Problem Statement

The Goal is to identify where the Time wastage happening in the service and using best possible way to stop the Consumption and optimize the time .

With the Data from the center and with the help of the Data Analysis to identify the time Consumption in the car service

Findings

According to our analysis on the data where 34% of time consumed by 77 Car of five types Car Model and remaining time 66% was utilized by 575 car of remaining 29 car model types .

In that 34 % of car where almost 72% of cars under the PMS(Period maintenance Service) which are 59 cars and remaining 28% of cars under the RR (Running Fault).

75% of cars which comes for almost serviced and processed within a day or below. Around 53 % Service are Periodic Maintenance service indicates better service in the Center.

There are certain model in the service which are BALENO , CELERIO , NEW ERTIGA , NEW SWIFT ,SWIFT , SCROSS , WAGON R , SWIFT DZIRE consumes 34% of the Total Service time.

According to dataset where Periodic Maintenance Service around 53% , Running Fault around 19% , Free Service FR1 around 9% and FR2 around 10% and FR3 around 6%.

Recommendation

With the help of the Findings from the analysis , we found that only Certain model type car cause the Time Delay and Time Consumption in the Service processing.

1.One of our best choice of solution is to provide the Special training and Educating the employee in those Certain model types which mentioned before to optimize the solution .

2.By increasing the manpower in the Periodic Maintenance Service might reduce the time because the PMS is the most using Service and potential one of the service which consumes more time too.

3. Using the Warehouse Management Software(WMS) to help in the Organize and administrator the part in the warehouse .

Deep Dive into the Car Servicing Dashboard

The dashboard you provided offers a wealth of information about car servicing trends, allowing for a more detailed explanation than just a glance at the charts. Here's a breakdown focusing on insights and potential actions:

1. Maruti Suzuki Dominates:

The bubble chart clearly shows Maruti Suzuki models, specifically the Swift, leading the pack in terms of servicing numbers. This suggests a large customer base for these models, making them a priority for efficient servicing.

2. Time Taken for Servicing:

The heatmap reveals a cluster of Maruti Suzuki models (Baleno, New Swift, Celerio, Wagon R, standard Swift) taking longer service times. This could be due to:

Model complexity: These models might have intricate parts requiring more time for technicians.

Frequent repairs: If these models have common issues, servicing might involve additional checks or part replacements.

Parts availability: Delays in obtaining specific parts for these models could extend service times.

3. Correlation Between Time and Model:

The scatter plot with an R-squared value of 0.6338 indicates a moderate positive correlation. This means there's a tendency for certain car models to consistently require longer servicing times compared to others.

Actionable Insights:

Investigate longer servicing times: Analyze service records for Maruti Suzuki models to identify specific reasons behind extended servicing times. Are there recurring issues or parts delays?

Optimize service procedures: Streamline servicing processes for high-volume models like the Swift to improve efficiency.

Consider service packages: Offer targeted service packages for popular models addressing common issues, potentially reducing overall service time.

Inventory management: Ensure adequate stock of frequently replaced parts for Maruti Suzuki models to minimize delays.

Additional Considerations:

The dashboard might benefit from including:

Service type breakdown: Categorizing services (oil change, major repairs) for a clearer understanding of time allocation.

Customer segmentation: Analyzing service trends based on customer demographics (age, location) for targeted marketing or service recommendations.

By delving deeper into the data and understanding the reasons behind service times, the car servicing business can optimize its operations and improve customer satisfaction.

The image you sent me is a flowchart of a process for a service center, but it appears to be specific to a car service center called Rajalakshmi Cars. Here's what I can extract from the flowchart:

Customer Brings Car

The process starts with the customer delivering their car to the service center.

Service Advisor Assesses Car

A service advisor receives the car and assesses it.

Two Paths: Minor or Major Service

Depending on the assessment, the car goes through either a minor service or a major service path.

Minor Service

The minor service path involves the advisor recommending an express service.

Express Service

An express service is likely a quicker and potentially less expensive service option.

Major Service

If a major service is needed, the advisor will recommend further consultation with a technical advisor.

Technical Advisor Consults with Customer

The technical advisor will consult with the customer about the major service recommendations.

Customer Approves or Denies Service

The customer decides to approve or deny the recommended major service.

Car Gets Serviced

If the customer approves the major service, the car gets serviced.

Driver Picks Up Car

Once the service is complete, a driver from the center will pick up the car.

