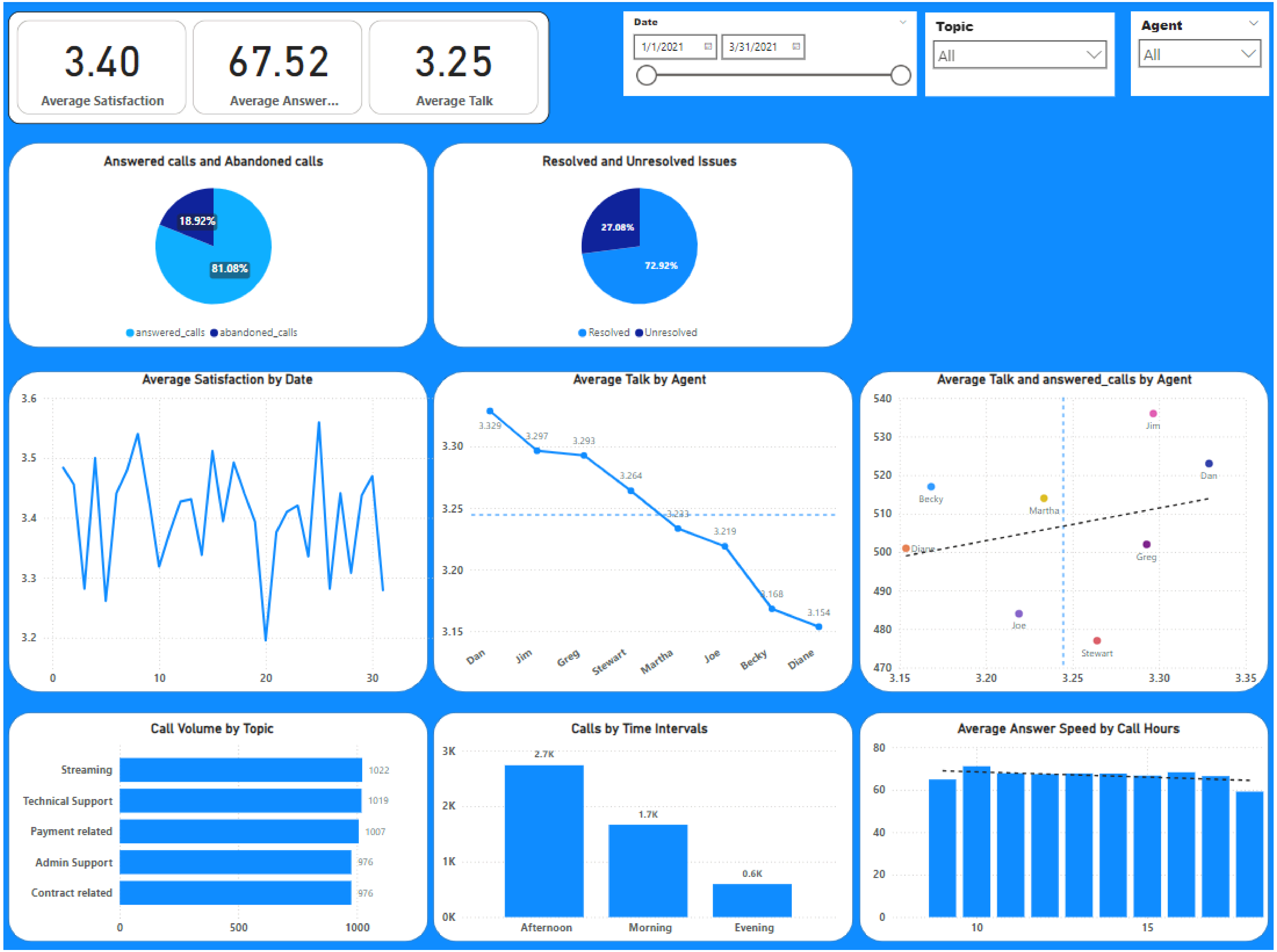
pwc

Power BI

(Get your Power BI skills in shape with PwC)

Presentation by :

BIDHAN PANT



3.40 Average Satisfaction

67.52 Average Answer...

3.25 Average Talk

Date: 1/1/2021 – 3/31/2021

Topic: All

Agent: All

Answered calls and Abandoned calls
18.92%
81.08%
● answered_calls ● abandoned_calls
Resolved and Unresolved Issues
27.08%
72.92%
● Resolved ● Unresolved
Average Satisfaction by Date
3.6
3.5
3.4
3.3
3.2
0
10
20
30
Average Talk by Agent
3.30
3.25
3.20
3.15
3.329
3.297
3.293
3.264
3.233
3.219
3.168
3.154
Dan
Jim
Greg
Stewart
Martha
Joe
Becky
Diane
Average Talk and answered_calls by Agent
540
530
520
510
500
490
480
470
3.15
3.20
3.25
3.30
3.35
Jim
Dan
Becky
Martha
Diane
Greg
Joe
Stewart
Call Volume by Topic
Streaming 1022
Technical Support 1019
Payment related 1007
Admin Support 976
Contract related 976
0
500
1000
Calls by Time Intervals
3K
2K
1K
0K
2.7K
1.7K
0.6K
Afternoon
Morning
Evening
Average Answer Speed by Call Hours
80
60
40
20
0
10
15

Background

All in on digital transformation: Creating a stronger, nimbler, more resilient future!

We aim to build innovative technology solutions that differentiate us from our competitors and digitize the business. Part of that included a strategic decision to invest in upskilling programmers so our people could learn how to use digital tools for data visualization as well as automation, data cleansing and more.

If our people could use these tools to solve common problems, they'd help us become more efficient and growth-oriented now and more innovative later in Business Services and beyond. Now, employees are learning to build bots – over 2,400 have been created so far – to automate workflows. We continue to invest to make processes more intuitive using machine learning, PowerBI and eventually artificial intelligence (AI). These are key to working faster and solving problems differently for ourselves and our clients.

This is why you're here! Our Digital Accelerator programmer is an internal chance that takes groups of our employees out of their day jobs and puts them through trainings that teaches them skills in technology such as automation, machine learning, design thinking, and digital storytelling. PowerBI is an important part of it as visualizing data helps to handle and understand clients.
So, become a Digital Accelerator yourself and start your PowerBI journey with us!

