



Technical Support Analysis

Onyx Data DNA Challenge May 2024



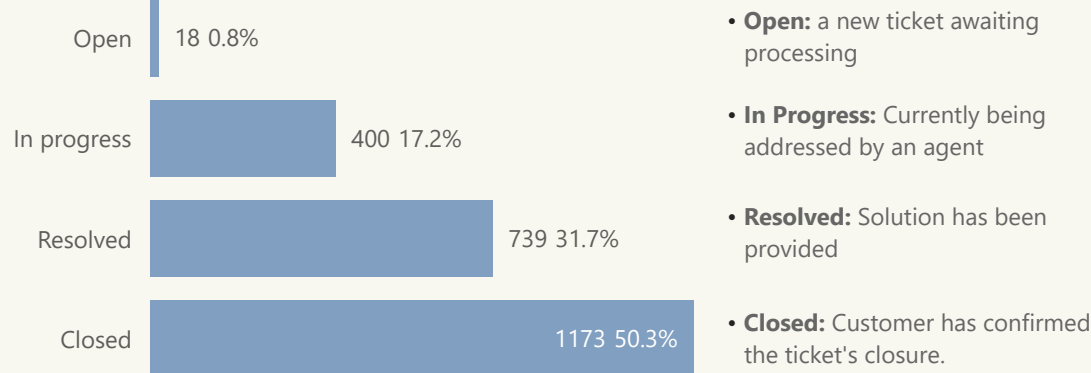
The objective of this project is to analyze the functioning of a Technical Support Centre by exploring key performance indicators (KPIs). This analysis aims to provide insights into ticket volume trends, ticket content and resolution, and overall performance metrics.

PART 1 Ticket Volume Trends

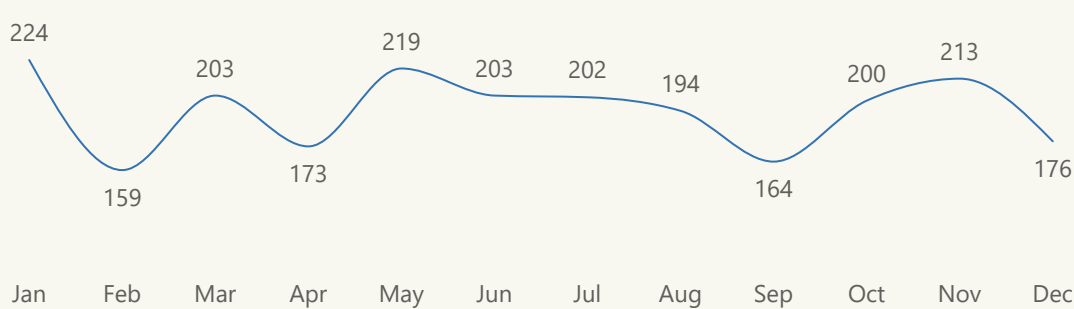
Total Ticket and Status

2330

Total Ticket: indicated Total Service request by customers.

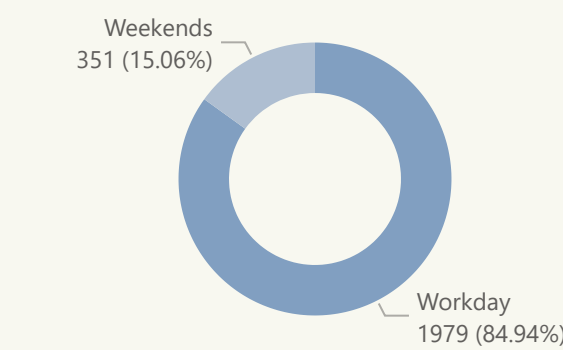


Monthly Ticket Volume Trend



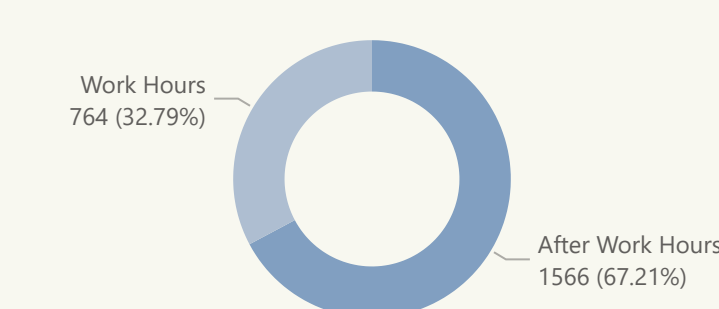
- In the months of January, May, and November, we received the highest number of tickets or customer service requests. Combined, these three months accounted for 29.1% of all tickets.
- In contrast, February had the lowest number of requests, with only 159 tickets submitted.

