

Final Report and Business Recommendations

Executive Summary

This project analyzed AAL's fourth-quarter sales data across Australian states and customer groups using data wrangling, statistical analysis, and visualization techniques.

The objective was to identify high-performing and underperforming regions and customer segments to support informed sales and investment decisions for the upcoming year.

Key Findings

1. Sales and revenue are unevenly distributed across states, indicating strong regional demand variations.
2. Certain customer groups contribute significantly more to total revenue, while others underperform.
3. Time-of-day analysis shows distinct purchasing patterns, suggesting opportunities for targeted promotions.
4. Revenue distribution is positively skewed, meaning a smaller subset of transactions accounts for a disproportionately large share of total revenue.
5. Weekly and monthly trends indicate fluctuations in sales performance within the quarter, emphasizing the importance of short-term monitoring.

Low-revenue states may require strategic interventions such as localized promotions, revised pricing, or improved supply chain support to enhance performance.

Lower-performing segments may benefit from targeted marketing campaigns and product repositioning.

Time-of-Day Insights

Sales performance varies across different times of the day.

Periods with lower sales volume present opportunities for time-specific discounts, flash sales, and personalized recommendations to boost customer engagement.

Strategic Recommendations

1. Allocate higher marketing and inventory budgets to high-performing states to maximize returns.
2. Design targeted sales programs and promotional campaigns for underperforming states.

3. Strengthen engagement with top-performing customer groups through loyalty programs and personalized offers.
4. Introduce time-of-day-based promotions during low-activity periods to improve overall sales volume.
5. Introduce incentives for employees to boost sales.

Conclusion

This analysis provides AAL with actionable insights into its Q4 sales performance across Australia.

By leveraging data-driven strategies, the company can optimize resource allocation, improve regional sales outcomes, and enhance customer engagement, supporting sustainable growth in the coming year.