot Mathely	Call-Center	New York	Billing Question	Within SLA	Albany	39.00
NYH-91540727-x-089517-9u	Mariellen Harman	Call-Center	New York	Billing Question	Below SLA	Albany	18.00
OAL-35524332-v-882551-y5	Carrol Kesley	Call-Center	New York	Payments	Within SLA	Albany	38.00
OJF-52410501-X-036682-ZZ	Lilas Antoniat	Call-Center	Georgia	Payments	Within SLA	Albany	17.00
OOP-18046567-U-387980-zP	Farica Kalkofer	Call-Center	New York	Billing Question	Within SLA	Albany	21.00
PDO-60147878-I-349302-Qo	Mortimer Chalkly	Call-Center	New York	Payments	Within SLA	Albany	31.00

Home | Grid | +