Ticket Volume by Day Type



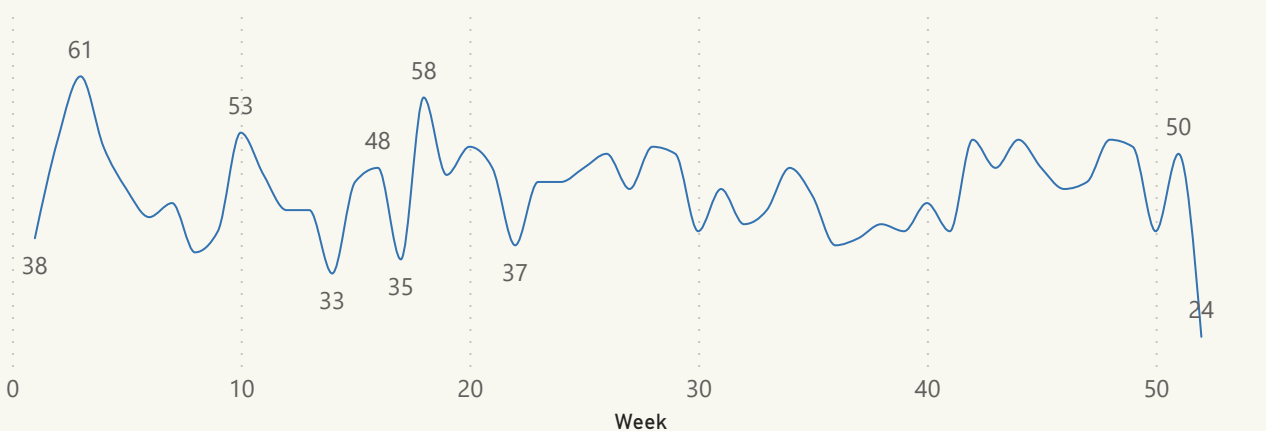
- Tips:** Weekends are defined as Sunday and Saturday, while all other days are considered weekdays.

Ticket Volume by Work Hours



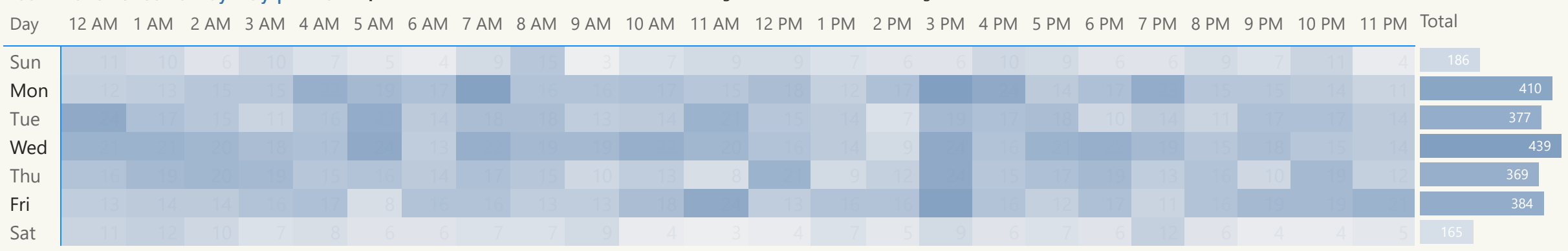
- Tips:** Work hours are defined as the period between 9 AM and 5 PM. Any time after 5 PM and before 9 AM is considered after work hours

Total Ticket by Week



- In When looking at ticket volumes on a weekly basis, Week 3 had the highest number of tickets with a total of 61. This is followed by Week 18, which saw 58 tickets.
- Conversely, Week 52 experienced the lowest ticket volume, with only 24 tickets recorded.

