



BLUEMOON

SKY HACK

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Executive Summary

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In the following report, the data has been extensively studied and analyzed to create key drive points, extract major themes in customer reviews and make recommendations to increase the review score of future customers.

Different technologies like Python, Jupyter Notebook, NLP and NLTK techniques have been utilised with the goal of improving the AHT and AST.



Key Driving Points

- 01 PRIMARY CALL REASON
- 02 CALL TRANSCRIPT - Agent & client conversation
- 03 HANDLE TIME & WAITING TIME
- 04 AVERAGE SENTIMENT
- 05 AGENT TONE & CUSTOMER TONE

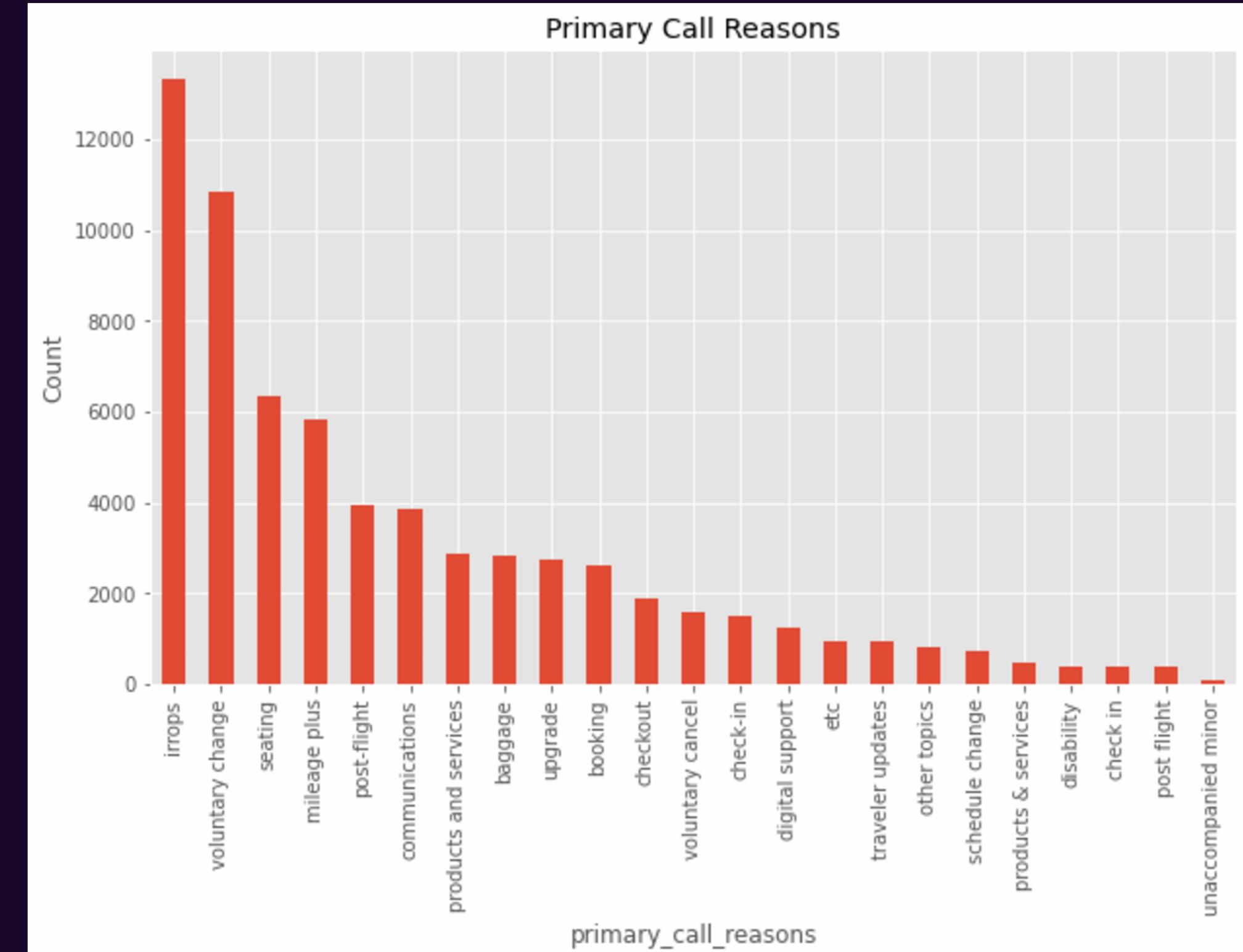
We were provided with three main datasets, which helped us identify key factors contributing to prolonged AHT (Average Handling Time) and AST (Average Service Time). Based on our analysis, we have outlined these key factors along with additional insights to determine the causes of extended AST and AHT.