Task Overview

What you'll learn

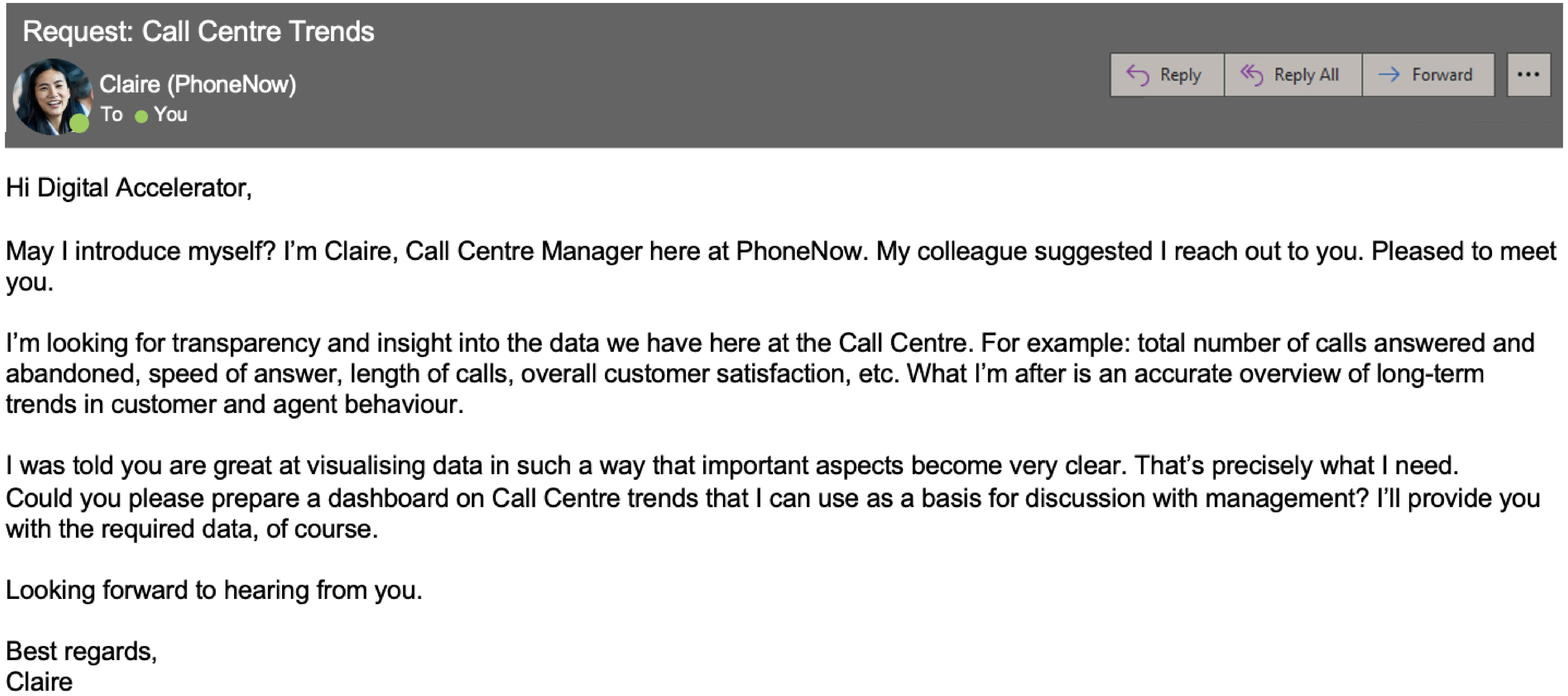
- The importance of upskilling in the digital age and its role in the workplace.
- The concept of becoming a "Digital Accelerator" and the skills associated with it.
- How to create a Power BI dashboard for visualizing key performance indicators (KPIs) and metrics.

What you'll do

- Create a dashboard in Power BI for visualizing relevant KPIs and metrics in the dataset provided.
- Utilize the resources provided, including podcasts and articles, to enhance your understanding of data visualization and upskilling.
- Respond to the client's request by providing a well-designed Power BI dashboard reflecting the requested KPIs.

Task: Call Centre Trends

It’s omnipresent: telecom marketing. Better price here. Better service there. Best for small businesses here. Best for young urbanites there. But what do customers really want? Our client, a big telecom company needs to know. This email just arrived for you:



Request: Call Centre Trends

Claire (PhoneNow)
To You

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

KPIs

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

Possible KPIs include (to get you started, but not limited to):

- Overall customer satisfaction
- Overall calls answered/abandoned
- Calls by time
- Average speed of answer
- Agent’s performance quadrant -> average handle time (talk duration) vs calls answered

Overall customer satisfaction

Finding the overall customer satisfaction is one the the mentioned KPIs from pwc. To find the overall customer satisfaction:

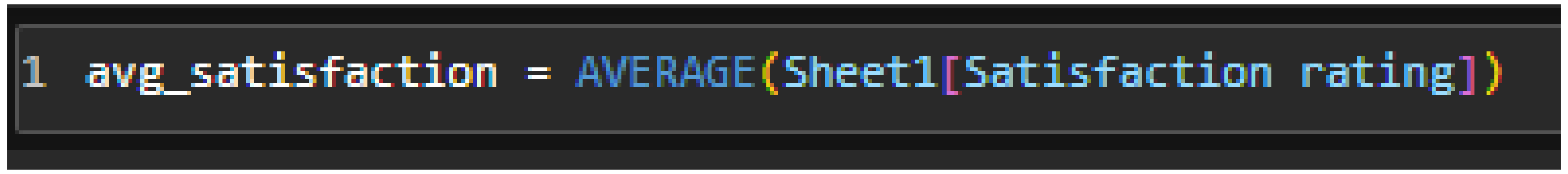
Data Field: Satisfaction rating

Measure: Calculate the average satisfaction rating across all calls.

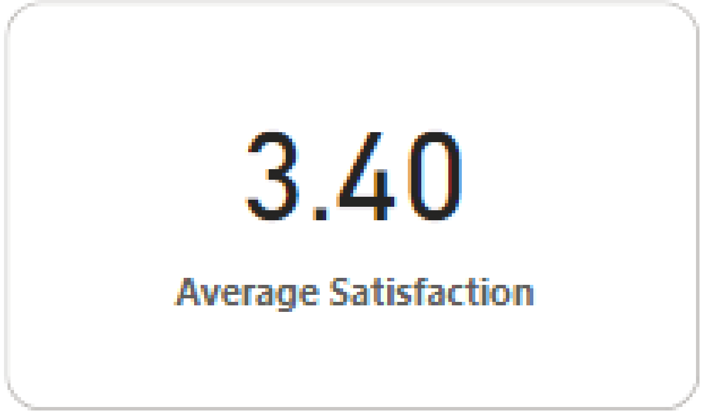
Visualization:

- Card to display the average satisfaction rating.
- Use a line chart to track satisfaction over time (Date as the X-axis).
- Slice satisfaction by agent, call type, or time to see trends.