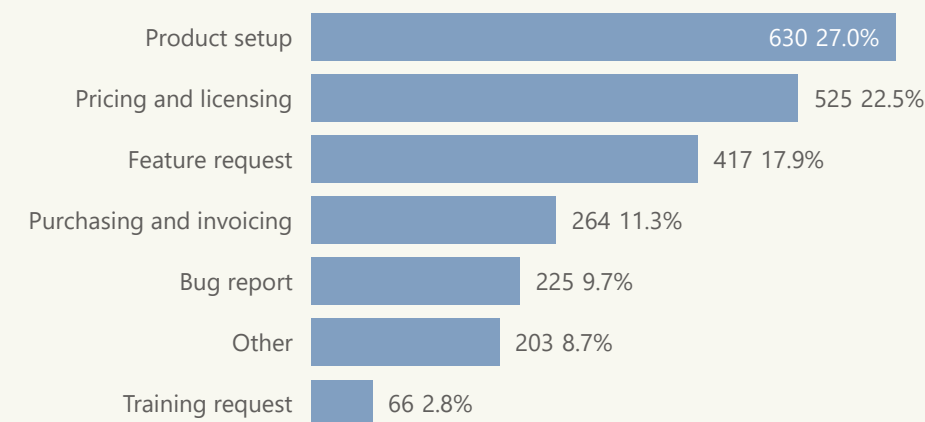
Peak Ticket Creation by Day | Time



PART 2 Ticket Content and Resolution

Ticket Volume by Topic

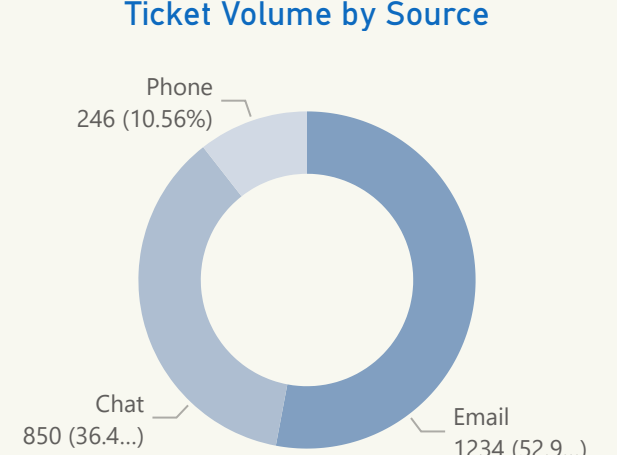
#Drill down by Product Group



- The **"Product Setup"** group is the topic with the highest ticket volume, accounting for **630 tickets** or **27%** of the total. On the other hand, **"Training Request"** has the lowest ticket volume.

Ticket Volume by Source

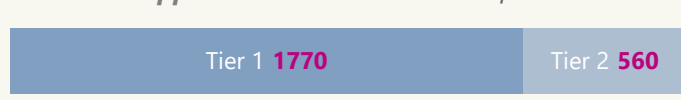
#Source Indicate Channel of Service Request(where customer connect for help).



- The majority of tickets were generated via **email**, with a total of **1,234 tickets** accounting for **52%** of the total.

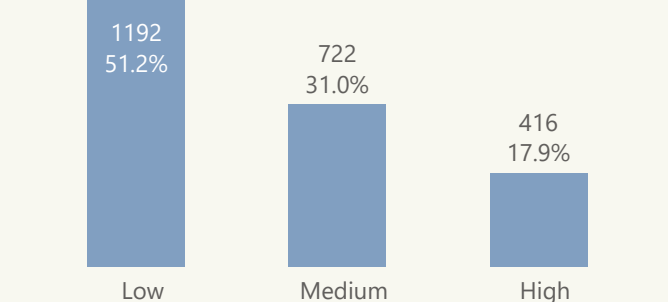
Ticket Volume by Support Level

#Support-Level Indicate Ticket difficultie level.



Ticket Volume by Priority

#Priority Indicates the urgency of a ticket, reflecting how urgently a customer requires service.



Investigation of first response and resolution times against SLAs



Before diving into SLA-based insights, it's important to understand the following key concepts:

*What is an SLA?

SLA stands for **Service-Level Agreement**, is a contract between a service provider and a customer that outlines the expected level of service.

*First Response

First Response refers to the initial reply or acknowledgment from the service provider after a ticket or service request is submitted by the customer.

*Within SLA

Within SLA means that the service provider has met the agreed-upon service standards. For example, if the SLA specifies a response time of 1 hour and the service provider responds within that time frame, they are considered to be within SLA

*Resolution Time

Resolution Time is the total time taken to resolve a customer's issue from the moment the ticket or service request is created until it is fully resolved.