Customer Provides Feedback

The process ends with the customer providing feedback about their service experience.

Additional Notes

The flowchart does not specify what happens if the customer denies the recommended service (either minor or major).

The text in the flowchart is difficult to decipher in some places.

Conclusion

With the help Data Analysis and Data Visualization using Tableau to find the Time Consumption in the Service Process where identified and which helps to optimize the time of the Car service .

Educating and Training the Employee in the area where the Time Consumption might be the best method to optimize the Service Time

In Future, Using the Machine learning model to predicate and forecast where problem in the Service Management by feeding the data will simplify everything .

Action taken Report : In the previous meeting, it was mentioned that a more suitable graph or plot should be used for the analysis and report.

To deepen the analysis and find the root cause, we conducted an analysis from both a service perspective and a technician perspective.

We calculated the average time for each technician in their respective service and analyzed the results.

Insights & Analysis

Description :To find the Root cause for the Time consumption in the Service process with the help of the data analysis

Phase 2 Analysis :

In the phase 2 , analysis where conducted from the technician perspective , the analysis where conducted on 15 technician and 867 customers between 1st Oct to 31st Oct.

In the PMS (Periodic maintenance service) is the most accessed service with count of 489 , RR(Running Repair) with 160 , FR (First Repair)service with 214.

In the analysis , we concluded that certain technician where assigned with more service than others which result in the unequal distribution service among the technician .

This improper distribution management impact the time in the process service which result in the delay delivery in PMS service and RR service types .

The Technician assigned with above average service are SANTHANAM L with 143 , THIRUMURUGAN A with 108, JANARDHANAN V with 87, JERODRAJ V WITH 93 and PALANI R with 58.

Based on the information you can extract from the image, you can determine the average time taken by a service by type of service. The average time taken by a service by type of service varies depending on the technician that completes the job. For example, Technician Dinesh Babu K seems to take the longest time on average to complete PMS services (77 hours), while Technician Jeroldraj S completes PMS services the quickest on average (20 hours).

Here's a breakdown of the information in the table:

Technician: The name of the technician who performed the service.

FR1, FR2, FR3: These appear to be abbreviations for different service types, possibly Fast Repair 1, Fast Repair 2, and Fast Repair 3.

PMS: This likely refers to Preventive Maintenance Service.

RR: This could be Regular Repair.

Count of Serviced: The total number of times a technician performed each type of service.

Avg. Time Taken: The average time (in hours) each technician took to complete each type of service.

Additional Notes:

The table also includes information about the total count of Registration No (possibly the number of cars serviced) and the total count of Serial No (unclear what this refers to).

It is difficult to say for certain why some technicians take longer than others to complete the same type of service. It could be due to factors such as experience level, complexity of the repairs performed, or the specific make and model of car being serviced.

The image you sent me is a data visualization dashboard that contains several charts and graphs that appear to be related to car servicing trends, likely for a company named Rajalakshmi Cars. Here's a deeper look at the information we can glean from the dashboard:

Title: Trend analysis between PMS and RR service

Dates: The data covers a period from July 30th, 2023 to August 29th, 2023. This relatively short timeframe makes it difficult to draw definitive conclusions, but it does provide a snapshot of servicing activity during that period.

Leftmost Chart: This chart is a times series graph. It shows trends in the number of PMS (Preventive Maintenance Service) and RR (likely Regular Repair) services completed over time. There seems to be a positive correlation between PMS and RR services, meaning that when the number of PMS services increases, the number of RR services also increases. This could indicate that cars that come in for preventive maintenance are more likely to also need some minor repairs. It could also suggest that the PMS process itself sometimes uncovers the need for additional repairs.

Rightmost Chart: This chart is also a time series graph, but it is less clear-cut than the leftmost chart. It shows the number of FR (Fast Repair) services completed over three categories (FR1, FR2, FR3) over time. It is difficult to discern any clear trends from this chart due to the limited timeframe. However, it does reveal that Rajalakshmi Cars offers Fast Repair services in three distinct categories, which could be helpful for customers looking for quick servicing options.

Data Anomalies:

There seems to be a data point on August 14th where both PMS and RR values are zero. This could be an error or indicate a center closure on that day. Anomalies like this can sometimes skew data analysis, so it would be worth investigating this data point further.

