

ABC Call Volume Trend Analysis

- **Project Description:** - This project consists of call centre data which is responsible for handling inbound calls of customers. The incoming voice calls from customer for business is attended by executives and service had been provided.
- **Approach:** - While performing this project we have to understand the data provided by the company, what are the company requirement and how can we help to them.
- **Tech-Stack Used:** - Windows 10, Excel and Word
- **Insights:** - I got to learn how to handle big data and analysis it with the company requirement and prepare data from them.
- **Result:** - Given below
- **Submitted by:** - Sparsh prasad

A. Calculate the average call time duration for all incoming calls received by agents (in each Time Bucket).

Ans. = Total call received (in sec) – IVR duration / Total calls received (in sec)

Deducting IVR duration because that is automatic call answer by the AI and that is not attended by the agent.

$$= 16463119.00 - 58580 / 83791$$

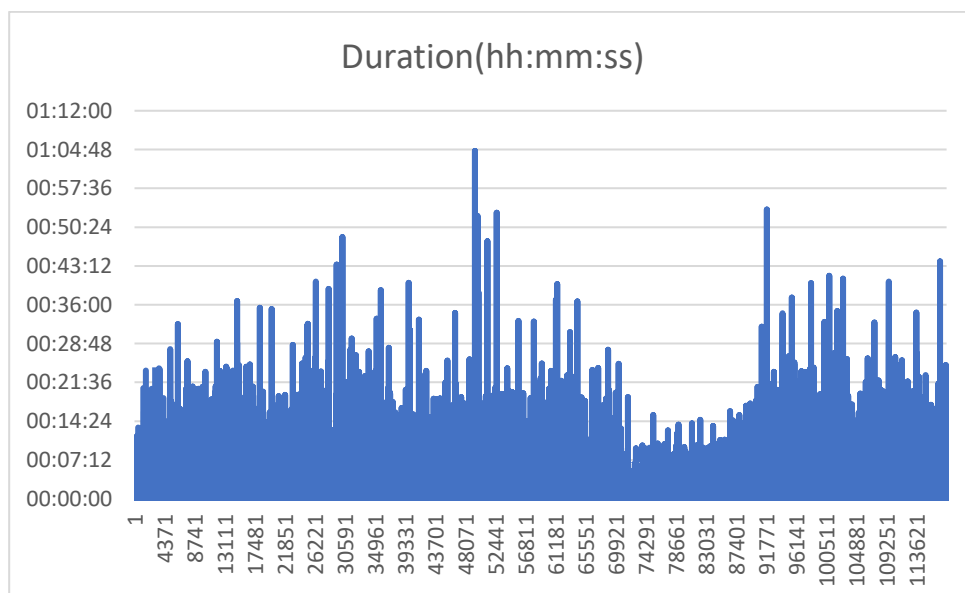
$$= 195.77 \text{ sec}$$

$$= 3.26 \text{ min is the avg time call}$$

B. 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,)

Ans. Total volume = 47023 sec

No of calls coming = 113621



C. 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.)

Ans. Total abandon calls = 34,404