Major Themes in Primary Call Reason

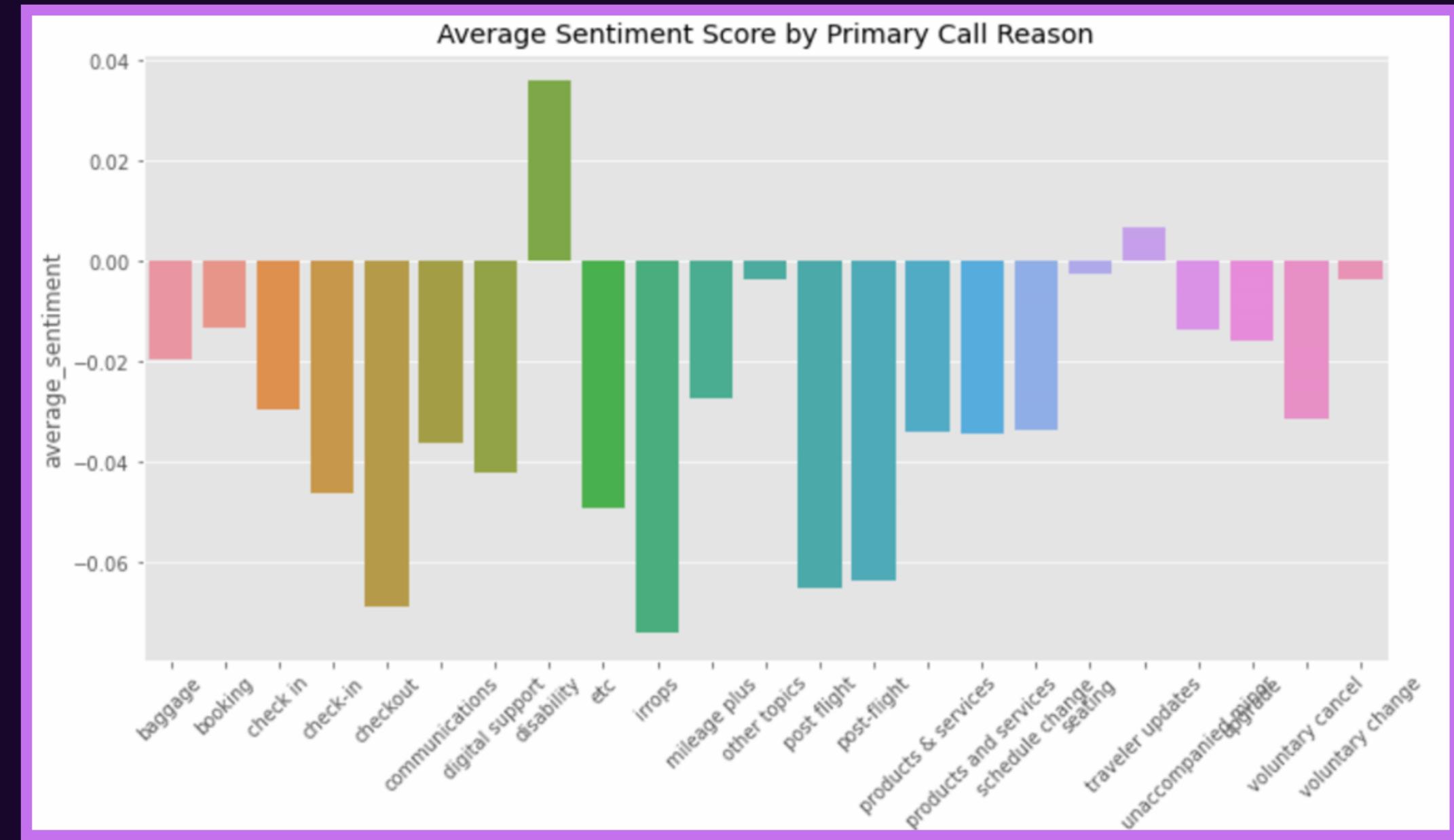
- **Top Call Reasons:** The most frequent call reason is "Infos," accounting for over 12,000 calls, indicating that customers often seek general information, likely about the company's services or policies. Following this, "Voluntary change" and "Mileage plan" are also common, reflecting frequent customer inquiries about modifying their plans or asking about mileage programs.
- "Post-flight" and "communications" also generate a significant volume of calls, potentially highlighting the importance of post-flight follow-ups and clarification on communication issues. Similarly, "baggage" and "booking" concerns are major contributors to call volume, which aligns with common issues in travel services. These insights are directly relevant to understanding the primary reasons for customer calls, identifying potential self-solvable issues, and streamlining processes to reduce Average Handling Time (AHT) and improve operational efficiency
- **Least Call Reasons:** At the far right, categories such as "check-in," "disability" and "unaccompanied minor" have much fewer calls. it's important that systems are still in place to handle these less frequent but specific needs efficiently.





