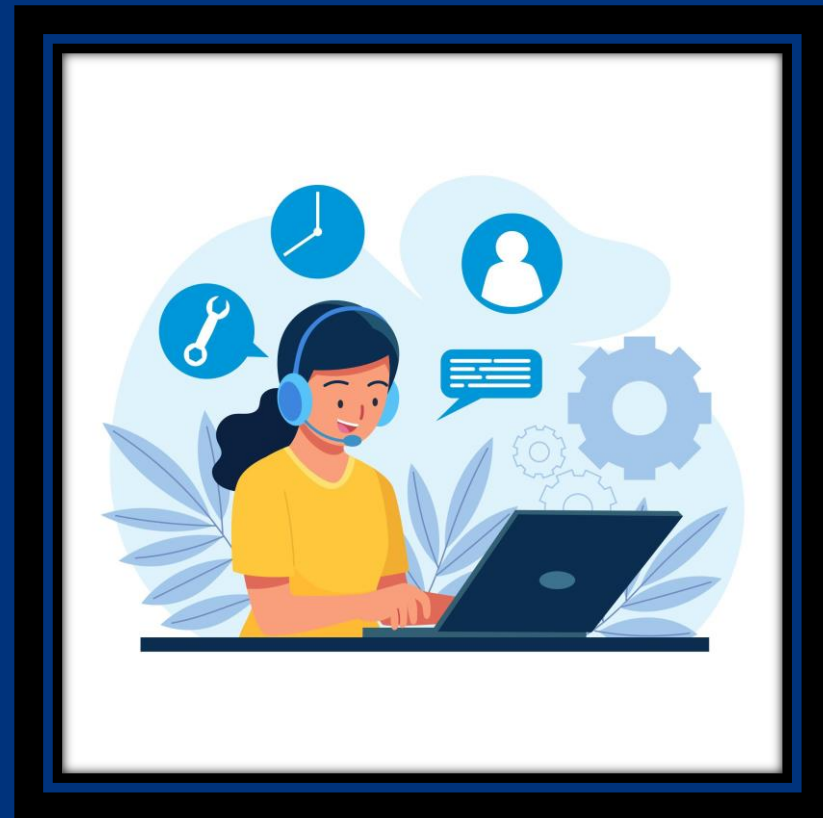


ABC Call Volume Trend Analysis



STEPS FOR DATA ANALYSIS PROCESS

- 1 PLAN
- 2 PREPARE
- 3 PROCESS
- 4 ANALYZE
- 5 SHARE
- 6 ACT

ABC Call Volume Trend Analysis

This project is all about the **ABC Call Volume Trend Analysis**.

In this we will find about all the details that will let us know about the **ABC Call Volume Trend Analysis**.

- Download the csv data to excel for all the data analytics.
- Things we are going to find
 - ☐ Calculate the average call time duration for all incoming calls received by agents
 - ☐ Show the total volume/ number of calls coming in via charts/ graphs [Number of calls v/s Time]. You can select time in a bucket form
 - ☐ As you can see current abandon rate is approximately 30%. Propose a manpower plan required during each time bucket [between 9am to 9pm] to reduce the abandon rate to 10%.
 - ☐ Now propose a manpower plan required during each time bucket in a day. Maximum Abandon rate assumption would be same 10%.

DATA ANALYSIS PROCESS

The analysis makes
things more simpler



Ask: Effective questions, stating the required output by the leadership team.

Prepare: Identify and taking the input data set to get the analytical result



Process: using the provided data by the team and excel sheet sorting.





Analyze: using tools ,sorting
filtering data identify patterns and
draw conclusions



Share : understanding the conclusions in the
form of ppt



Act: Team can work according
to the results to take further
action.

DATA ANALYSIS PROCESS

Steps to follow for Exploratory data analysis

- Understanding data columns and data
- Checking for missing data
- Clubbing columns with multiple categories
- Checking for outliers
- Removing outliers
- Drawing Data Summary

