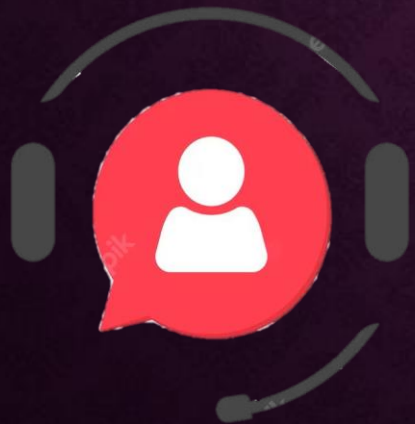




# CALL VOLUME TREND ANALYSIS



## TOOL USED



Ms-Excel



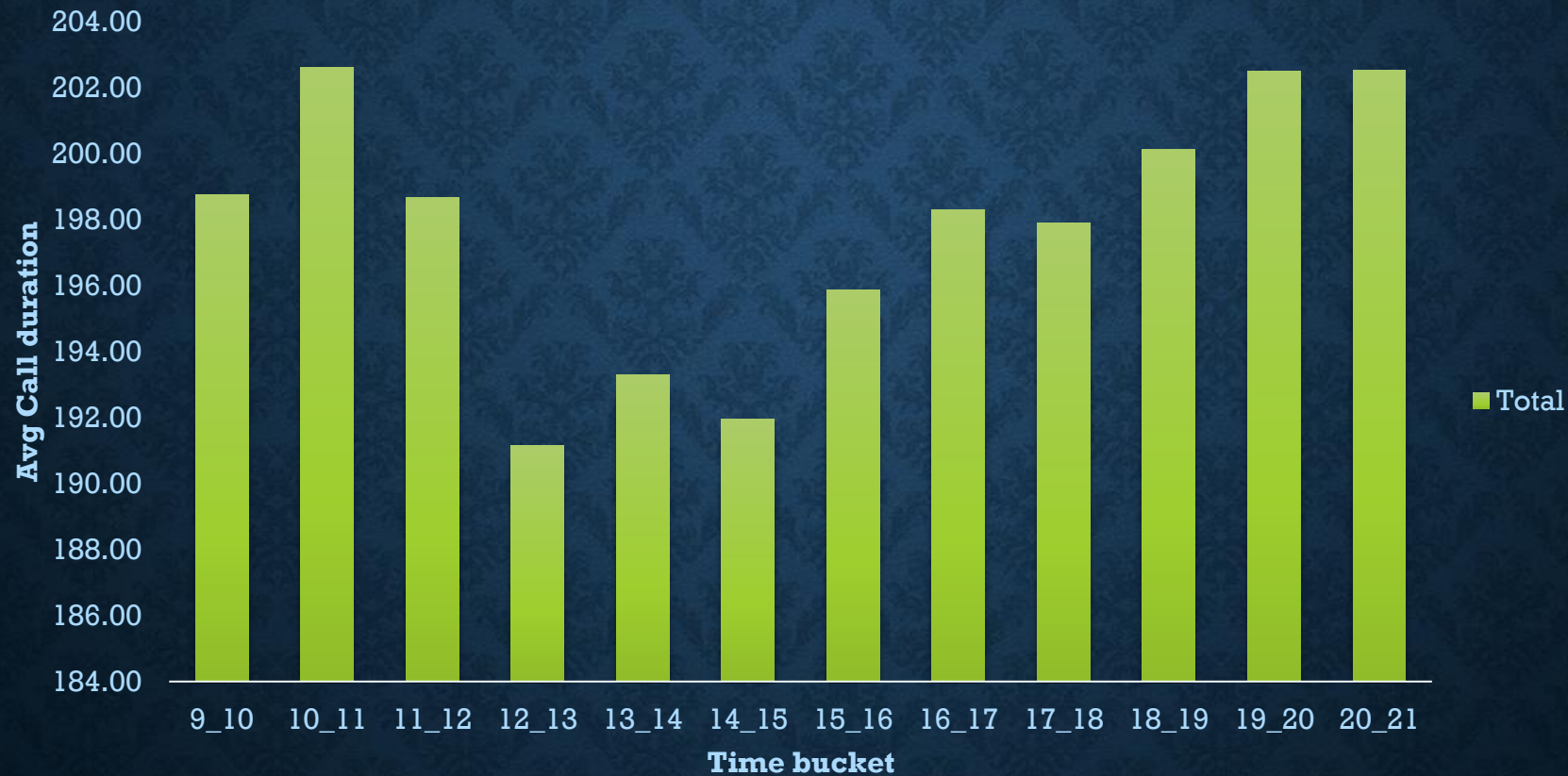
# Description:-

For your final project we are providing you with a dataset of a Customer Experience (CX) Inbound calling team for 23 days. Data includes Agent\_Name, Agent\_ID, Queue\_Time [duration for which customer have to wait before they get connected to an agent], Time [time at which call was made by customer in a day], Time\_Bucket [for easiness we have also provided you with the time bucket], Duration [duration for which a customer and executives are on call, Call\_Seconds [for simplicity we have also converted those time into seconds], call status (Abandon, answered, transferred).