Overall Insights:

The dashboard suggests that there might be a connection between PMS and RR services at Rajalakshmi Cars. Perhaps customers who get a PMS also tend to need RR services, or vice versa. More data over a longer period would be needed to confirm this correlation and investigate the reasons behind it.

FR services seem to be offered in three categories (FR1, FR2, FR3), but the trends for these categories are inconclusive from this view. Analyzing data for a longer timeframe and breaking down FR services by category would reveal which category is most frequent and allow for further investigation into the types of repairs offered under each category.

Further Analysis:

To get a more complete picture, it would be helpful to see data for a longer time period. This would allow for a more robust analysis of trends and potential correlations between PMS and RR services.

Analyzing the reasons behind RR services after a PMS could help determine if there's a causal relationship between the two. For example, are there certain types of PMS that are more likely to uncover the need for repairs?

Breaking down FR services by category (FR1, FR2, FR3) would reveal which category is most frequent and allow for further investigation. This could help Rajalakshmi Cars understand what types of fast repairs are most in demand and optimize their service offerings accordingly.

The image you sent me is a data visualization dashboard that contains several charts and graphs that appear to be related to technician performance at a car service center. Here's what I can extract from the image:

Technician Performance: This section likely shows two key performance indicators (KPIs) for each technician:

Count of Service: The total number of services completed by the technician during the measured period. This metric reflects the technician's workload and overall contribution to the service center's output.

Avg. Time Taken: The average time (in hours) each technician took to complete a service. This metric can be an indicator of the technician's efficiency in completing tasks. However, it's important to consider that some complex repairs may naturally take longer than simpler jobs.

From this section, we can see that Technician Ramesh has completed the most services (15) at an average time of 9 hours per service. Conversely, Technician Subramani has completed the fewest services (2) at an average time of 7 hours per service. On the surface, this might suggest that Ramesh is more productive than Subramani. However, without additional context about the types of services completed by each technician, it's difficult to draw a definitive conclusion.

Technician vs Their Performance: This section seems to be a visual representation of the data in the "Technician Performance" section. It includes two bar charts:

Count of Service: A bar chart showing the distribution of service counts across technicians. This chart allows for a quick visual comparison of the workload handled by each technician.

Avg. Time Taken: A bar chart showing the average time taken by each technician to complete a service. This chart helps identify any technicians who are consistently taking longer (or shorter) than average to complete services.

The bar charts visually reinforce the information presented in the table, making it easier to identify high performers and potential areas for improvement.

Additional Information:

The bottom right corner of the image contains information that appears to be unrelated to technician performance. It includes details about registrations (possibly new car registrations) and distinct counts of service requests (unclear what "distinct" refers to in this context).

Overall Insights:

This dashboard provides a snapshot of technician performance at the service center. It allows for quick comparisons between technicians in terms of their workload and efficiency. By analyzing technician performance data, service center managers can gain insights into resource allocation, identify areas for improvement, and potentially implement strategies to optimize technician performance.

Limitations:

The dashboard doesn't reveal the types of services completed by each technician. It's possible that some technicians specialize in complex repairs that take longer, while others handle simpler, quicker jobs. Without this context, it's difficult to make a definitive judgment about a technician's efficiency based solely on average time taken. For instance, Technician Ramesh might be consistently assigned complex repairs that take longer, but his high service count could indicate his expertise in handling those tasks efficiently.

The dashboard doesn't account for customer satisfaction. While completing services quickly is important, it's also crucial to ensure the quality of the work. Ideally, technicians should strive to find a balance between speed and accuracy. Including customer feedback on technician performance alongside the objective data on service counts and times would provide a more holistic view of technician effectiveness.

Further Analysis:

To get a more comprehensive understanding of technician performance, it would be beneficial to consider the following:

Service Type: Analyze how long each technician takes to complete different types of services. This would provide a more nuanced picture of their efficiency and identify any areas for improvement. For example, a technician who consistently takes longer than average to complete oil changes might benefit from additional training on that specific service.

Customer Satisfaction: Include customer feedback on technician performance alongside the objective data on service counts and times. This would help assess the quality of service alongside its speed. Technicians with high customer satisfaction ratings, even if their average service time is slightly higher than others, could be considered high performers.

Conclusion:

Our analysis from the technician's perspective has shed light on critical aspects of our service operations.

The unequal distribution of service assignments among technicians is evident and impacting in service delivery.

