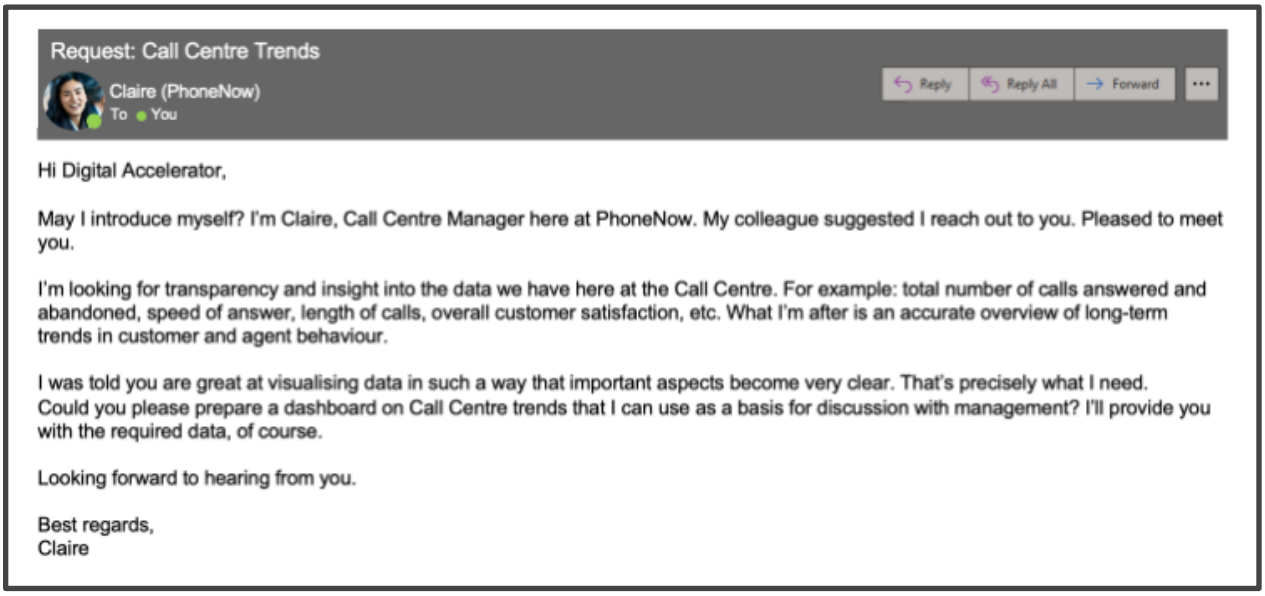
Case:

Call Centre Trends

Visualizing customer and agent behavior.

I) ABOUT THE TASK:

Create a dashboard in Power BI for Claire that reflects all relevant Key Performance Indicators (KPIs) and metrics in the dataset.


Request: Call Centre Trends

Claire (PhoneNow)
To You

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Hi Digital Accelerator,

May I introduce myself? I'm Claire, Call Centre Manager here at PhoneNow. My colleague suggested I reach out to you. Pleased to meet you.

I'm looking for transparency and insight into the data we have here at the Call Centre. For example: total number of calls answered and abandoned, speed of answer, length of calls, overall customer satisfaction, etc. What I'm after is an accurate overview of long-term trends in customer and agent behaviour.

I was told you are great at visualising data in such a way that important aspects become very clear. That's precisely what I need. Could you please prepare a dashboard on Call Centre trends that I can use as a basis for discussion with management? I'll provide you with the required data, of course.

Looking forward to hearing from you.

Best regards,
Claire

II) ABOUT THE DATABASE: "01 Call-Center-Dataset.xlsx"

A brief description of the columns:

a) Call Id: Primary Key on this data frame
b) Agent: Identifies the Agent that receives the call in this data center.
c) Date: Record about the date that the call was made.
d) Time: Record about the time that the call was made.
e) Topic: Related to the call
f) Answered (Y/N): Boolean. Was the call answered? yes/ no
g) Resolved: Was the issue resolved yes/no
h) Speed of answer: Express in seconds how long the call took before the agent answered.
i) Talk Duration: Time Format about the duration of the call
j) Satisfaction Rating: From 1 to 5 (only if the call was answered).