*SLA Violation

An "SLA Violation" occurs when the service provider fails to meet the agreed-upon service standards. For instance, if the SLA requires an issue to be resolved within 24 hours and the issue is not resolved within that time frame, it is considered an SLA violation

First Response

26.07 Minute

AVG First Response Time

#AVG First Response time (minute) against SLA.

SLA	AVG First Response Time	Ticket Volume
SLA Violated	93.42	311
Within SLA	16.30	2019
Total	26.07	2330

Is First Response time (minute) affected by Ticket Priority.

Priority	SLA Violated	Within SLA	Total
High	74.20	16.22	22.68
Low	78.39	16.38	24.76
Medium	131.22	16.21	30.19
Total	93.42	16.30	26.07

Is First Response time (minute) affected by Ticket Source.

Source	SLA Violated	Within SLA	Total
Chat	6.86	1.02	1.93
Email	253.52	30.08	48.40
Phone	18.26	0.99	5.31
Total	93.42	17.16	26.83

- When analyzing first response times by **priority level**, there isn't a significant difference. The response times for high, medium, and low priority tickets are nearly the same.
- However, the response time is notably **affected by the ticket source**.

Resolution Time

33.25 Hours

AVG Ticket Resolution Time

#AVG Ticket resolution time (hours) against SLA.

SLA	AVG Ticket Resolution Time	Ticket Volume
Within SLA	33.51	2019
SLA Violated	31.43	311
Total	33.25	2330

Is Ticket resolution time (hours) affected by Ticket Priority.

Priority	SLA Violated	Within SLA	Total
High	32.50	33.26	33.18
Low	32.59	32.23	32.28
Medium	28.86	35.70	34.85
Total	31.43	33.51	33.25

Is Ticket resolution time (hours) affected by Ticket Source.

Source	SLA Violated	Within SLA	Total
Chat	28.62	27.51	27.69
Email	32.75	36.35	36.07
Phone	35.67	39.45	38.54
Total	31.43	33.51	33.25

- When examining resolution times by priority level, there isn't a significant difference. **Medium priority tickets take slightly longer** to resolve compared to high and low priority tickets.
- However, the average resolution time varies significantly based on the ticket source.

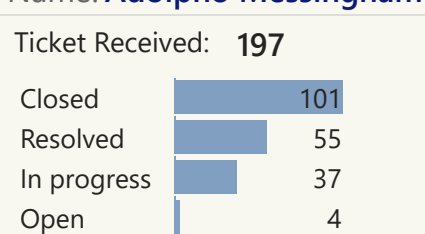
Total Ticket by Country and Topic | User can drill down it by Product group, priority and ticket source

Country	Bug report	Feature request	Other	Pricing and licensing	Product setup	Purchasing and invoicing	Training request	
⊕ Austria	13	21	20	37	41	11	1	144
⊕ Bulgaria	10	20	15	28	37	16	5	131
⊕ Czech Republic	13	28	12	32	38	18	3	134
⊕ France	12	29	14	31	45	22	5	158
⊕ Germany	34	63	24	66	76	32	11	306
⊕ Greece	13	30	9	30	36	24	2	144
⊕ Italy	21	59	17	79	83	32	12	303
⊕ Poland	35	54	21	63	73	30	11	287
⊕ Republic of Ireland	18	19	17	36	38	16	4	148
⊕ Slovenia	17	29	12	33	43	22	3	159
⊕ Spain	15	19	12	27	45	13	2	133
⊕ United Kingdom	24	56	30	63	75	28	7	283
Total	225	417	203	525	630	264	66	

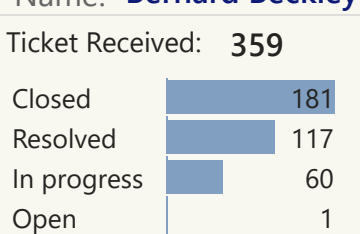
PART 3 Performance Metrics:

Agent Performance

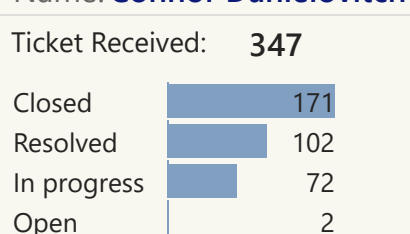
Name: **Adolpho Messingham**



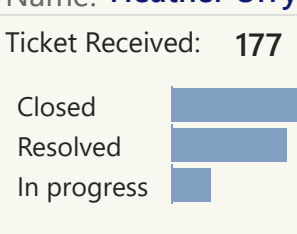
Name: **Bernard Beckley**



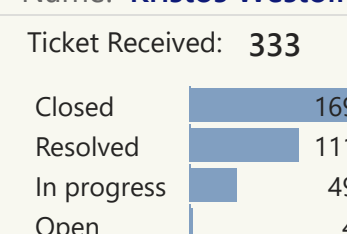
Name: **Connor Danielovitch**



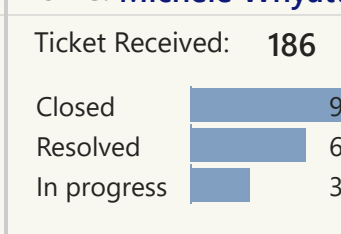
Name: **Heather Urry**



Name: **Kristos Westoll**

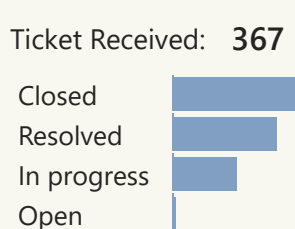


Name: **Michele Whyatt**

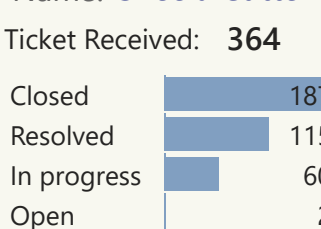


AVG First Response Time Minutes: 13.78			AVG First Response Time Minutes: 21.49			AVG First Response Time Minutes: 24.20			AVG First Response Time Minutes: 45.46			AVG First Response Time Minutes: 21.31			AVG First Response Time Minutes: 28.18		
AVG Ticket Resolution Time Hours: 33.19			AVG Ticket Resolution Time Hours: 33.53			AVG Ticket Resolution Time Hours: 35.71			AVG Ticket Resolution Time Hours: 26.21			AVG Ticket Resolution Time Hours: 35.64			AVG Ticket Resolution Time Hours: 32.53		
Priority	F.Response Time Minut	Resolution Time Hours	Priority	F.Response Time Minut	Resolution Time Hours	Priority	F.Response Time Minut	Resolution Time Hours	Priority	F.Response Time Minut	Resolution Time Hours	Priority	F.Response Time Minut	Resolution Time Hours	Priority	F.Respons e Time Minut	Resoluti on Time Hours
High	25.80	32.71	▲			▲			▲			▲			▲		
Low	16.64	31.99	High	11.82	34.00	High	21.35	40.11	High	35.24	31.56	High	26.13	28.10	High	24.59	39.89
Medium	20.56	36.18	Low	22.62	35.23	Low	20.34	32.93	Low	38.72	23.53	Low	18.17	35.22	Low	33.35	30.80
			Medium	24.96	30.58	Medium	32.16	38.08	Medium	62.38	26.43	Medium	24.00	39.70	Medium	21.20	31.04
Source	F.Response Time Minut	Resolution Time Hours	Source	F.Response Time Minut	Resolution Time Hours	Source	F.Response Time Minut	Resolution Time Hours	Source	F.Response Time Minut	Resolution Time Hours	Source	F.Response Time Minut	Resolution Time Hours	Source	F.Respons e Time Minut	Resolution Time Hours
Chat	1.88	31.42	Chat	1.43	23.84	Chat	3.36	35.86	Chat	1.71	19.28	Chat	1.53	26.60	Chat	1.32	26.93
Email	37.48	36.57	Email	40.02	37.20	Email	48.19	34.22	Email	79.15	28.63	Email	40.60	40.01	Email	50.33	36.77
Phone	6.81	23.50	Phone	1.56	48.58	Phone	1.73	41.03	Phone	1.68	32.41	Phone	1.83	38.68	Phone	1.08	30.40
AVG Rating: 3.46			AVG Rating: 3.41			AVG Rating: 4.07			AVG Rating: 3.37			AVG Rating: 3.23			AVG Rating: 3.40		

Name: **Nicola Wane**



Name: **Sheela Cutten**



AVG First Response Time Minutes: 33.12			AVG First Response Time Minutes: 25.65			
AVG Ticket Resolution Time Hours: 34.45			AVG Ticket Resolution Time Hours: 31.36			
Priority	F.Response Time Minut	Resolution Time Hours	Priority	F.Response Time Minut	Resolution Time Hours	
High	19.07	33.77	Medium	26.53	32.75	
Low	30.04	31.46		Low	25.66	31.77
Medium	45.56	39.32		High	24.24	28.03
Source	F.Response Time Minut	Resolution Time Hours	Source	F.Response Time Minut	Resolution Time Hours	
Chat	1.35	30.28	Chat	2.29	23.56	
Email	54.76	35.82	Email	45.76	36.55	
Phone	22.89	40.31	Phone	1.75	31.61	
AVG Rating: 3.36			AVG Rating: 3.65			