Average Sentiment And Primary Call Reason

- **Positive Sentiment:** "Digital support" shows the highest positive sentiment, indicating customers generally have favorable experiences in this area.
- **Negative Sentiment:** "Checkout" has the lowest sentiment score, reflecting significant customer dissatisfaction. Other negative areas include "communications," "disability," and "irregular operations."
- **Neutral Sentiment:** Call reasons like "baggage," "booking," and "check-in" have near-neutral scores, indicating a balanced customer experience.
- **Variation Across Categories:** Sentiment scores vary widely by call reason, highlighting differing levels of customer satisfaction.



Possible Inferences:

- Customer Experience:** Departments like digital support may have better processes or faster resolutions, leading to more positive customer experiences.
- Pain Points:** Checkout and communication-related issues appear to be significant pain points for customers, which may require process improvements.
- Focus Areas:** The organization may consider focusing on training agents or improving systems in areas with lower sentiment scores to enhance customer satisfaction.
- These insights can help prioritize improvements in customer service processes, focusing on areas that negatively impact customer sentiment the most.



1. Most Frequent Call Reason: Irregular Operations (IRROPS)

- Average Waiting Time: 6.00 minutes
- High call volume due to delays and cancellations indicates operational issues needing attention.

2. Least Frequent Call Reason: Unaccompanied Minor

- Average Waiting Time: 11.47 minutes
- More complex and sensitive issues require longer handling time.

3. Waiting Time Comparison:

- Difference: -47.68%
- "Irrops" calls are managed efficiently, while "unaccompanied minor" calls are slower, suggesting a need for better resources for complex cases.

4. Enhancing Operational Efficiency

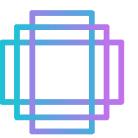
- Operational Challenges: High "irrops" call volume suggests the need to address underlying causes (scheduling, communication).
- Resource Allocation: Efficient handling of "irrops" shows the call center has adequate resources. These strategies could be adapted for complex calls.

5. Improving Customer Service

- Customer Experience: Long wait times for "unaccompanied minor" calls indicate a need for prompt handling to ensure customer satisfaction.
- Targeted Interventions: Learning from "irrops" handling could improve processes for "unaccompanied minor" inquiries, such as specialized training or enhanced self-service options.