Delays in PMS and RR services are negatively affecting customer satisfaction and operational efficiency.

Recommendations

Optimize Technician Assignments: Implement a fairer distribution of service assignments among technicians to reduce workload disparities.

Training and Skill Enhancement: Offer training and skill development programs to improve the capabilities of technicians with higher service loads.

Resource Allocation: Consider hiring additional technicians or redistributing resources to balance service loads effectively.

Additional Information:

In the Given dataset , we can also to extract the Location of the customer who visited the Service Center.

With the help of program we developed to obtain the latitude and longitude of customer from the pin code in the dataset

From the Map , We can understand the service center receive customer from dispersed area of the Chennai.

ACTION TAKEN REPORT

During the previous meeting, the following recommendations were made:

It was recommended to conduct a Time Dependent Pattern Recognition.f

Enhance inventory management processes.

Time Consumption Analysis

We discovered that the service station offers three primary service types: Preventive Maintenance Service (PMS), Repair and Replacement (RR), and Breakdown Assistance and Parts Procurement (BANDP).

In the Phase 4 analysis, we analyzed three months of service center data and encountered around 3,469 service records, which we analyzed using 17 different technicians.

We analyzed data attributes that included entry date and time, ready date and time, service type, car model, and technician who worked on the car.

Statistical Analysis:

Our next analysis is a statistical model, one-way ANOVA classification. This analysis gave us insight into the service time of different service types in comparison to one another.

The service type with the longest average time was Repair and Replacement (RR), followed by Breakdown Assistance and Parts Procurement (BANDP).

he list includes several tasks categorized by mileage. Here are the categories and some of the listed tasks:

Every 3,000 miles or 3 months:

Oil change: This routine maintenance helps remove contaminants and impurities from the engine oil, which can help reduce wear and tear on engine components and improve overall engine performance.

Tire rotation: Regularly rotating your tires helps ensure even wear and tear, which can extend the life of your tires and improve handling.

Filter replacements (air, cabin): Air filters help remove dust, pollen, and other airborne contaminants from the air entering the car's engine. Cabin air filters help remove dust, pollen, and other allergens from the air entering the car's passenger compartment. Replacing these filters at regular intervals can help improve engine performance and air quality inside the car.

Fluid top-off (windshield washer, brake): Windshield washer fluid is essential for keeping your windshield clean and improving visibility while driving. Brake fluid plays a vital role in your car's braking system. Regularly topping off these fluids ensures that your car's systems function properly.

Every 15,000 miles or 1 year:

Spark plug replacement: Spark plugs are responsible for igniting the air-fuel mixture in your car's engine. Over time, spark plugs can wear out and become less effective. Replacing them at regular intervals can help ensure optimal engine performance and fuel efficiency.

Fuel system cleaning: The fuel system can accumulate deposits over time, which can reduce fuel efficiency and engine performance. Fuel system cleaning helps remove these deposits and restore optimal performance.

Additional Notes:

The specific details of the tasks might vary depending on the car model and manufacturer's recommendations. It's always best to consult the car's owner's manual for the most accurate maintenance schedule.

The to-do list seems generic and might not include all the maintenance tasks recommended by the car manufacturer. Consulting a trusted mechanic or the car's owner's manual for a more comprehensive maintenance schedule is advisable.

The image you sent is a scatter plot showing the duration of BANDP service from car arrival to completion. The text accompanying the graph says that there is a significant dispersion in the BANDP service times, while PMS service times are tightly clustered. BANDP service accounted for 57% of service time among 588 encounters, whereas PMS service accounted for 19.67% of the total service time.

In other words, the time to complete a BANDP service is more variable than the time to complete a PMS service. This suggests that BANDP services may be more complex or less standardized than PMS services.

Here are some additional details that can be extracted from the image:

The x-axis of the scatter plot is labeled "DateT." This suggests that the time to complete a service is being plotted against the date the service was performed.

The y-axis of the scatter plot is labeled "Service Time (s)". This suggests that the y-axis is measuring the amount of time it took to complete a service in seconds.

The text mentions that a single technician performed all of the BANDP services. This could be a factor in the variability of the BANDP service times.