Overall AVG Rating:

3.51

% of Ticket got first response within SLA:

86.7%

% of Ticket got resolution within SLA:

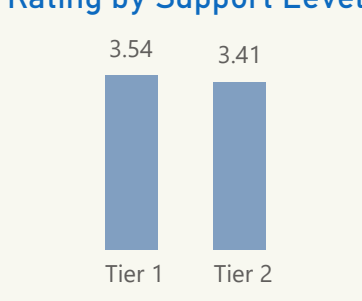
66.4%

Rating by Topic

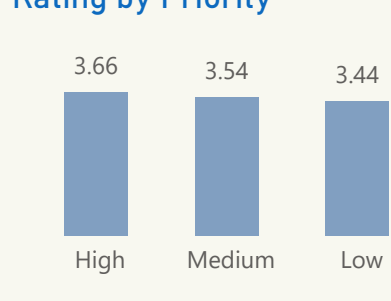
#Drill down by Product Group



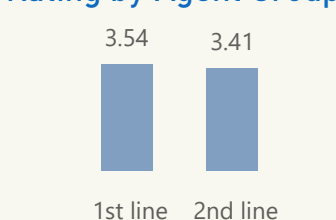
Rating by Support Level



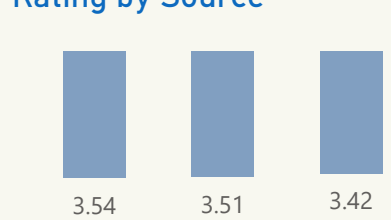
Rating by Priority



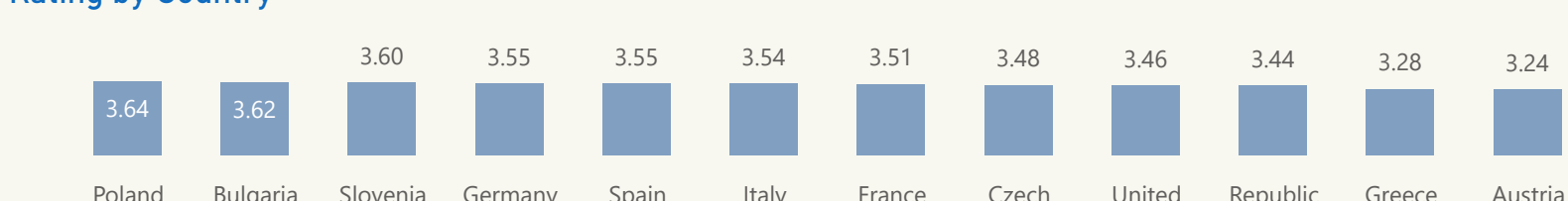
Rating by Agent Group



Rating by Source



Rating by Country



PART 4 Recommendation

Approximately **27% of the total tickets, amounting to 630, are related to product setup**, despite this category having the **lowest satisfaction rating**. To improve customer experience, it is essential to focus more on **product setup-related services**. We can enhance our support by providing comprehensive **documentation** and creating **YouTube tutorials** to assist customers effectively.

The analysis shows that over **50% of tickets are created via email**, which is a professional way, but its **first response time is much longer** compared to chat and phone, impacting customer experience. To improve this, we should aim for a minimum **email response time of 5 minutes** to enhance customer satisfaction and also work on reducing resolution times.

The analysis shows that over **50% of tickets are created via email**, which is a professional way, but its **first response time is much longer** compared to chat and phone, impacting customer experience. To improve this, we should aim for a minimum **email response time of 5 minutes** to enhance customer satisfaction and also work on reducing resolution times.

Only **86.7% of total tickets** received a **first response within the SLA**, which affects our overall customer satisfaction. By utilizing **chatbots and AI**, we can handle simpler tickets more efficiently, improving our response rate and customer service within SLA.

We can enhance the performance of our lowest-performing agents by providing them with targeted training. Additionally, assigning more challenging tickets to our top-performing agents can improve overall customer service efficiency.