Link to excel File:-

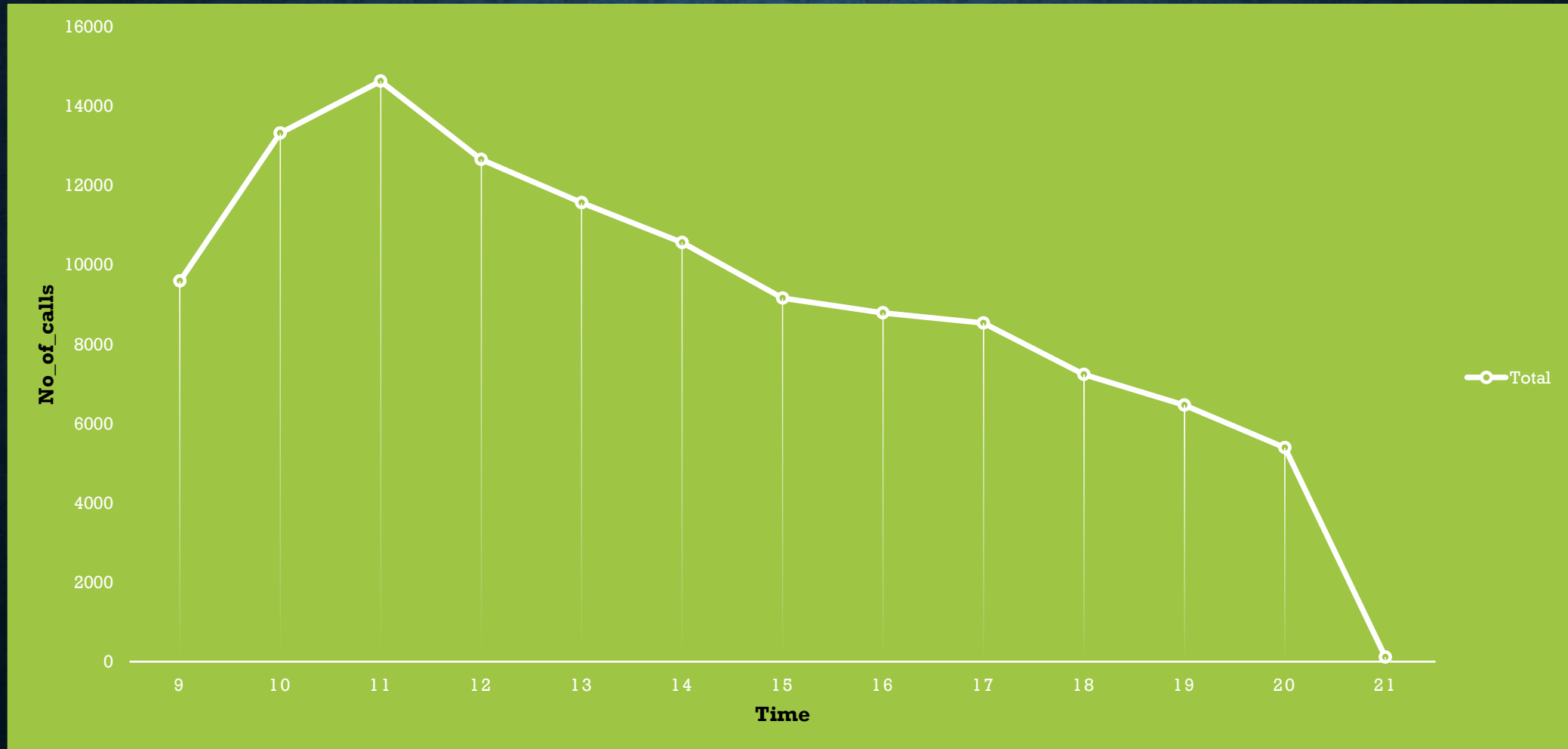
[https://docs.google.com/spreadsheets/d/1FDUv5roHgAMyN5By5sVi8RQuCcnSvV\\_3/edit?usp=sharing&ouid=107932508938240092754&rtpof=true&sd=true](https://docs.google.com/spreadsheets/d/1FDUv5roHgAMyN5By5sVi8RQuCcnSvV_3/edit?usp=sharing&ouid=107932508938240092754&rtpof=true&sd=true)

