Power BI Project - CALL CENTER ANALYSIS

ServiceSpot, an IT company, contacted us in order to help them analyze their call center data. To realize this analysis, we started by importing the data, then we built a data model (a star schema). The process typically includes importing CSV files, transforming and cleaning the data, mapping it to the predefined model, and finally, visualizing the insights through a user-friendly dashboard interface.

❖ DASHBOARD

We have created a map to show the number of calls per state and per site. We observe the state of Florida and its Jacksonville site received the most calls, with a total of 47481 calls. We added a pie chart with the value within SLA (Calls answered within 35 sec.) and the total number of calls to check the number of calls that were true and false. We note that there were 144,000 calls, more precisely 86% of the calls were genuine. We created a clustered column chart about the total of calls by call type. We can see that over a 4-year period, March and October recorded the most calls in the "Tech support" category. We added to KPIs measures which are quantifiable metrics used to track and measure progress toward specific business objective: KPI within SLA: percentage of calls in relation to the total number of calls: more precisely, this is a call target that is set automatically. KPI Average Wait Time by calls: Calculate the waiting time for each call. When the KPI shows red, this does not mean that it is negative, but on the contrary that the call center is very efficient and responds quickly to calls.

❖ REVENUE

This dynamic report delivers actionable insights through a detailed histogram showcasing revenue distribution by site and call type, offering a granular view of performance. A pie chart breaks down the revenue by call type: we observe that call type “tech support” revenues are always higher than “sales” and “billing” call type revenues. For example, the revenue distribution in 2021 demonstrates that tech support will constitute 43% of the total, with billing contributing 36%, and sales making up the remaining 21%. We have added customizable filters for year, quarter, call type, and manager name, users can tailor their analysis. Additionally, prominent cards prominently display total revenue figures, providing a quick snapshot of financial performance, we note that the total revenue for the 4 years is $2 million, with an average revenue of $15 per call.

❖ CALLS & PERFORMANCE

We observe that over four years, a call lasts on average 12.53 minutes and the waiting time is around 30 seconds. This varies every year between 12.44 and 12.73 minutes for a call and 27 to 37 seconds for a waiting time. Our pie chart shows that most of the received calls are managed, with only around 5% of calls being abandoned. Thanks to a clustered column chart, we can see that Jacksonville is the site that receives the most calls, followed by Aurora and Spokane in third position. Most of the calls are regarding 'Technical support', then 'billing' and a few for 'Sales'. Regarding performance, we can observe thanks to a table and some conditioning parameters that 4 teams have generated over $200,000 in total revenue over the 4 years.

These are also the teams that have handled the most calls: Teams managed by Ardath Ducharme (Jacksonville), Elisie Taplin (Aurora), Jamar Prahl (Spokane), and Casey Bainbridge (Jacksonville). The Jacksonville site is then the center that generates the most income. These four teams are also at the top of the rankings each year, with a revenue higher than $50,000. The top 3 employees who managed the most calls over the 4 years are: Chantell Tibbits (2200), Noella Valentin (2181), and Deandre Smyre (2145). At least one of them is in the Top 3 ranking of each yea