Measures:

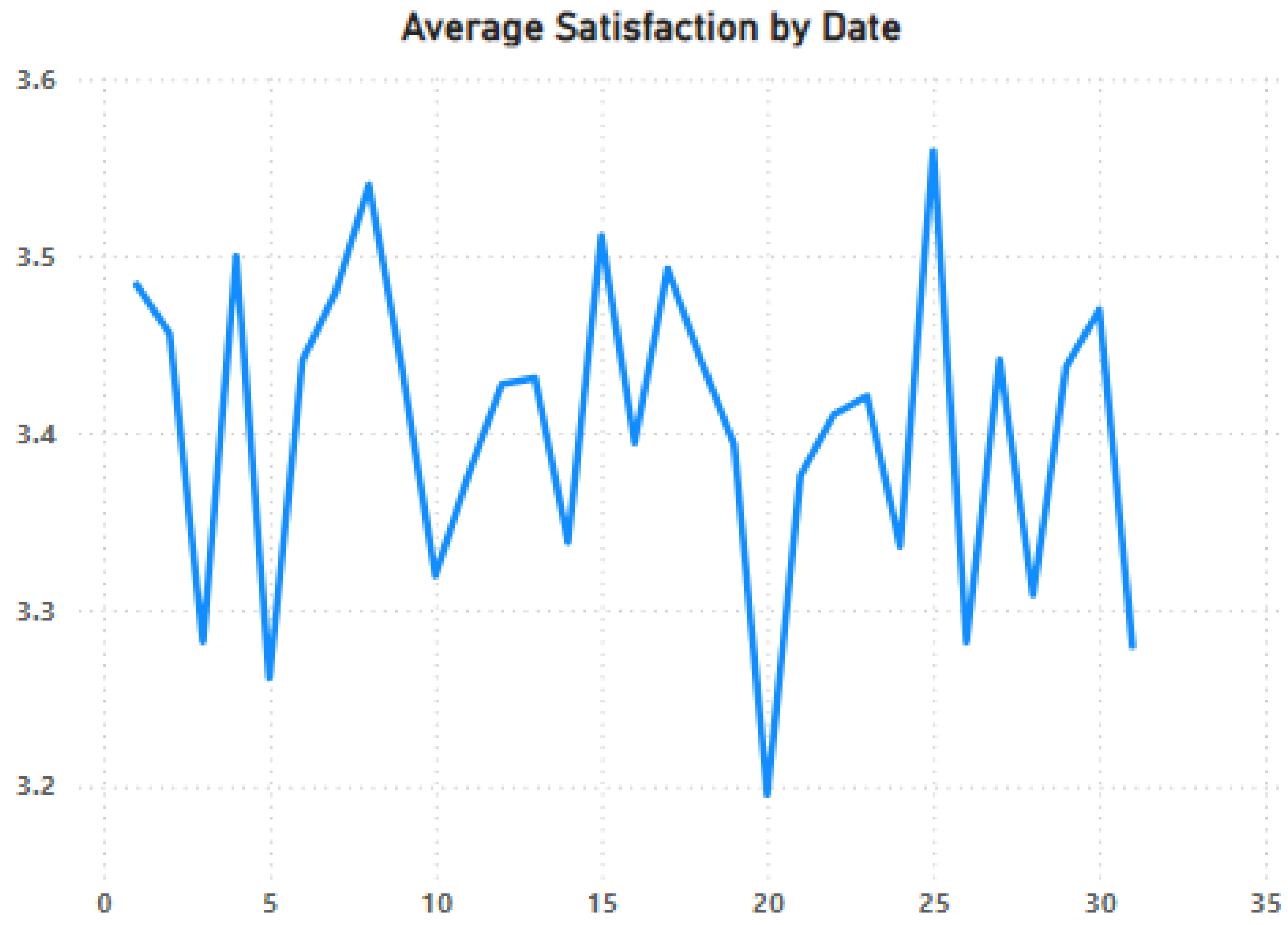


```
avg_satisfaction = AVERAGE(Sheet1[Satisfaction rating])
```



3.40

Average Satisfaction



Average Satisfaction by Date

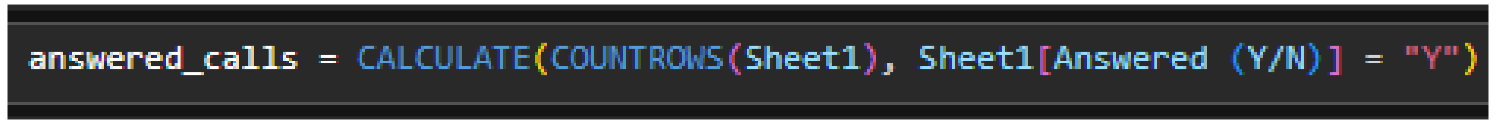
Overall calls answered/abandoned

Data Field: Answered (Y/N)

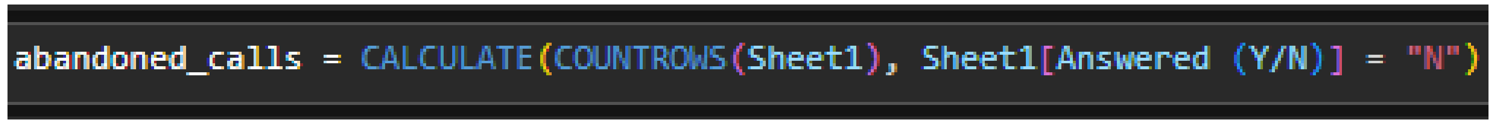
Measure:
- Count of calls where answered = Y (answered calls).
- Count of calls where answered = N (abandoned calls).

Visualization:
- Pie chart or Donut chart to show the proportion of answered vs abandoned calls.

