# **Project Charter**

# **ClearConnect Communication Oct 2024**

## Introduction:

ClearConnect Communications is a nationwide telecommunications provider offering internet, mobile, and digital payment services across multiple cities. The company’s mission is to deliver reliable connectivity and transparent billing for both residential and business customers.

The ClearConnect Call Center handles thousands of customer interactions monthly, with calls mainly related to payment processing, billing inquiries, and service outages.

## Project Goal:

The main goal of this project is to **analyze customer sentiment, satisfaction, and operational efficiency** across our call centers to identify:

* Performance gaps
* Areas impacting customer satisfaction
* Potential improvements in response and resolution times

Ultimately, the outcome should help management **improve CSAT (Customer Satisfaction)** and **reduce negative sentiment** and **call handling inefficiencies**.

## Business Objective:

Our customer satisfaction scores have fluctuated in recent months, and management wants to understand the reasons behind low CSAT and negative sentiment in specific regions, channels, or call centers.

## Project Objective:

By analyzing the given dataset, you need to:

1. Identify key **drivers of customer satisfaction** and **sentiment**.
2. Evaluate **response time** and **call duration** impact on satisfaction.
3. Compare **performance across call centers** and **channels** (phone, chat, email, etc.).
4. Detect **city/state trends** — which regions perform best/worst.
5. Monitor **time trends** (daily/weekly/monthly) in sentiment and CSAT.

## Milestone:

* + **Milestone 1 Ask (1-2 Days )** (Explore Dataset , Understand the data , Check the Questions asked by the stake holder
  + **Milestone 2 Prepare (1 Day)** (Store and organize the data ,Check data bias and integrity , Check if there’s any problem with the data.
  + **Milestone 3 Process (1 Day )** Check the data for errors – Choose the tools , Transform the data and document the cleaning process.
  + **Milestone 4 Analyze (2 Days )** Aggregate the data and preform calculations to get insights and answer the Question.
  + **Milestone 5 Share (1 Day )** Determine the best way to share the insights –Create effective data visualizations.
  + **Milestone 6 Act (1 Day )**  Final report along with share the project to GitHub and Kaggle –LinkedIn.

## Deliverable:

1. **Project Charter**
2. **Clean Dataset**
3. **EDA(Exploratory Data Analysis)**
4. **Final Report.**

## Milestone 1 (ASK) :

The process began with checking the dataset and reviewing it thoroughly to understand the data structure, project objectives, and stakeholder questions.

The most important questions to be answered:

* What is the **average CSAT score** across all call centers, and how does it vary by **location** or **channel**?
* Which **sentiment categories** are most common, and do they correlate with **low CSAT scores**?
* Are **negative sentiments** concentrated in certain **cities, reasons**, or **channels**?
* What percentage of customers did not provide a CSAT score, and can we identify patterns among them (e.g., certain channels or call centers)?
* Which factors (channel, call reason, sentiment, location) most strongly influence customer satisfaction?

## Milestone 2 ( Prepare) :

We downloaded the dataset and Identify how it’s organized , Sort and filter the data

And here’s a brief description about the dataset.

The dataset contains **12 columns**:  
**ID, Customer Name, Sentiment, CSAT Score, Call Time, Reason, City, State, Channel, Response Time, Call Duration (min),** and **Call Center**.

It includes a total of **32,941 rows**, representing all call logs recorded in **October 2024**.

* The **ID** column is an alphanumeric identifier.
* The **CSAT Score** ranges from **0 to 10**, with some **NULL values** representing customers who did not complete the satisfaction survey.
* The **Sentiment** column includes **five categories**: Very Negative, Negative, Neutral, Positive, and Very Positive.
* The **Reason** for calls falls into **three main categories**: Billing, Service Outage, and Payment.
* The **Channel** field indicates the mode of contact, with **four types**: Call Center, Email, Chatbot, and Web.
* The **Call Center** column represents **four different locations**: Baltimore (MD), Los Angeles (CA), Chicago (IL), and Denver (CO).

## Milestone 3 Process :

In this phase we need we will focus to clean the data before start the analysis here’s the process :

* 1. Check the data for errors ,( There wasn’t specific errors about the data )
  2. Checked and re-formatted the data (The date was include many text values , transitioned it to date , Also make sure the number columns are set as number ) .
  3. Check if there’s any duplicates in the Call ID column ( No duplicate values detected in the ID )
  4. Turn the dataset to table format so it can be easier when dealing and analyzing the data.
  5. I added 3 additional Columns ( Survey to check the customers who did the survey ) , Day to check the peak days , CSAT which indicates the Satisfaction rate of the customer ( 0-4 “*unsatisfied “*  - 5-7 “*neutral”* – 8-10 “*Satisfied “.*

## Milestone 4 Analyze:

This time we have some questions to answer by analyzing the data

* First I’ll create an overview about the dataset ( Total Calls Received overall , Total received calls per day , CSAT Score overall, SLA overall , Total Calls By Reason , Total Calls by Region Total Calls By Channel , Average Call duration overall , Overall Sentiment , Customer who did survey )
* **Initial analysis**

1. Total Calls 32941 in Oct with 1098 daily received calls.
2. CSAT Score indicates around 42% of overall score neutral ( 4 , 5 , 6 ) While the reset percentage distributed between Satisfied and not satisfied and Average CSAT Score 5.55
3. Calls *Within SLA* is 75% of overall calls received.
4. 71% Of the inquiries are billing questions while the other 29% distributed to Payment and service outages.
5. Top 5 States received calls are : - California , Texas ,Florida ,New York and Virginia
6. Lowest 5 states received calls are: Maine, Vermont, and Wyoming.
7. 32% of the Inquiries received through Call Centers and 19% through web
8. Average handling time 25 Mins.
9. 62% of the customer didn’t submit the survey.
10. Customer sentiment around 51% negative and 21% positive while the other Natural .

As long as the main of the project is to focus on 3 main areas

* **Performance gaps**
* **Areas impacting customer satisfaction**
* **Potential improvements in response and resolution times**

**The Final report will have a full details about all the results and the outcome.**

## Milestone 5 Share:

In this phase, I developed **three main dashboards** within Excel, integrated into the same workbook containing the dataset and pivot table analyses:

* **Overview:** Provides a general summary of all call centers, featuring key metrics such as **Total Calls**, **SLA**, **CSAT**, and **Sentiment**.
* **Performance:** Delivers a comparative analysis of performance across all call centers and illustrates **daily and weekly trends** to highlight operational patterns.
* **CSAT Improvement:** Concentrates on **CSAT and Sentiment by Channel**, along with **Top CSAT by State**. States were divided into two categories — those with **fewer than 500 surveys** and those with **more than 500 surveys** — to ensure unbiased results. This dashboard also explores the relationship between **CSAT**, **Sentiment**, and **SLA** to identify potential performance impacts.

All these dashboards answered the business questions.

## Milestone 6 Act:

I’ve included the final conclusions in the **Final Report**, which contains all the key **insights and recommendations**. The report also highlights the **missing data** required for a complete understanding of the business — such as **agent performance**, **offer calls**, and **abandoned calls**.