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III) BASIC REQUIREMENTS:

According to Claire, she would like to know some insights about the Call Centre like

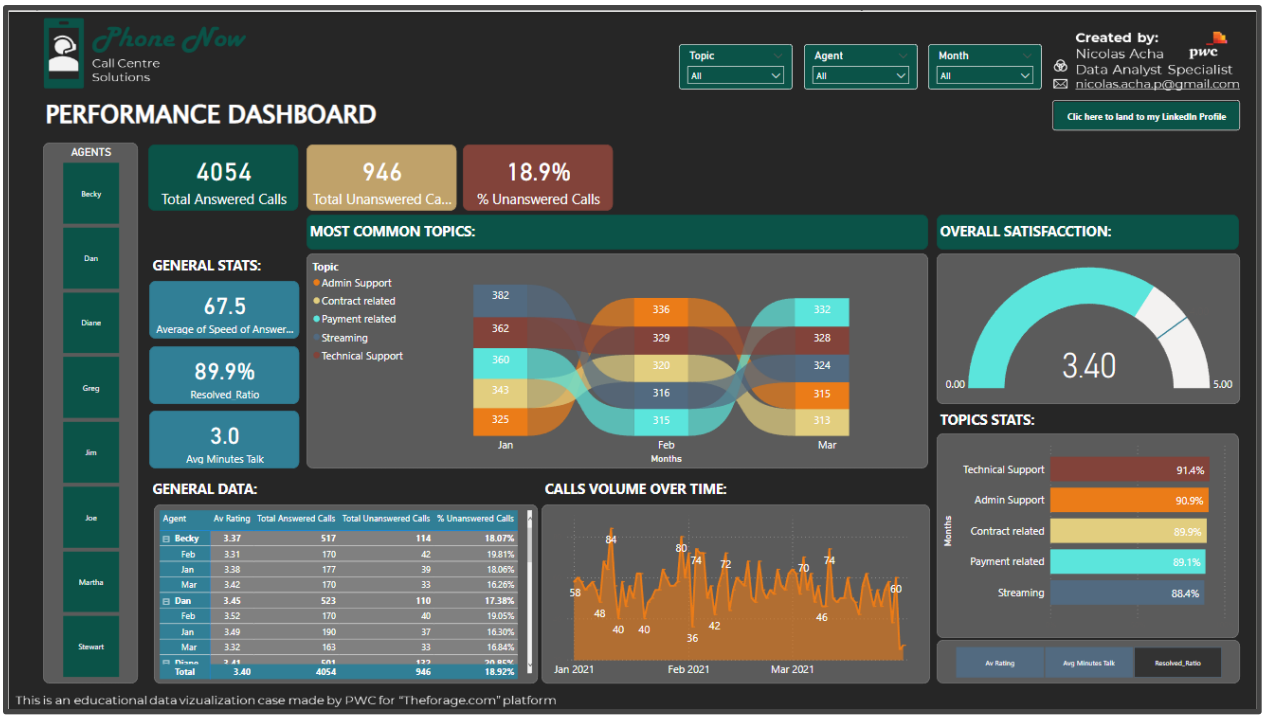
a) Total Number of Calls Answered / Abandoned
b) Speed of answers
c) Length of calls
d) Overall customer satisfaction
e) Trends over time in customer and agent behavior

IV) DATA CLEANING:

I had to transform the original column Talk Duration with Excel to an appropriate format to calculate the average time talk in a time chronometric value.

V) DASHBOARD PRODUCT:

Based on the requirements we created the Power Bi Report Dashboard "*Call_Centre_Viz ByNicolas_Acha.pbix*".



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Where some of the most important features of this Dashboard are:

a) Filter options by Topics, Agents, and Months.
b) The volume of calls over time and the rate between answered calls, and unanswered calls.
c) We can look at important metrics like average speed in seconds of answering a call, average minutes length of calls, and the resolved cases ratios.
d) The most common topics and some stats about every topic like the av. satisfaction rate, the average length of talk, and resolved ratio.

VI) INSIGHTS AND CONCLUSIONS:

By using the dashboard, I could drop some insights:

- The topics of the calls are equally distributed (More or less).
- I find Dan as the most productive agent with a slightly better rating than their peers in relation to the most volume of answered calls.
- Based on this logic, Joe will be the most unproductive agent.
- But the variability in performance metrics over all agents is not significant so to me we can say the whole group performance is the same.
- I find it very alarming that almost 20% of calls are abandoned. I recommend further investigation to find the why.
- I also find it necessary to investigate if it's reasonable to take more than a minute to take a call.
- The most alarming metrics are that on average everyday an agent would take between 5 to 6 calls which translates to only 17 minutes of working through the phone day by day. This workload is unacceptable for a team of 8 agents. We have evidence to conclude the volume of calls is too low and the team is to big for the demand. I recommend downsizing the call center to only two agents.
- Finally, as a manager, I would orient performance strategies to seek an overall satisfaction value of >=4 and a resolved ratio of +95%.

Thank you for reading it. Please share it or use it for educational purposes.
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