Approach

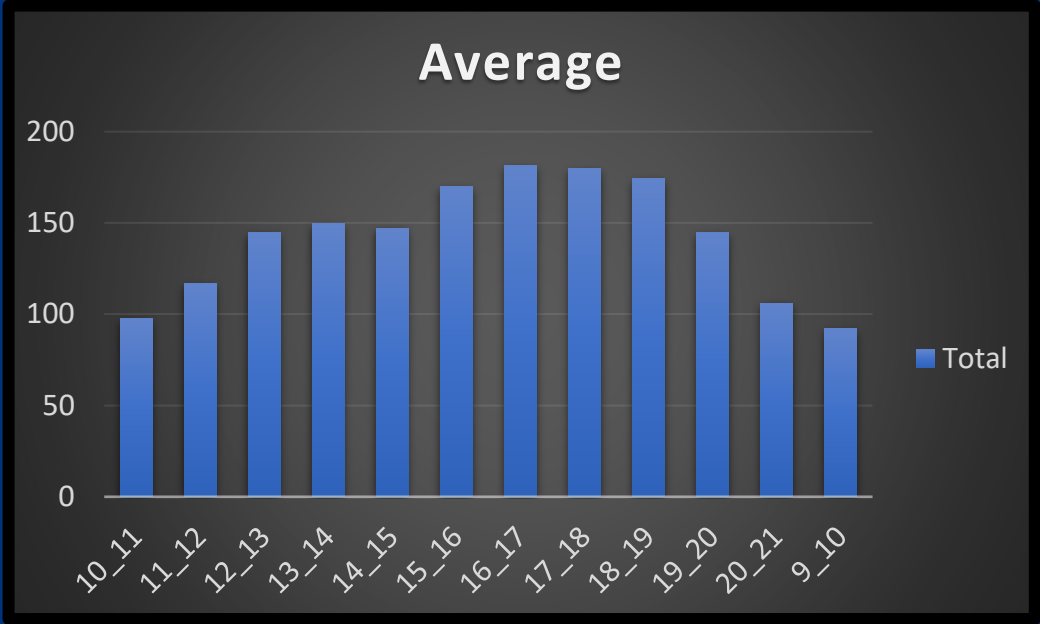
- ✓ The data was downloaded from google sheets to excel .
- ✓ All the data was filtered and categorised.
- ✓ All steps from exploratory data analysis are performed.
- ✓ For all the queries research the topics to get the optimized results for the analytics.
- ✓ All the steps are done in the excel to get to know the results.
- ✓ All the information regarding pivot tables and lookup and various different functions that were used to get the output for the desired results.
- ✓ The solutions for the quires are there in the next slides.

ScreenShots and Solutions



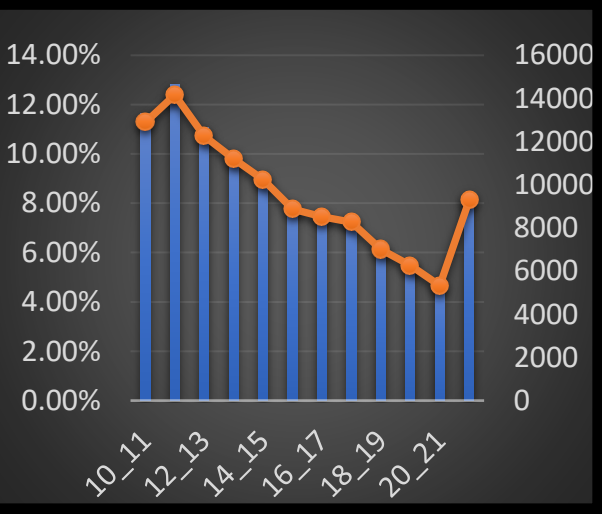
Calculate the average call time duration for all incoming calls received by agents

Row Labels	Average of Averageif
10_11	97.42402163
11_12	116.7837413
12_13	144.7250237
13_14	149.5409567
14_15	146.9693211
15_16	169.8968228
16_17	181.4393491
17_18	179.7245137
18_19	174.3246753
19_20	144.5825468
20_21	105.9491371
9_10	92.01032541
Grand Total	139.5321473