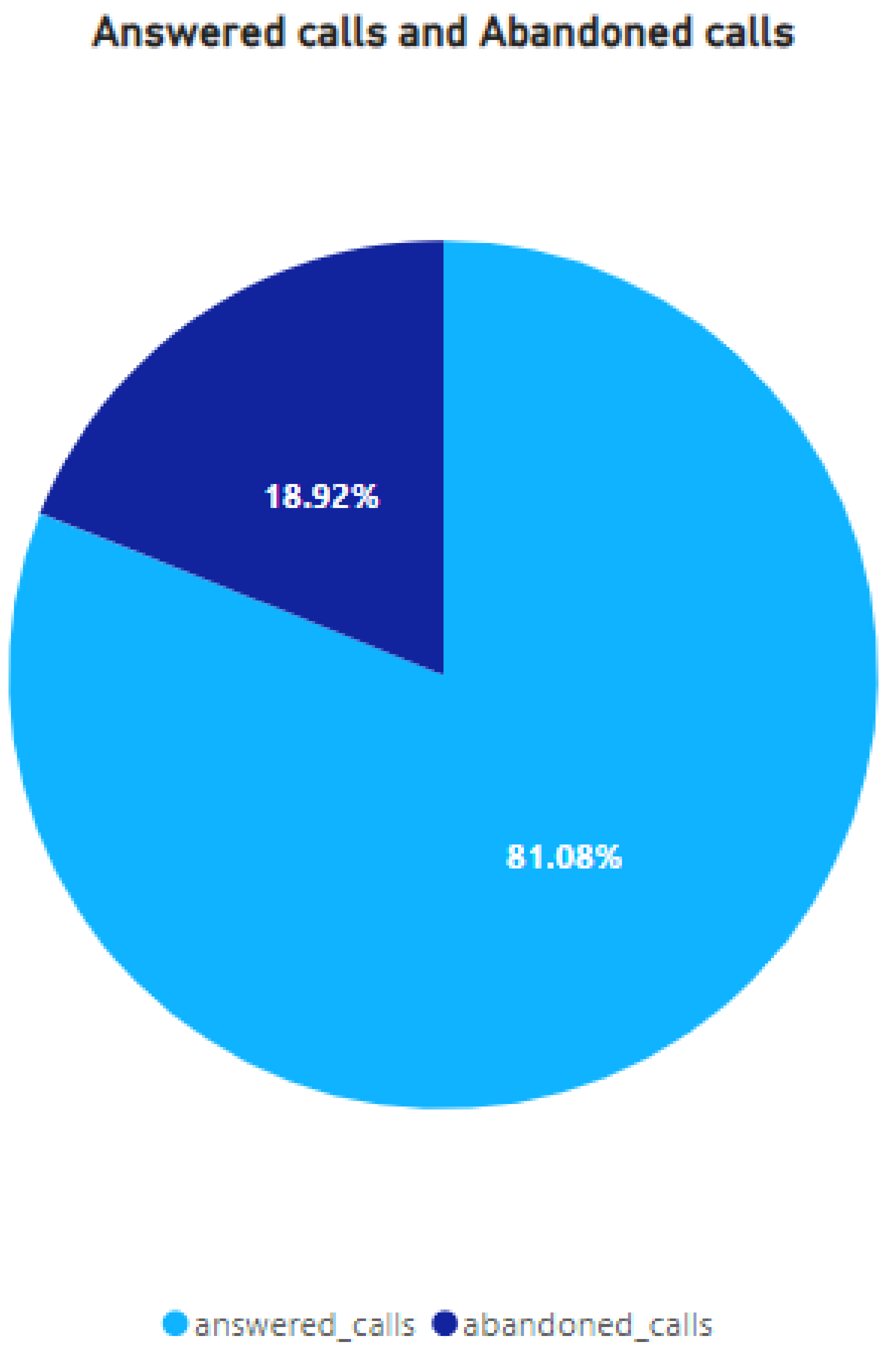
Measures:



```
answered_calls = CALCULATE(COUNTROWS(Sheet1), Sheet1[Answered (Y/N)] = "Y")
```



```
abandoned_calls = CALCULATE(COUNTROWS(Sheet1), Sheet1[Answered (Y/N)] = "N")
```



Calls by Time

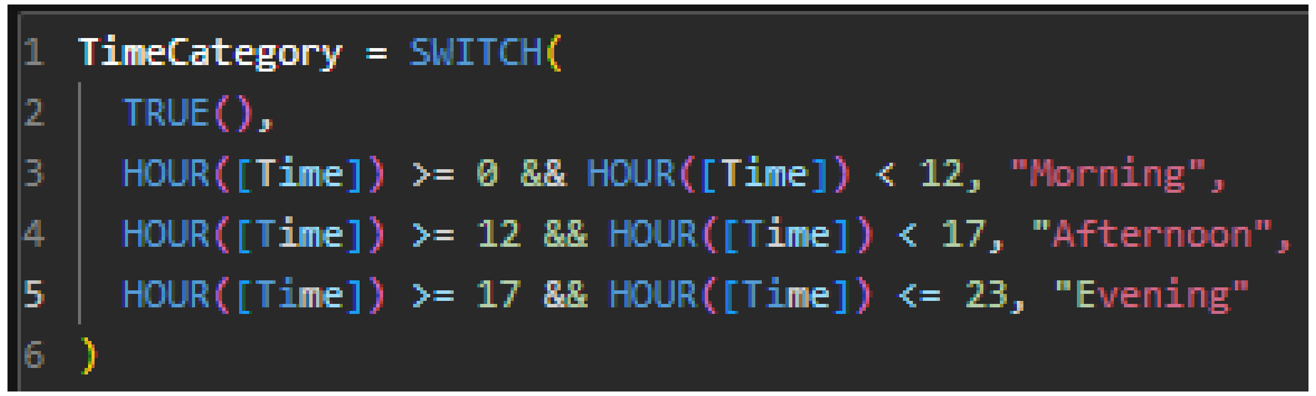
To find the calls by time, our **Time** column is given in **hh:mm:ss** format. First I need to extract hours from this column for that I am using function called ***“Hour”*** to the new column **CallHour** and will use that function on **Time** column.

Measure:

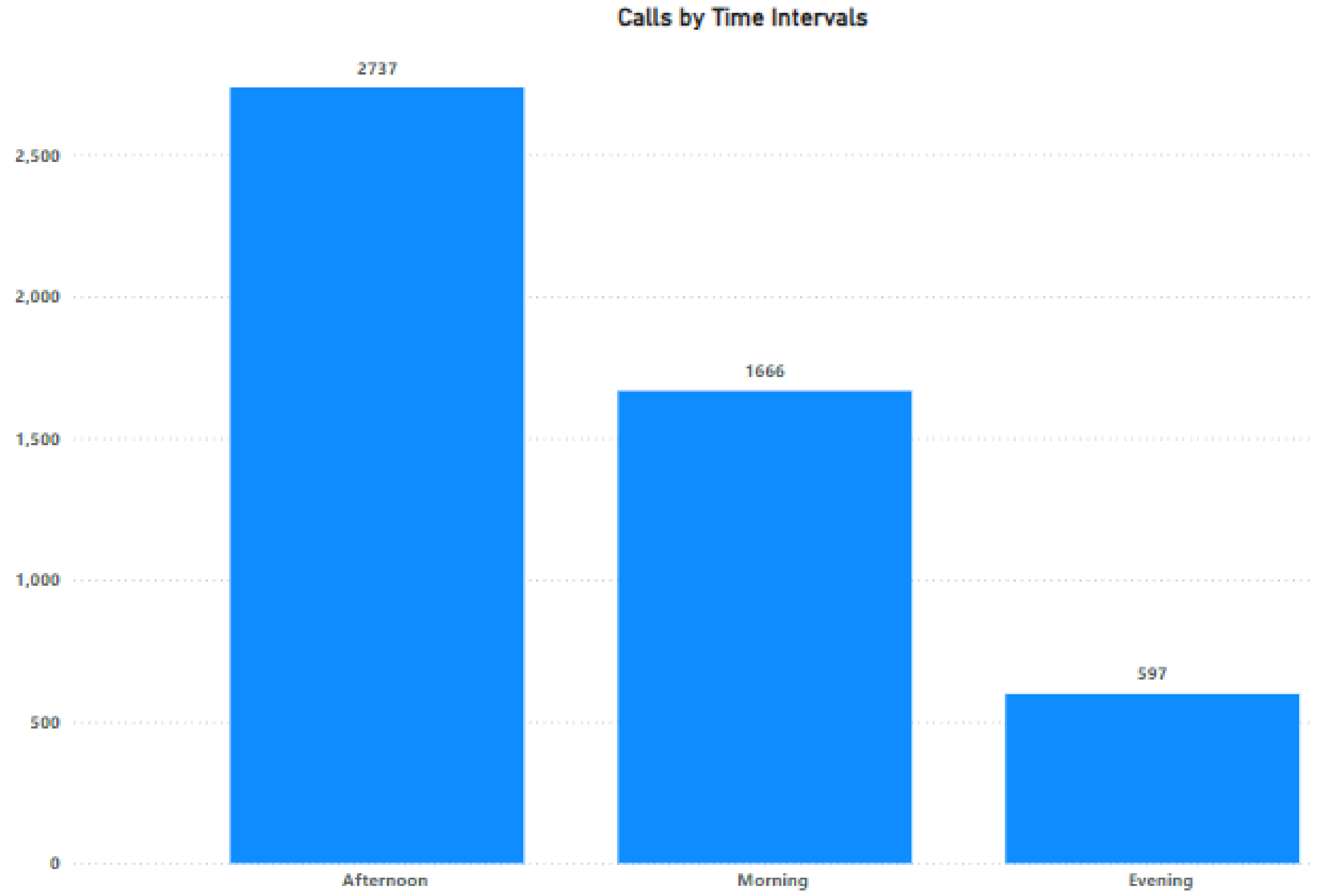
CallHour = HOUR([Time]) it will give me hours from 0 - 23

Grouping calls by Morning, Afternoon, Evening

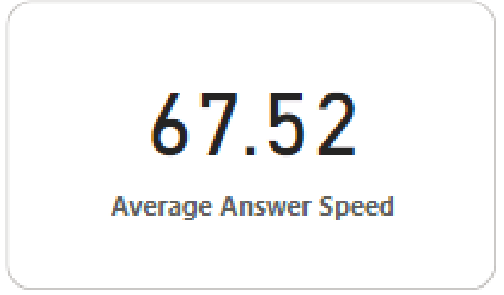
Measure:



```
TimeCategory = SWITCH(
    TRUE(),
    HOUR([Time]) >= 0 && HOUR([Time]) < 12, "Morning",
    HOUR([Time]) >= 12 && HOUR([Time]) < 17, "Afternoon",
    HOUR([Time]) >= 17 && HOUR([Time]) <= 23, "Evening"
)
```



Average speed of answer

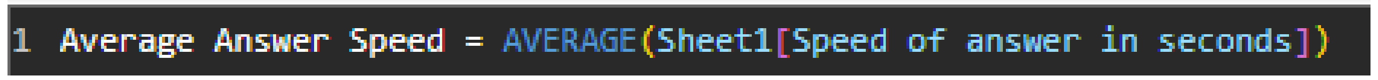


67.52

Average Answer Speed

Data Field: speed of answer in seconds

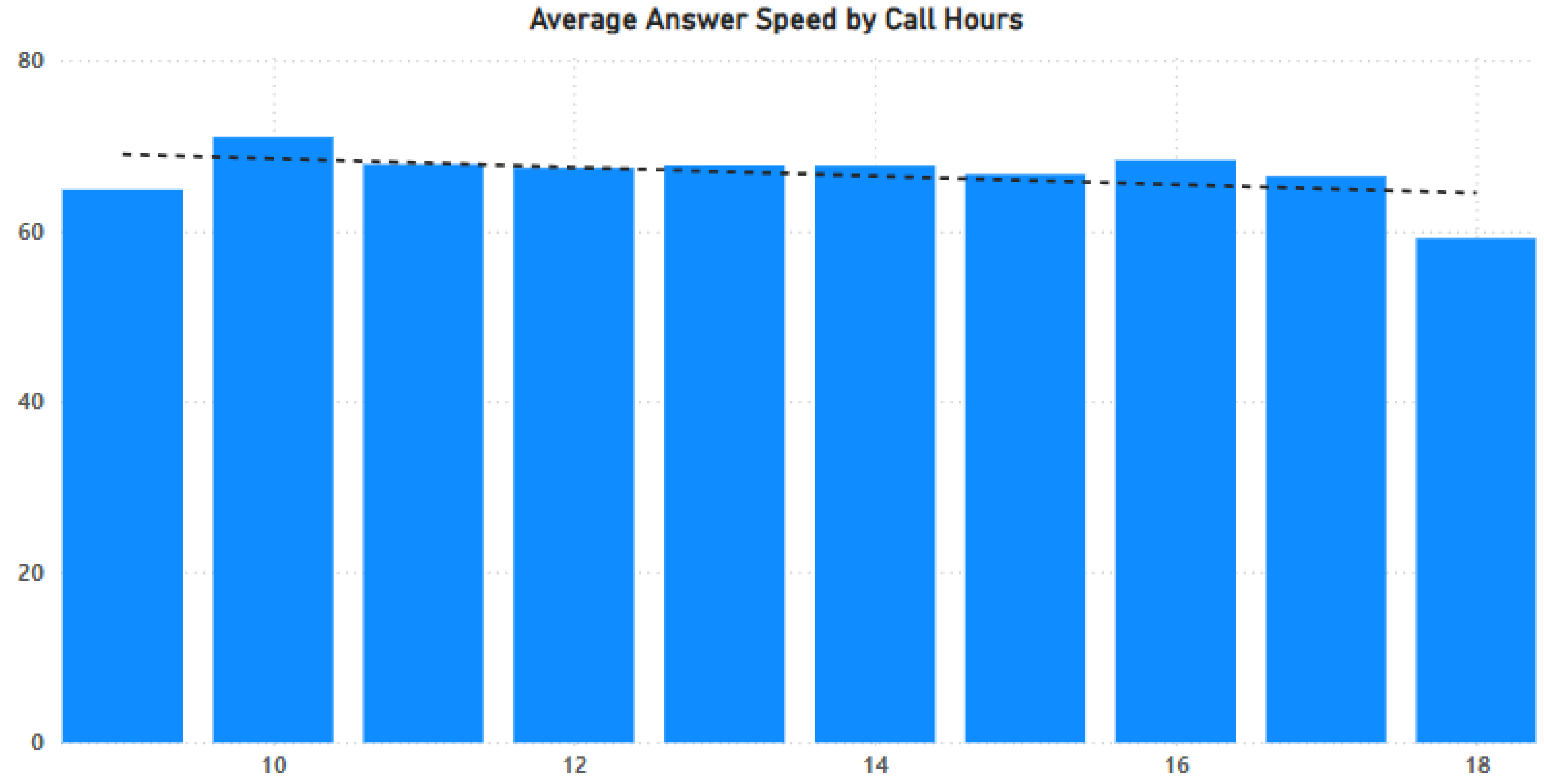
Measure: Calculate the average speed of answer for answered calls.



```
Average Answer Speed = AVERAGE(Sheet1[Speed of answer in seconds])
```