Possible reasons for the variation in BANDP service times

The fact that the BANDP service times are more variable than the PMS service times could be due to a number of reasons. One possibility is that BANDP services are more complex than PMS services. This could mean that they involve more steps, or that they require the technician to use a wider range of tools and equipment. Another possibility is that BANDP services are less standardized than PMS services. This could mean that there is more variation in how the service is performed from one car to the next. For example, the technician may need to take different steps depending on the make and model of the car, or the specific problems that the car is having.

The fact that a single technician performed all of the BANDP services could also be a factor in the variability of the service times. If the technician is new or inexperienced, they may take longer to complete the service. Additionally, if the technician is tired or overworked, they may also take longer to complete the service.

Further analysis

It would be interesting to see if there is any correlation between the date of the service and the service time. For example, if the technician is new or inexperienced, we might expect to see that the service times were longer earlier in the data set. Additionally, it would be interesting to see if there is any correlation between the make and model of the car and the service time. This could help to determine if the complexity of the service is a factor in the variability of the service times.

Overall, the image suggests that there is more variability in the time it takes to complete a BANDP service than the time it takes to complete a PMS service. This could be due to the complexity of the BANDP service, the fact that a single technician performed all of the BANDP services, or a combination of these factors.

The image you sent is a graph showing the weekly car service requests categorized by service type. The text overlaying the graph says that there is a clear pattern for PMS, which is periodical maintenance service. It spikes on Wednesdays and Saturdays, while it has minimum requests on Sundays. This indicates that we can expect fewer car service encounters on Sundays and more on Wednesdays and Saturdays of a week.

Here is a breakdown of the information in the image:

X-axis: Timeline for Services that encountered (Sunday, Wednesday, Saturday)

Y-axis: Distinct count of Registration No.

Data points: The graph shows nine data points, each representing the distinct count of car registration numbers for three service types (PMS, Body & Paint (BANDP) and Engine) on Sundays, Wednesdays and Saturdays over a nine-week period (Week 1 to Week 9).

PMS: Periodic Maintenance Service. The graph shows a clear pattern for PMS services, with a significantly higher number of requests on Wednesdays and Saturdays compared to Sundays. This suggests that people are more likely to schedule routine maintenance services for weekdays or weekends when they are likely not using their cars.

Body & Paint (BANDP) and Engine: The graph shows a less clear pattern for Body & Paint (BANDP) and Engine services compared to PMS services. There is some fluctuation in the number of requests for these service types across the three days (Sunday, Wednesday, Saturday) over the nine weeks. However, it is difficult to discern a definitive weekly pattern from the graph.

Overall, the graph indicates that PMS services are most requested on Wednesdays and Saturdays, while Sundays see the least number of requests. This suggests that people are more likely to schedule routine maintenance services for days when they are likely not using their cars. The pattern for Body & Paint (BANDP) and Engine services is less clear, and it may be difficult to draw any specific conclusions about these service types from this graph.

Challenges :

Most of the works in the BANDP service need to be done manually such as Color Spraying ,Parts Changing etc.. It results in the high time consumption in the workflow ,particularly the BANDP service have low number of technicians to handle

Repetitive Motion Disorders: These injuries result from constant stress on one part of the body. For example, workers who repeatedly have to turn manual screwdrivers put excessive pressure on their wrists.

Chemical Exposure: Along with the particles and dust produced by grinders, polishers, buffing machines and other equipment, the respiratory systems, eyes and skin of workers are at risk of damage.

Low and unexperienced Technicians : We came to know most of the worker in the BANDP service are inexperienced and had no prior knowledge about the work , This results in inconsistency and delay in the workflow

Recommendation

Hazard - Autobody workers may develop nervous disorders, skin and eye irritation, respiratory sensitization, asthma and reduced lung function from exposure to paint.

DOWNDRAFT VENTILATION spray painting booths are recommended instead of Cross Draft or Semi-Downdraft Ventilation spray painting booths. Properly operated DOWNDRAFT booths produce lower concentrations of paint overspray compared to the other two types of booths. DOWNDRAFT booths produce a cleaner paint job that requires less buffing.

Here's the information I can extract from the image:

Service Types: The service station handles four main service types:

PMS (Periodic Maintenance Service) is likely the routine maintenance that most cars need on a regular basis [1].

BANDP (Body & Paint) likely refers to collision repair, rust repair, dent removal, repainting, and other services that restore the exterior of a vehicle [1].

REFF (Refueling) is the service of filling a vehicle's tank with gasoline or other fuel [1].

WASH (Washing) likely includes both automatic and manual car washing services [1].