**1. Calculate the average call time duration for all incoming calls received by agents (in each time bucket).**

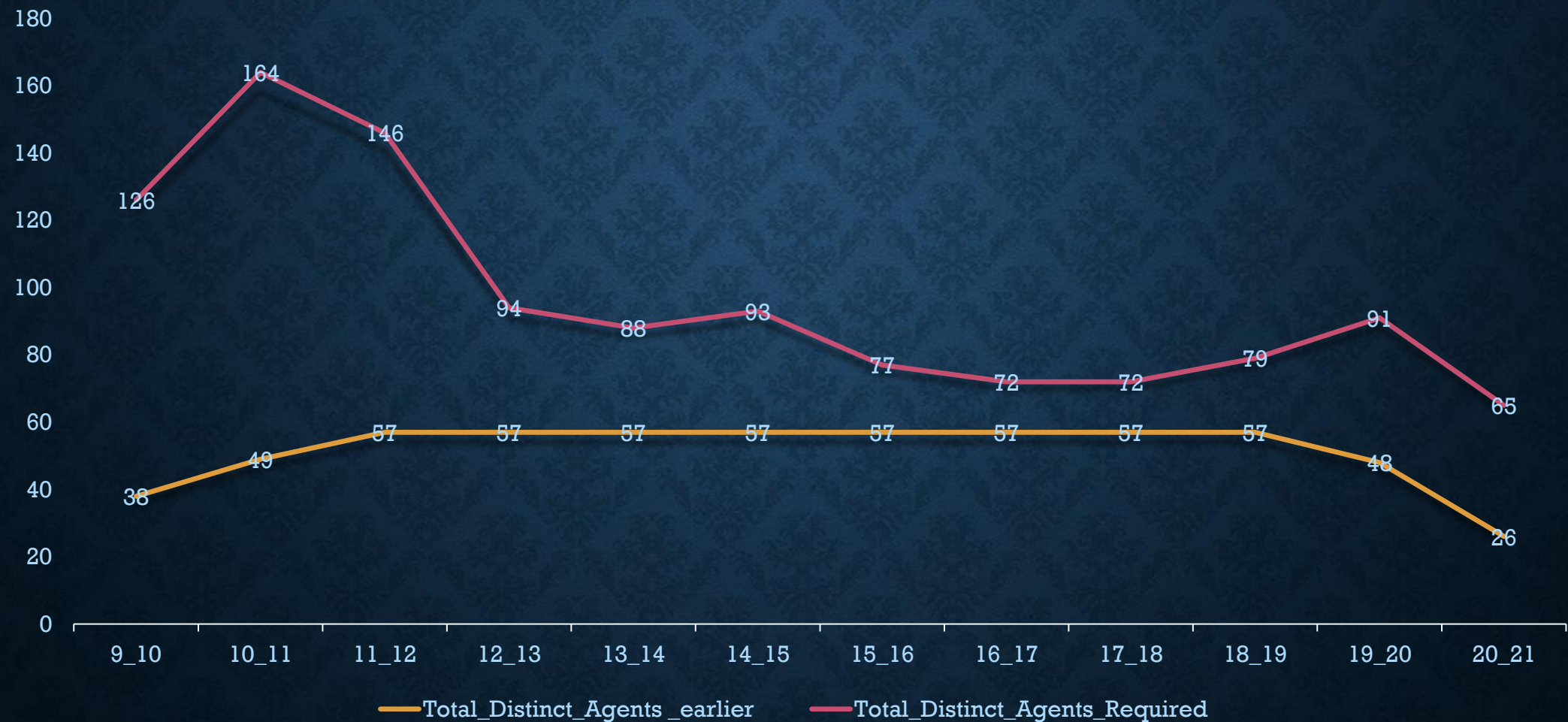




**2. Show the total volume/ number of calls coming in via charts/ graphs [number of calls v/s time]. You can select time in a bucket form (i.e. 1-2, 2-3, .....)**



3.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%. (I.E. You have to calculate minimum number of agents required in each time bucket so that at least 90 calls should be answered out of 100.)