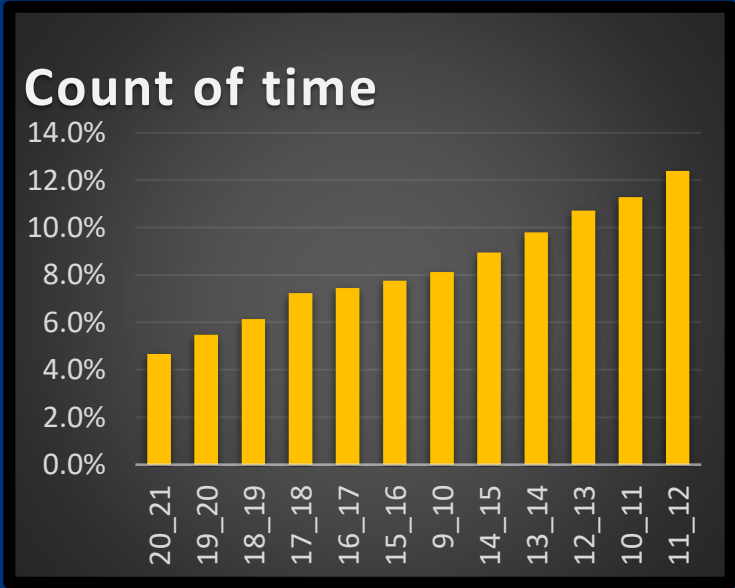


Show the total volume/ number of calls coming in via charts/ graphs

[Number of calls v/s Time]. You can select time in a bucket form

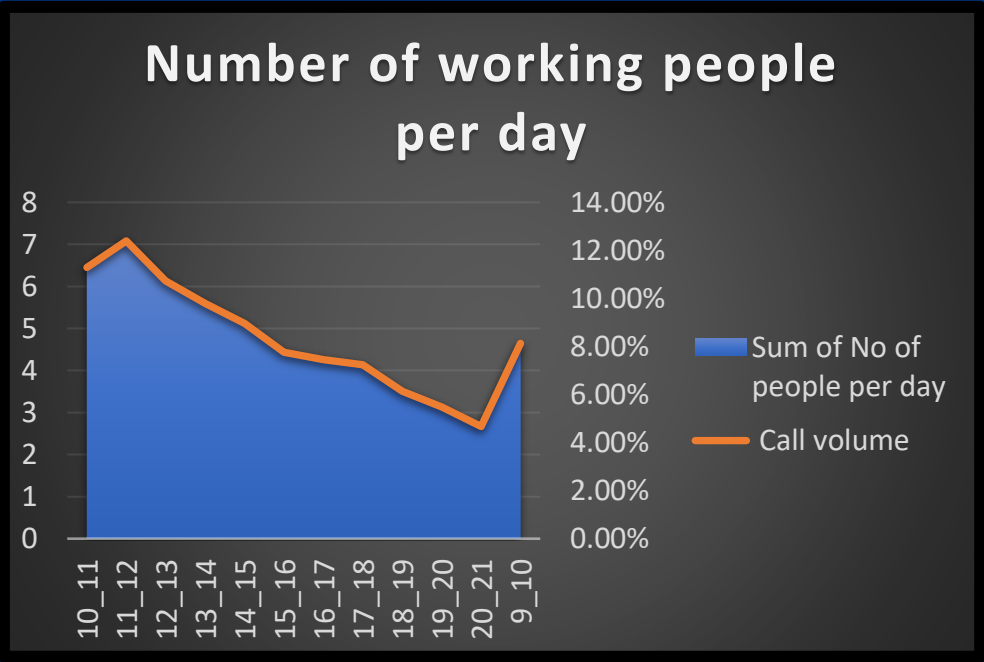


Row Labels	Count of Customer_Phone_No	Count of Time
10_11	13313	11.28%
11_12	14626	12.40%
12_13	12652	10.72%
13_14	11561	9.80%
14_15	10561	8.95%
15_16	9159	7.76%
16_17	8788	7.45%
17_18	8534	7.23%
18_19	7238	6.13%
19_20	6463	5.48%
20_21	5505	4.67%
9_10	9588	8.13%
Grand Total	117988	100.00%



Row Labels	Count of Time
20_21	4.7%
19_20	5.5%
18_19	6.1%
17_18	7.2%
16_17	7.4%
15_16	7.8%
9_10	8.1%
14_15	9.0%
13_14	9.8%
12_13	10.7%
10_11	11.3%
11_12	12.4%

As you can see current abandon rate is approximately 30%. Propose a manpower plan required during each time bucket [between 9am to 9pm] to reduce the abandon rate to 10%.



Time_bucket	Count of calls	Call volume	No of people per day
9_10	9588	8%	5
10_11	13313	11%	6
11_12	14626	12%	7
12_13	12652	11%	6
13_14	11561	10%	6
14_15	10561	9%	5
15_16	9159	8%	4
16_17	8788	7%	4
17_18	8534	7%	4
18_19	7238	6%	3
19_20	6463	5%	3
20_21	5505	5%	3
	117988		57