Visualization:

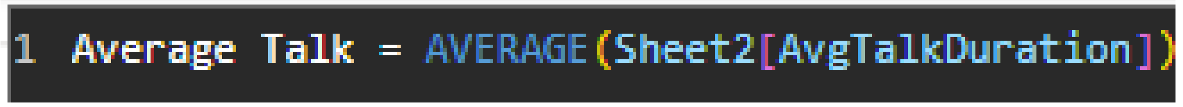
- Card to show the average speed of answer.
- Use a line chart or bar chart to display speed of answer trends over time, filtered by agent or call type.



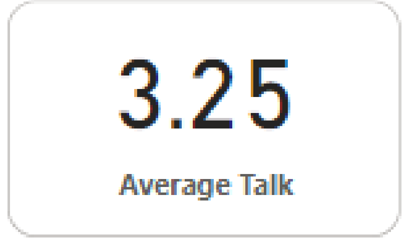
Average Talk Duration

Data Field: avgTalkDuration

Measure: Calculate the average talk duration.



```
Average Talk = AVERAGE(Sheet2[AvgTalkDuration])
```

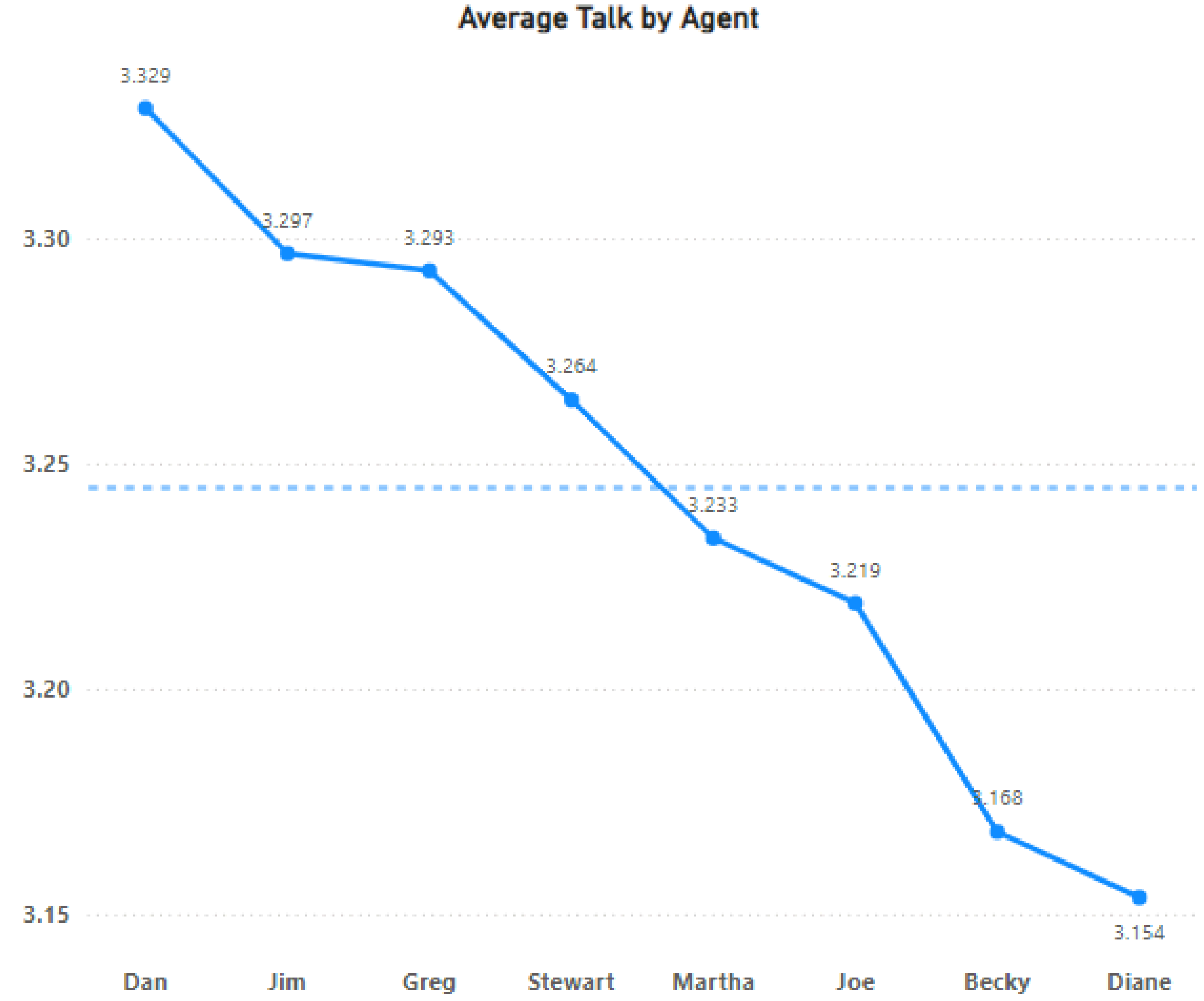


3.25

Average Talk

Visualization:

- Card for average talk duration.
- Use a line chart to track how the talk duration varies over time or by agent.