Summary

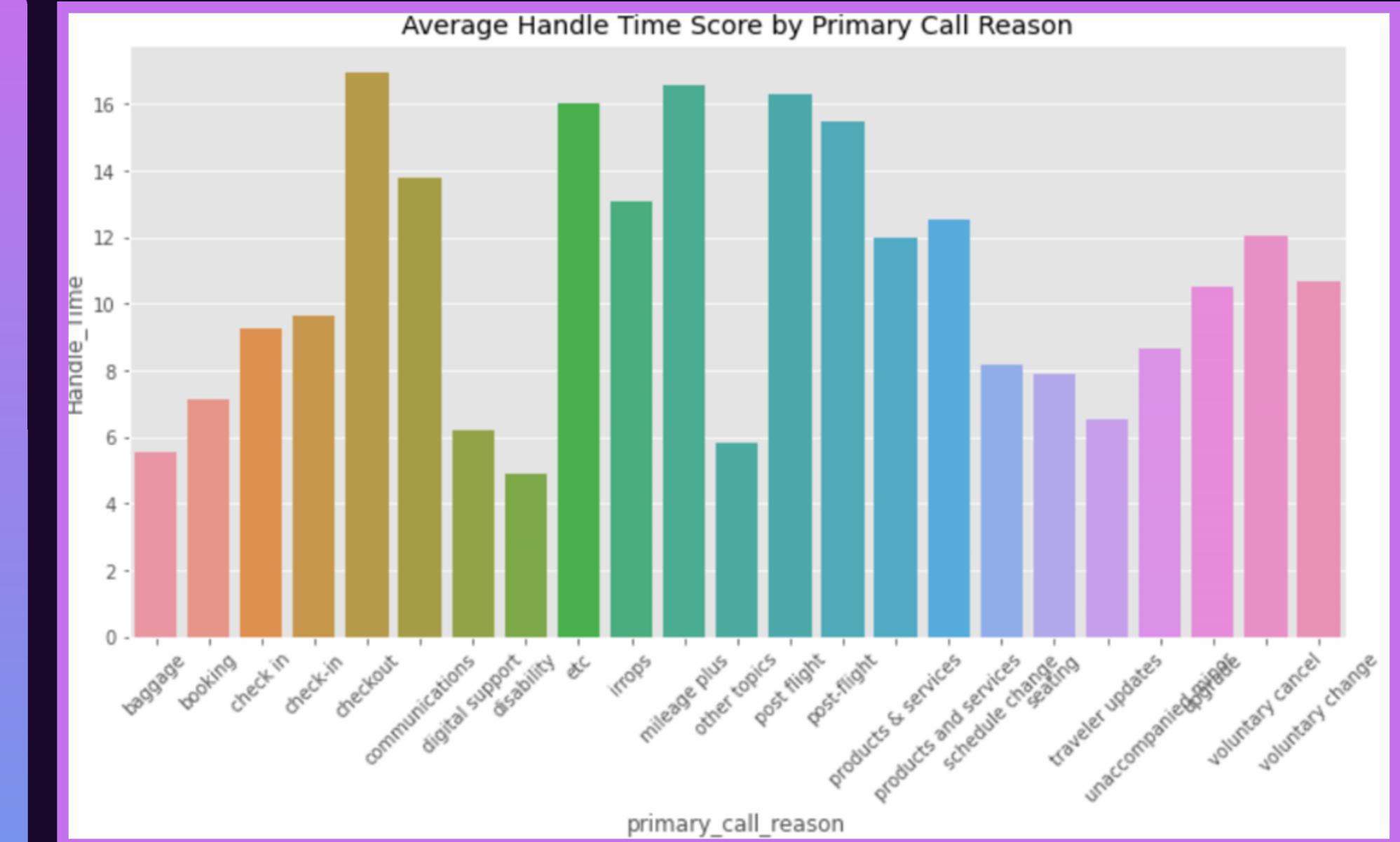
Comparing waiting times reveals both operational challenges and customer service opportunities. Addressing these can lead to greater efficiency and improved customer satisfaction.



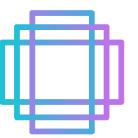
Average Handle Time

Average Handle Time Insights:

- 1. High Handle Times:** Categories like "change fee," "checkout," and "irrops" take the longest to resolve, likely due to their complexity.
- 2. Moderate Handle Times:** Issues like "products & services," "digital disability," and "baggage" take a moderate amount of time, indicating they are somewhat complex but not as time-consuming.
- 3. Low Handle Times:** Categories such as "communications," "sales & service chat," and "products & services chat" are resolved quickly, often because they involve simple questions.
- 4. Variation in Call Reasons:** Different call reasons show a range in handle times, with straightforward queries being quicker to handle compared to more complicated ones like "irrops" and "checkout."