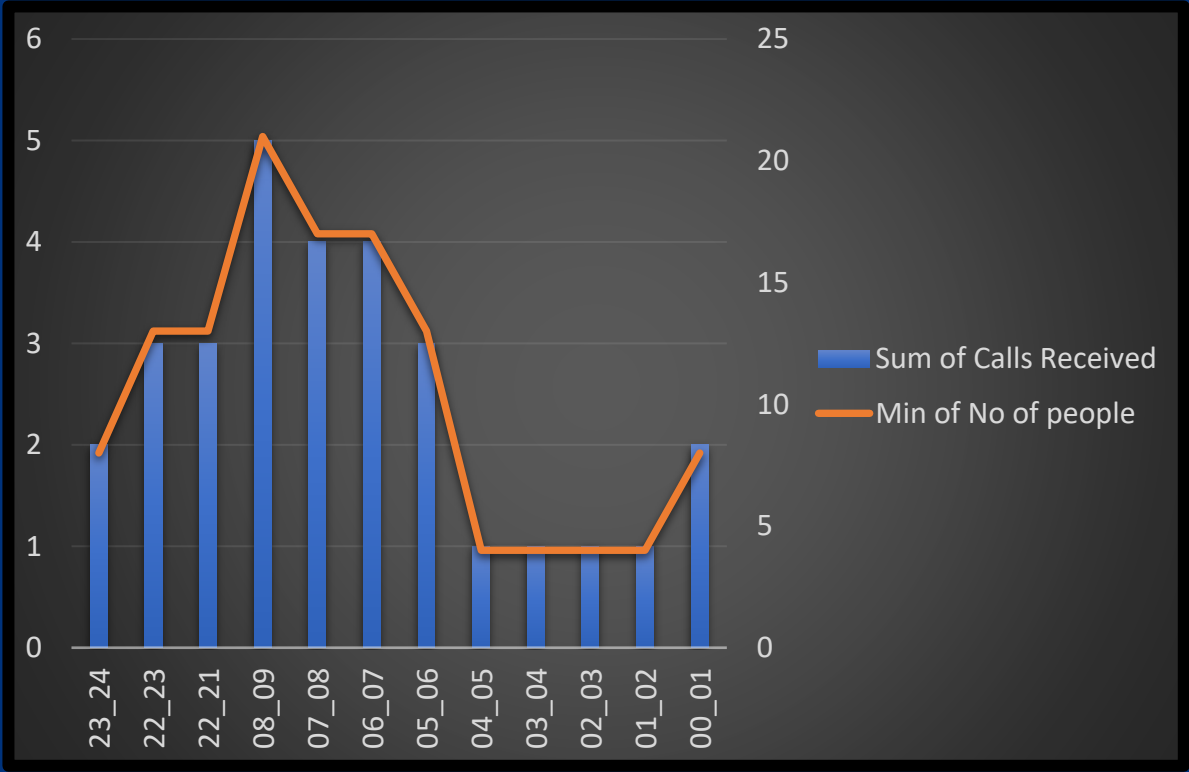
Now propose a manpower plan required during each time bucket in a day. Maximum Abandon rate assumption would be same 10%.

Time Taken on a average to answer a call	198.6sec			
Time required to answer 90% of thr call in hrs	254.7001826			
Total working persons required per day	57			
call volume 9am-9pm	5130			
call volume at night 9pm-9am	1539			
Additional call hrs	76.41135			
Additional man power needed for night	17			
Total people day+night	74			

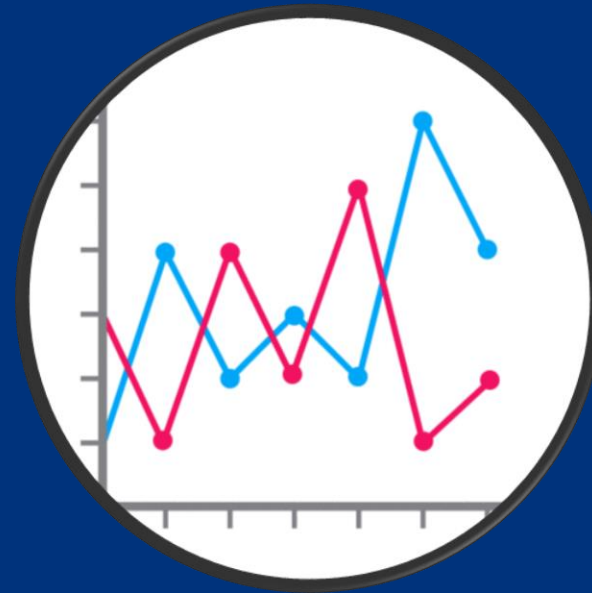
9am-9pm:54 people
9pm-9am:17 people
Totally 71 people are needed
for 24/7 support in the
company

Now propose a manpower plan required during each time bucket in a day. Maximum Abandon rate assumption would be same 10%.

	Sum of Calls Received	Min of No of people
23_24	2	8
22_23	3	13
22_21	3	13
08_09	5	21
07_08	4	17
06_07	4	17
05_06	3	13
04_05	1	4
03_04	1	4
02_03	1	4
01_02	1	4
00_01	2	8
Grand Total	30	4



Technology Stack used



Insights

- Creating new sheets in excel.
- How to use advance excel.
- All about aggregate function, VLOOKUP and look up functions. How to use them in excel.
- How to draw conclusions from a given data according to stack holders .

Result

- Got the desired output according to the leadership team.
- How to take a informed decision in the data centric application to upgrade it.
- How to use excel in an efficient way to do analysis.

Thank you!