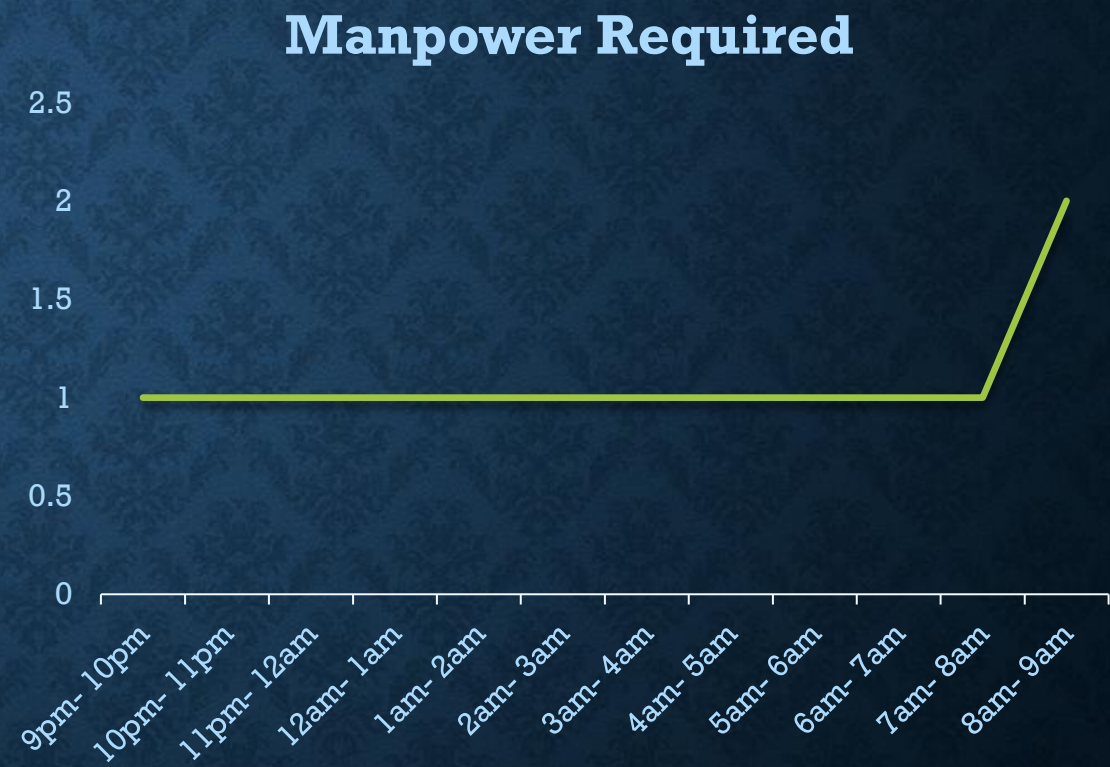
4.Let’s say customers also call this ABC insurance company in night but didn’t get answer as there are no agents to answer, this creates a bad customer experience for this insurance company. Suppose every 100 calls that customer made during 9 am to 9 pm, customer also made 30 calls in night between interval [9 pm to 9 am] and distribution of those 30 calls are as follows:

Distribution of 30 calls coming in night for every 100 calls coming in between 9am - 9pm (i.e. 12 hrs slot)											
9pm- 10pm	10pm - 11pm	11pm- 12am	12am- 1am	1am - 2am	2am - 3am	3am - 4am	4am - 5am	5am - 6am	6am - 7am	7am - 8am	8am - 9am
3	3	2	2	1	1	1	1	3	4	4	5

Now propose a manpower plan required during each time bucket in a day. Maximum Abandon rate assumption would be same 10%. Assumption: An agent work for 6 days a week; On an average total unplanned leaves per agent is 4 days a month; An agent total working hrs is 9 Hrs out of which 1.5 Hrs goes into lunch and snacks in the office. On average an agent occupied for 60% of his total actual working Hrs (i.e 60% of 7.5 Hrs) on call with customers/ users. Total days in a month is 30 days

Manpower Required = (Calls Distribution \* (1 - (Abandonment Rate/100)) / (Occupancy Rate \* Working Hours \* (1 - (Unplanned Leaves/Total Days)))

Time_Bucket	Calls Distribution	Manpower Required
9pm- 10pm	3	1
10pm- 11pm	3	1
11pm- 12am	2	1
12am- 1am	2	1
1am- 2am	1	1
2am- 3am	1	1
3am- 4am	1	1
4am- 5am	1	1
5am- 6am	3	1
6am- 7am	4	1
7am- 8am	4	1
8am- 9am	5	2





# Learnings:-

- Got to know about how cx calling team works ,the various metrics related to it .
- Good use of math knowledge to solve certain questions
- With change in duration how does a call volume changes and its effect on manpower requirement.
- Learnt how to design manpower plan for given conditions.

**THANK  
YOU**