Total number of calls = 1,17,976

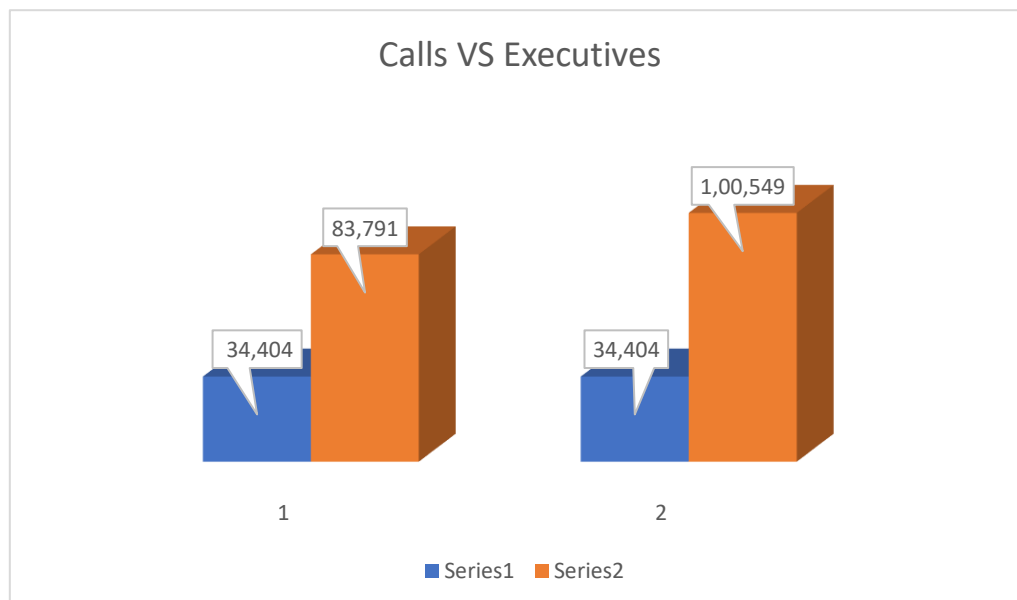
$$\% \text{ Of abandon calls} = \frac{(\text{Total abandon calls} / \text{Total number of calls})}{100}$$

$$= (34404/117976) * 100$$

$$= 29.161 \%$$

Approx. 30% of abandon ratio

- To reduce the abandon calls ratio to 10% we can increase the man power to 20% so that maximum number of calls can be attend.
- Total number of executives are 83791
- So here increasing it to 20% we will get 16,758
- Total number of executives after increasing 20% = 1,00,549



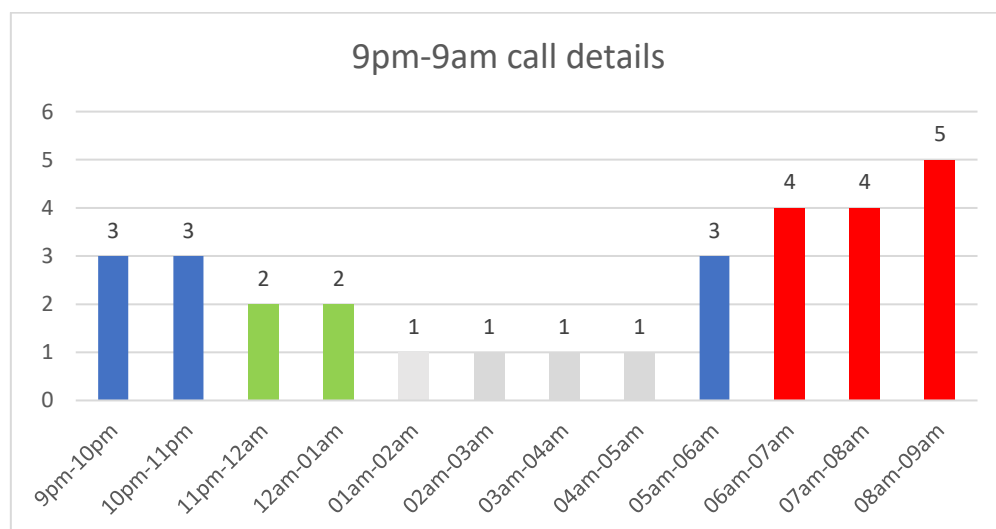
- Series 1 indicate executives working as per data.
- Series 2 indicate executives working after purpose of manpower.

D. 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%.

Ans. From the question 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]



- From the graph we can say that highest call received is 5 in between 8 to 9 am, so from analysing the data we can say that we have to hire executive for night shift we can be maximum to 5-6.
- Second suggestion can be like if we don't want to spend extra for night executive then we can shift some of day employee shift to night as it only required only 5-6 maximum executive.
- Or as said in question that company can consider 10% abandon So, with that data we can add 3-4 executive manpower.