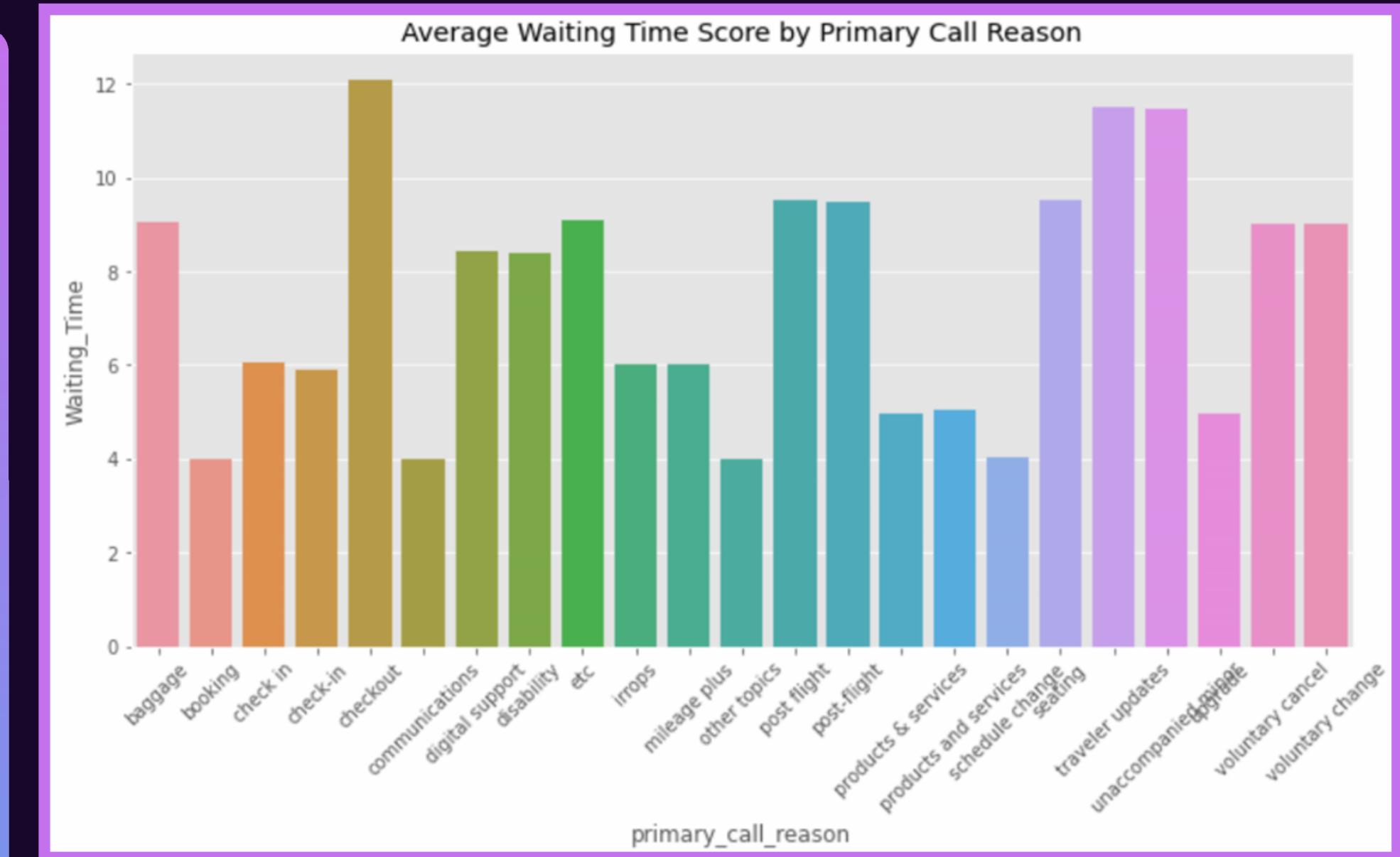
This data could be useful for allocating resources and training, as high handle time areas may benefit from additional support or streamlined processes.



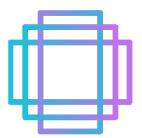
Average Waiting Time

Average Waiting Time Insights:

- 1. High Waiting Times:** Categories like "checkout," "travel updates," and "unaccompanied minor" have the longest waits, around 10-12 seconds. This suggests many calls or the need for special help in these areas.
- 2. Moderate Waiting Times:** Categories such as "mileage plus," "irrops," "other topics," and "products & services" have average waiting times. They may be busy but likely have better processes for handling calls.
- 3. Low Waiting Times:** Call reasons like "baggage," "booking," "check-in," "digital disability," and "sales & service chat" have the shortest waits. These issues may be more straightforward, allowing quicker assistance.
- 4. Impact on Customer Experience:** Long waits in areas like "checkout" and "travel updates" can hurt customer satisfaction. Improving staffing or processes in these high-wait categories could help.
- 5. Resource Allocation:** The findings suggest that call centers could improve by shifting resources to busy areas during peak times, like "checkout" and "travel updates," to reduce waits and boost efficiency.