Average Talk by Agent

Agent's Performance (Quadrant Chart)

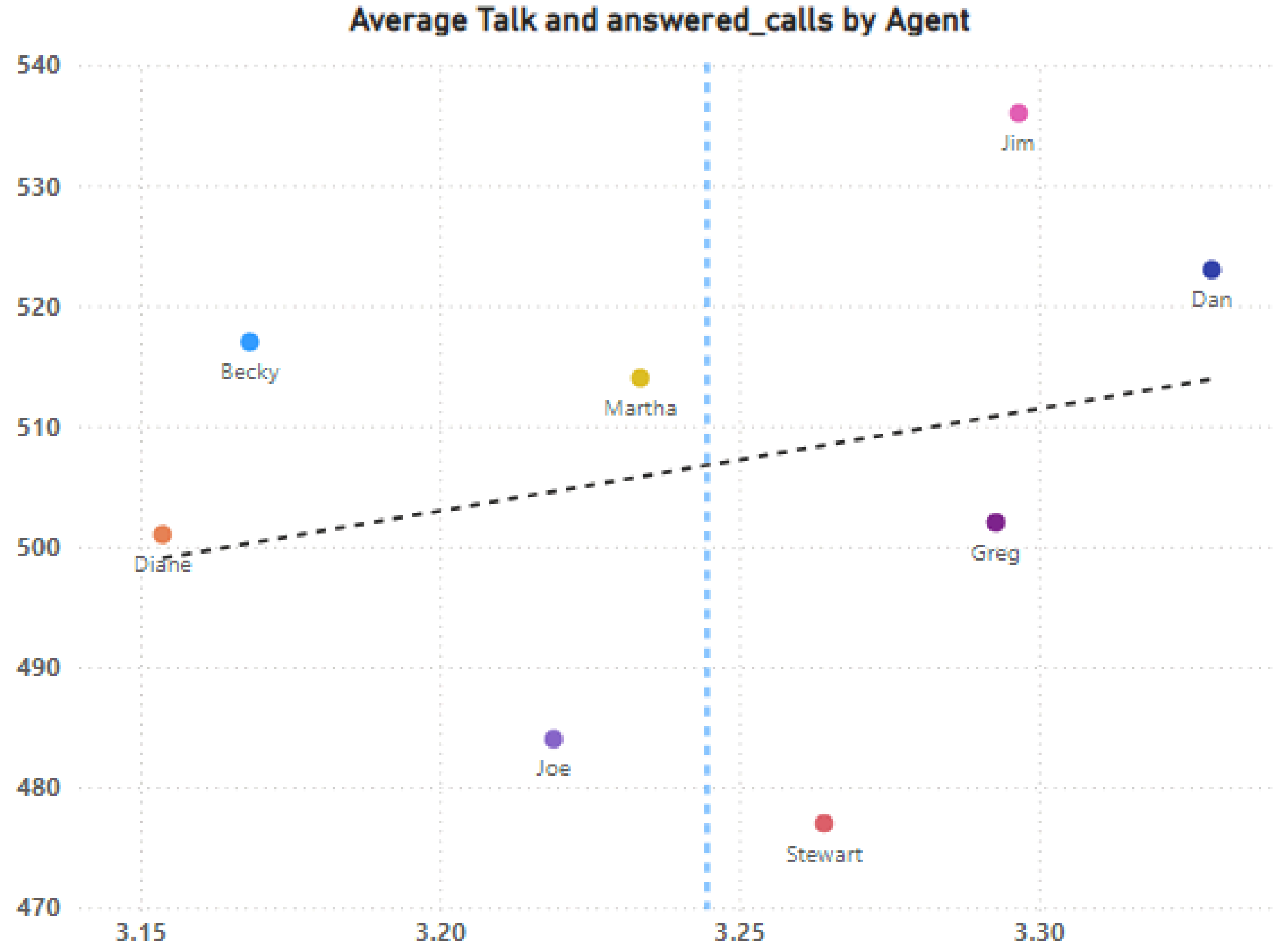
Data Fields: avgTalkDuration, answered (Y/N)

Measure:

- X-axis: Average handle time per agent (average avgTalkDuration).
- Y-axis: Total number of calls answered by the agent (count of answered = Y).

Visualization:

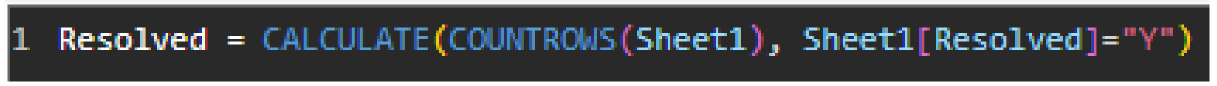
- Scatter plot or quadrant chart where agents are represented as points. You can analyze which agents are answering the most calls while keeping talk duration optimal. Ideal quadrant: high number of calls answered with low average talk duration.



Resolved vs Unresolved Calls

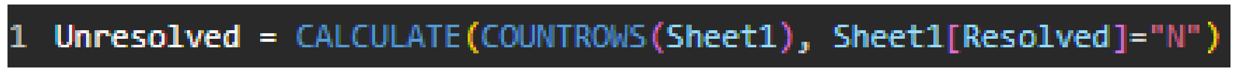
Data Field: resolved

Measure:



```
Resolved = CALCULATE(COUNTROWS(Sheet1), Sheet1[Resolved]="Y")
```