Proportion of Services: PMS is the most accessed service, at around 39% [1]. This suggests that a significant portion of the service station's business comes from routine maintenance. BANDP is the second most accessed service, at around 17% [1]. Free services (washing, refuelling) make up around 16-17% of services [1]. It's interesting to note that a significant portion of the services provided by the service station are complimentary.

The image is a chart depicting the total amount of revenue generated by different service types at a service center [1]. The title of the chart is "Total Amount Based on Service Type" [1].

The left side of the chart lists various service types offered by the service center, including TV2, TV1, TV3, FR4, WASH, SC, WMOS, FR2, FR1, PMS, ACC, FR3, and BANDP [1]. There is a link symbol next to "Service Type" but it is not clear where it links to [1].

The chart reveals that PMS (Periodic Maintenance Service) is the most profitable service, generating around 33,488,343 in total revenue [1]. This is followed by BANDP (Body & Paint) at around 28,313,293 [1]. The revenue generated by other service types is significantly lower than that of PMS and BANDP [1]. For instance, FR3 generated only 1,799,385, and RR (presumably Refueling) generated 8,056,317 [1].

This suggests that routine maintenance and collision repair are the most significant revenue generators for the service center.

The image you sent is a line graph that shows the average time spent on a website [1]. The title overlaying the graph says "Time Series Analysis" [1].

The X-axis of the graph is labeled "DateT", and the Y-axis is labeled "Service Time (s)". This suggests that the graph is plotting the average time users spend on a website over a period of time [1]. The timeframe for this data cannot be determined from the image [1].

There are multiple data series plotted on the graph, but it is difficult to distinguish the individual lines due to the low resolution of the image [1]. It appears there might be four or five lines plotted on the graph [1]. Without more information about the legend, it is impossible to say what these lines represent [1].

Overall, the image shows a line graph that plots the average time users spend on a website over a period of time. However, due to the quality of the image, it is difficult to extract more specific details about the data.

Title: The title of the chart is "For time series analysis, we analyzed the most accessed such PMS, RR, BANDP" [1].

X-axis: The x-axis label is cut off in the image [1]. However, based on the remaining characters "te Li" and the context of the chart, it likely represents "DateLine" [1]. This suggests that the x-axis shows the time period over which the data was collected [1].

Y-axis: The y-axis label is "Service Time (s)". This indicates that the y-axis measures the amount of time a service took in seconds [1].

Data: The chart depicts service times for three service types: PMS (presumably Periodic Maintenance Service), RR (likely Refueling), and BANDP (Body & Paint) [1]. Each service type is represented by a different colored line on the chart [1].

Data points: There are multiple data points plotted for each service type, but the exact number is difficult to determine due to the resolution of the image [1].

Notes:

The text overlaying the graph notes that a single technician performed all of the BANDP services [1].

It also notes that there is a relationship between service time and season [1], however the exact nature of this relationship is unclear from the image [1].

Overall, the image shows a time series plot that compares the service times for three different service types over a certain period. The text overlay provides some additional context about the data, but some details are unclear due to the quality of the image.

Title: The title of the chart is "Transition of (8) Diseases of locomotion and internal organs due to heavy and excessive work load in Top6 large industries (198)** [1]. However, it is not relevant to the data being shown in the chart [1].

X-axis: The x-axis label is "DateT." This suggests that the time to complete a service is being plotted against the date the service was performed [1].

Y-axis: The y-axis label is "Service Time (s)". This suggests that the y-axis is measuring the amount of time it took to complete a service in seconds [1].

Data: The chart is a scatter plot showing the duration of BANDP service from car arrival to completion [1]. There is a significant dispersion in the BANDP service times, while PMS service times are tightly clustered [1]. BANDP service accounted for 57% of service time among 588 encounters, whereas PMS service accounted for 19.67% of the total service time [1].

In other words, the time to complete a BANDP service is more variable than the time to complete a PMS service. This suggests that BANDP services may be more complex or less standardized than PMS services [1].

Here are some additional details that can be extracted from the image:

The text mentions that a single technician performed all of the BANDP services. This could be a factor in the variability of the BANDP service times [1].

Overall, the image suggests that there is more variability in the time it takes to complete a BANDP service than the time it takes to complete a PMS service. This could be due to the complexity of the BANDP service, the fact that a single technician performed all of the BANDP services, or a combination of these factors [1].