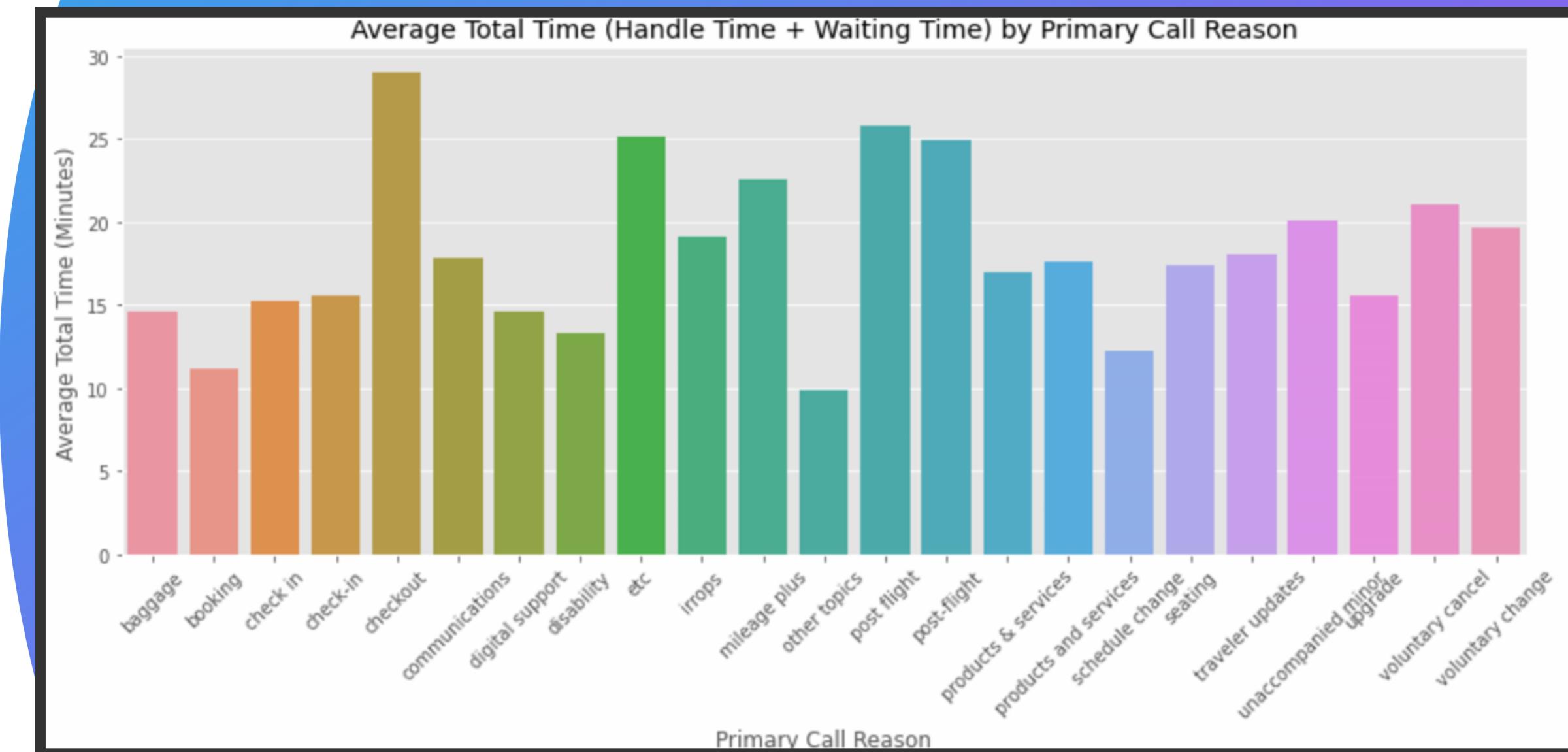
In summary, the data highlights the need to examine the reasons for prolonged waiting times in certain categories and explore strategies to reduce these, while maintaining efficient handling for categories with moderate or low waiting times.



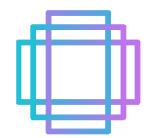
Total Time

Average Total Time Insights:

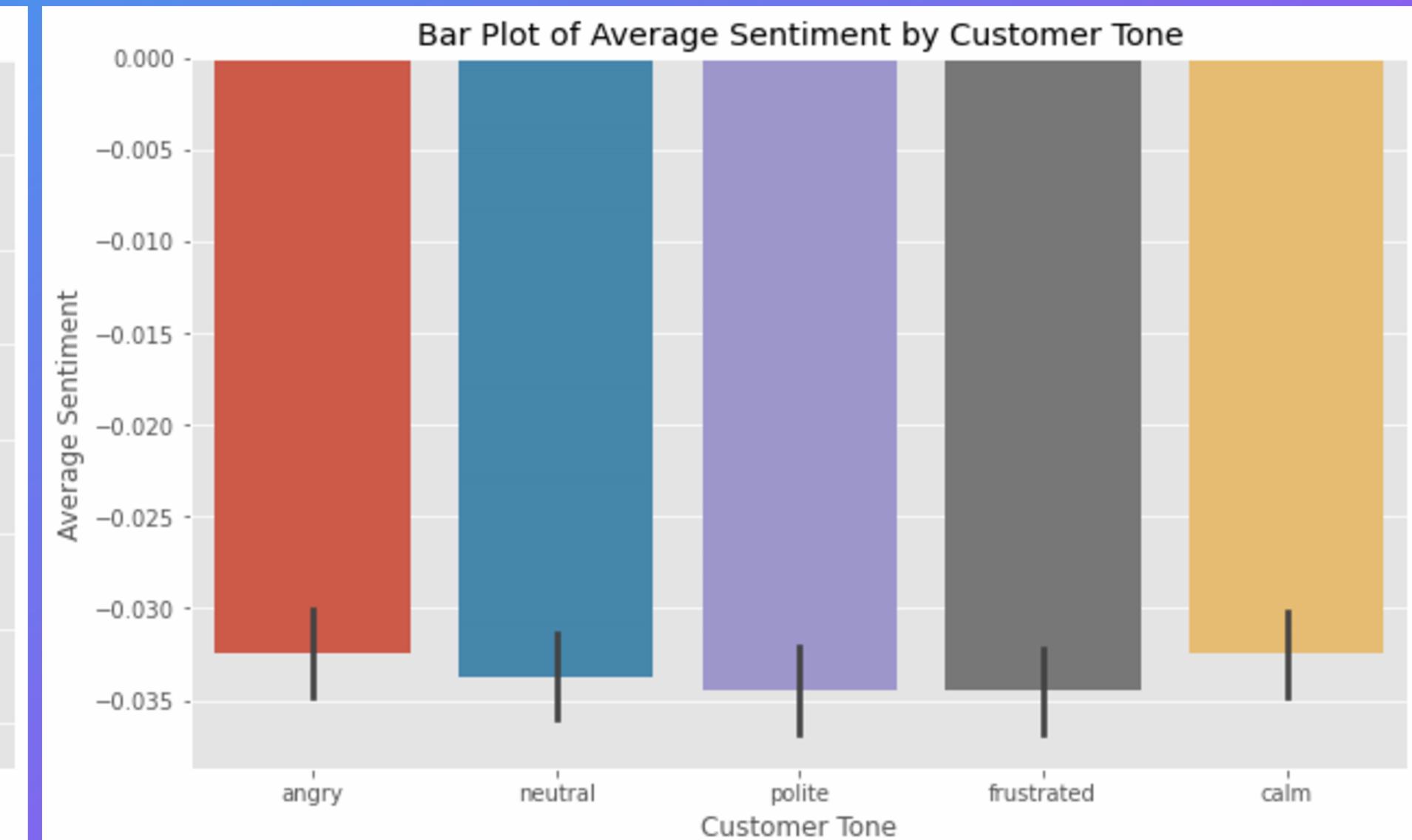
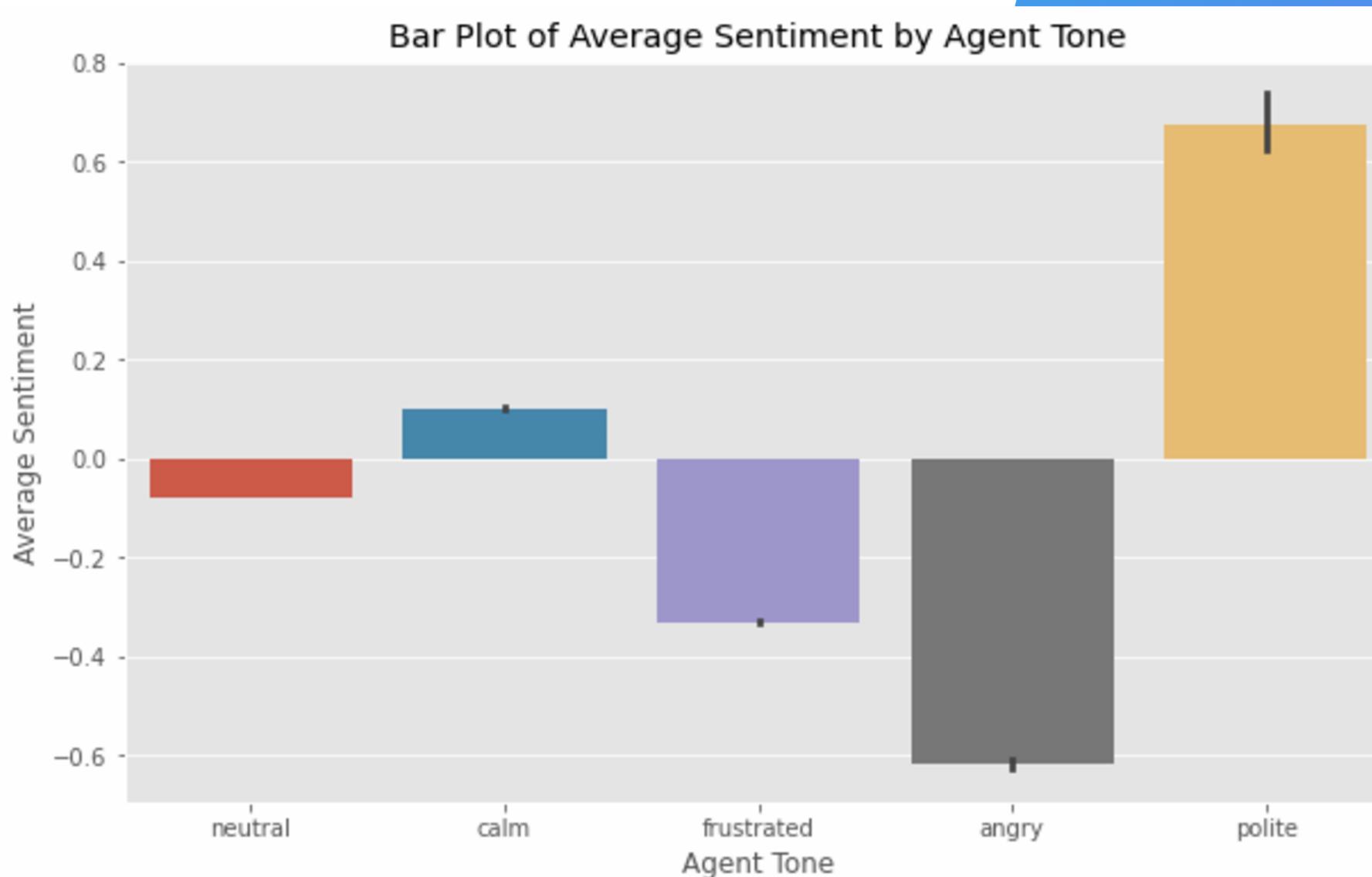
- Highest Total Times:** Categories like "checkout," "irrops," and "post flight" have the longest total times, showing they involve both long interactions and waits. These are likely complex issues needing more support.
- Moderate Total Times:** Call reasons like "products & services," "schedule change," and "unaccompanied minor" have average total times. Improving processes in these areas could help reduce overall time.
- Lowest Total Times:** Categories such as "baggage," "booking," and "check-in" have the shortest total times, indicating quicker resolutions and shorter waits. These are usually simpler issues.
- Resource Allocation:** High total time categories like "checkout" and "irrops" may need more resources or better processes to lower both handle and waiting times, which could improve customer satisfaction.