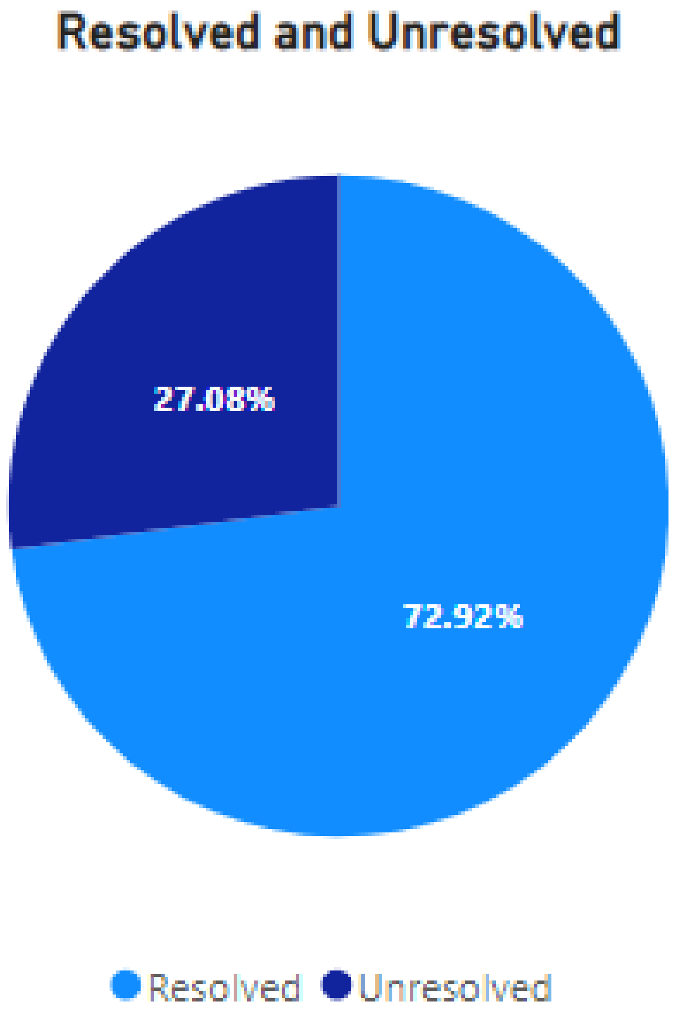
- Count of calls where resolved = Y (resolved calls).
- Count of calls where resolved = N (unresolved calls).



```
Unresolved = CALCULATE(COUNTROWS(Sheet1), Sheet1[Resolved]="N")
```

Visualization:

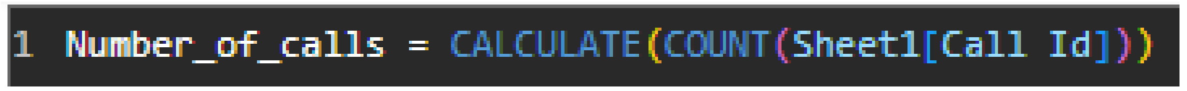
- Pie chart to show the proportion of resolved vs unresolved calls.
- A breakdown of unresolved calls by agent or topic for further insights.



Call Volume by Topic

Data Field: topic

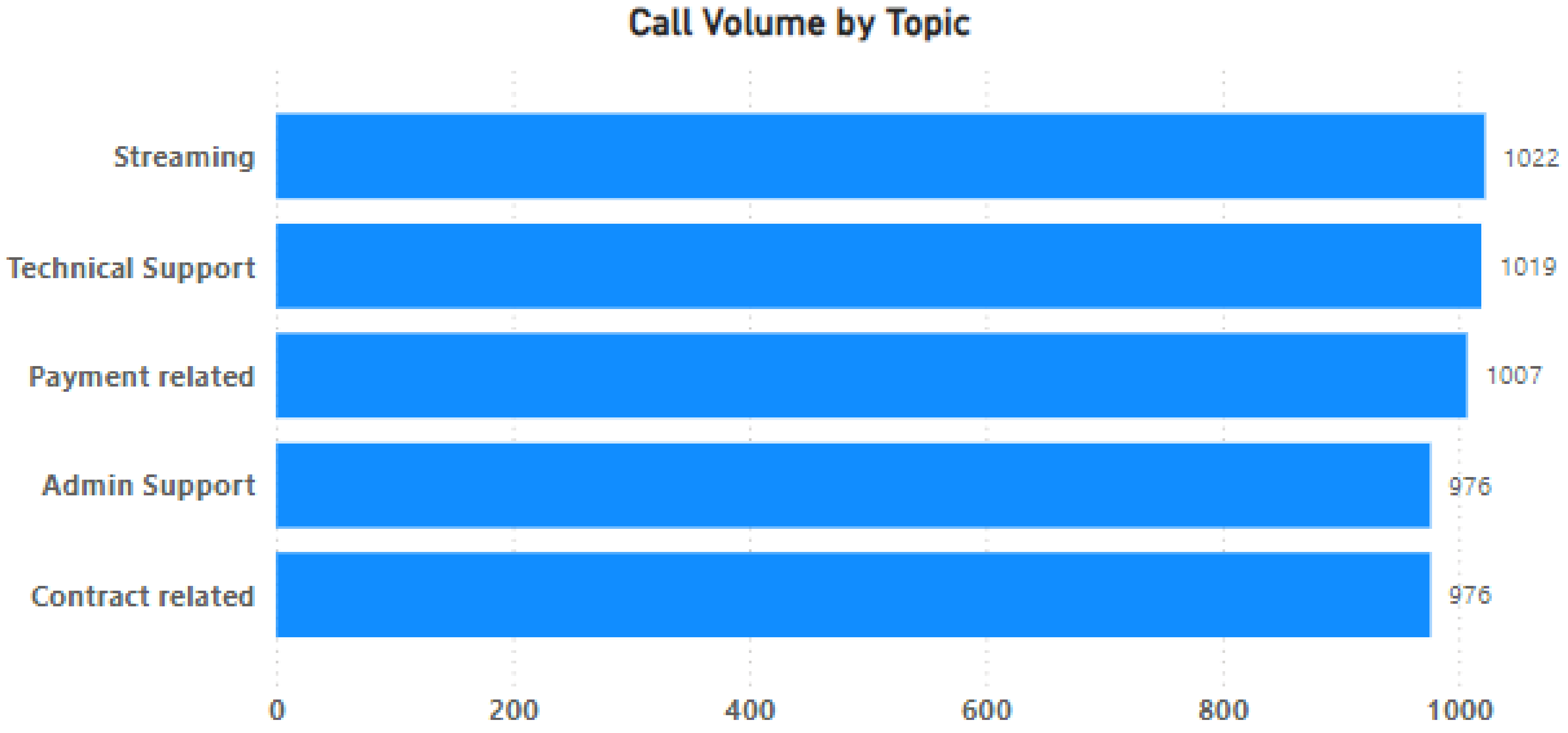
Measure: Number of calls by different topics.



```
Number_of_calls = CALCULATE(COUNT(Sheet1[Call Id]))
```

Visualization:

- Stacked bar chart showing call volume by topic.



Insights from overall Analysis

- Best Performance: Agents like Dan and Jim performed well in terms of resolved calls and maintaining customer satisfaction.
- Improvement Opportunities: The average speed of answer could be optimized to reduce customer wait times and improve overall satisfaction.

Thank You So Much!

QUESTIONS?
HOW?
WHERE?
Where?
WHEN?
WHO?
WHAT?
WHEN?
WHAT?
WHERE?
WHEN?
Where?
When
What?
When?
When?
WHERE?
Why?
WHEN?
WHAT?
When?
Why?
When?
WHO?
HOW?
WHAT?
Where?
HOW?
What?
WHERE?
When?
HOW?
What?

Presentation by :

BIDHAN PANT