This graph highlights areas where efficiency improvements could reduce total time spent, especially for high-impact call reasons, potentially improving the customer experience in these areas.



Average Sentiments by Agent Tone & Customer Tone





Recommendations

From the fore mentioned key points and analysis, we can conclude that certain steps taken care can help improve the customer experience and overall passenger satisfaction. These are discussed below-



1. We can divide the **IRROPS** in following categories (As it is the most frequent call reason) and ask customers that in which category their problem lies in and then forward their call to agents accordingly.

- Flight Delays: Significant delays due to weather, technical issues, or crew rest requirements
- Flight Cancellations: Cancellations caused by maintenance problems, strikes, or other unforeseen events
- Missed Connections: When a delay or cancellation causes passengers to miss their connecting flights
- Diversions: Flights diverted to alternate airports due to emergencies or weather conditions
- Rebooking and Refunds: Assistance with rebooking flights or processing refunds for non-refundable tickets affected by IRROPs

And then forward that call to agent accordingly to agent so that handling time reduces for these reasons as it takes significantly high time compared to others and average sentiment for these type of calls is lowest.

2. Mileage Plus (**United airlines customer loyalty program**)

- Customers may inquire about using their miles or loyalty points to upgrade during the check-in process or request details on special privileges tied to their loyalty status.
- We can integrate some more features of MileagePlusX app in United Airlines app so that customers can easily get information about their points. Ease of convenience will also help United Airlines to retain their already loyal customers and also increase new long miles traveling customers.



Recommendations



3. Self-service options in the IVR system

- There are some call reasons which can be resolved through IVR systems where average handling and waiting time is high.
- For example, we can tell customer their mileage points by their customer id. If they want to cancel it we can also add this to IVR systems.
- We can categorize some call reasons so that they can be connected to agent in less time and customers don't have to wait for more than necessary time. Or so that they can solve their problem with the help of IVR systems itself.
- Pre Flight Categories - Mileage Plus, Voluntary Cancellations, Voluntary change, products and services
- Post Flight Categories - Baggage, Missed flights or connecting flights.

3. Feedback Mechanism

- Post-Flight Surveys: Solicit feedback through surveys to understand customer experiences and areas for improvement.
- Act on Feedback: Show customers that their feedback is valued by making visible changes based on their input.