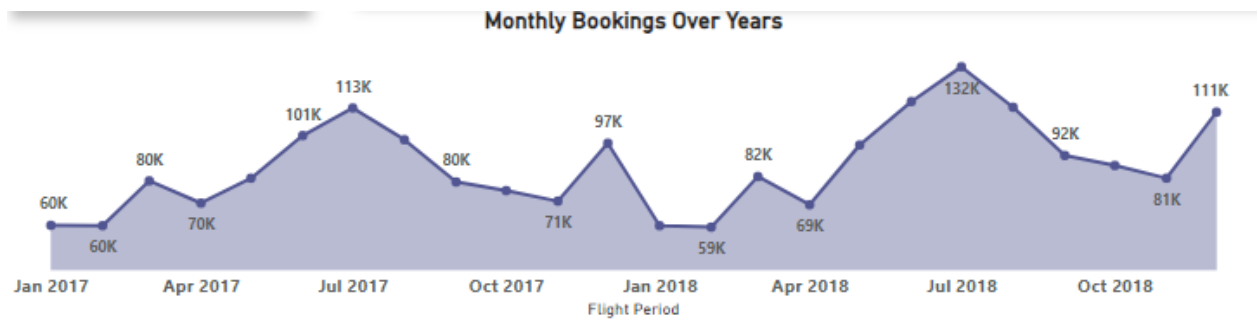


Business Scenarios:

1. Flight Activity Analysis:



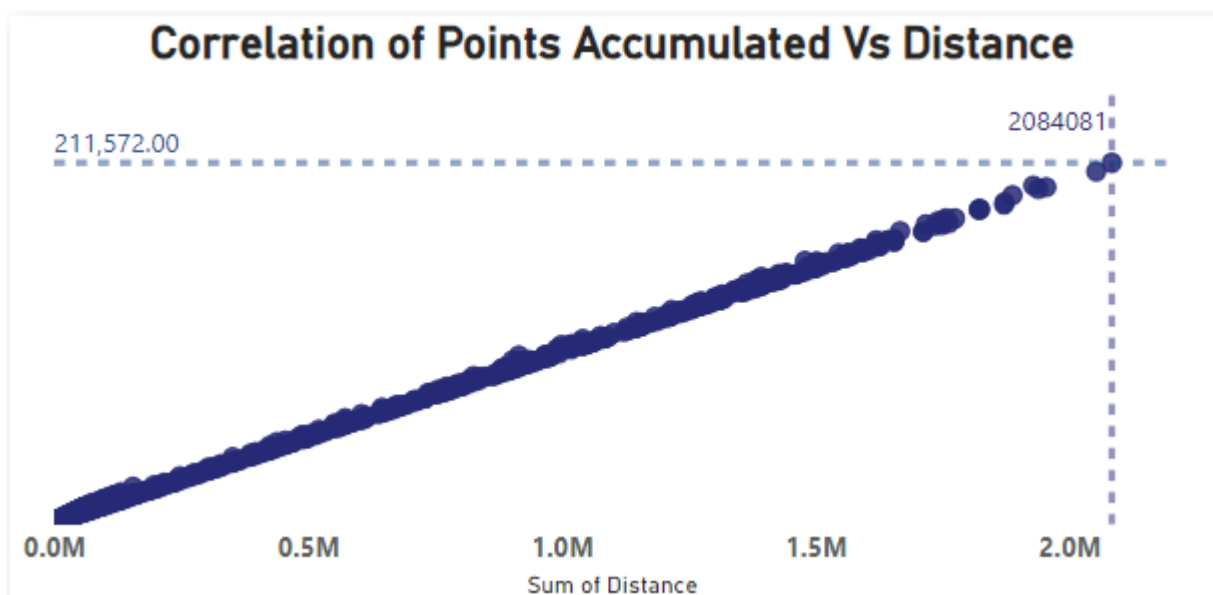
Seasonal Booking Insights

- **Clear Yearly Rhythm:** Bookings fluctuate with peaks likely driven by spring break, summer vacations (July), and holiday travel (December), with lulls in between.
- **Consistent Year-to-Year:** 2017 and 2018 show similar trends, but 2018 has higher peaks, suggesting growth.

Strategic Implications

- **Maximize Peak Seasons:** Boost capacity and promotions aligned with spring break, summer, and holidays to capitalize on high demand.
- **Combat Off-Season Dips:** Introduce incentives to encourage travel during slower periods. Consider the start of the school year as a potential reason for the post-summer dip.
- **Forecast & Optimize:** Use this predictability for better capacity management, dynamic pricing, and targeted marketing.

Key Takeaway: Flight bookings have a predictable seasonal pattern, offering actionable insights for the airline's strategy.



Scatter Plot Insights: Flight Distance vs. Loyalty Points

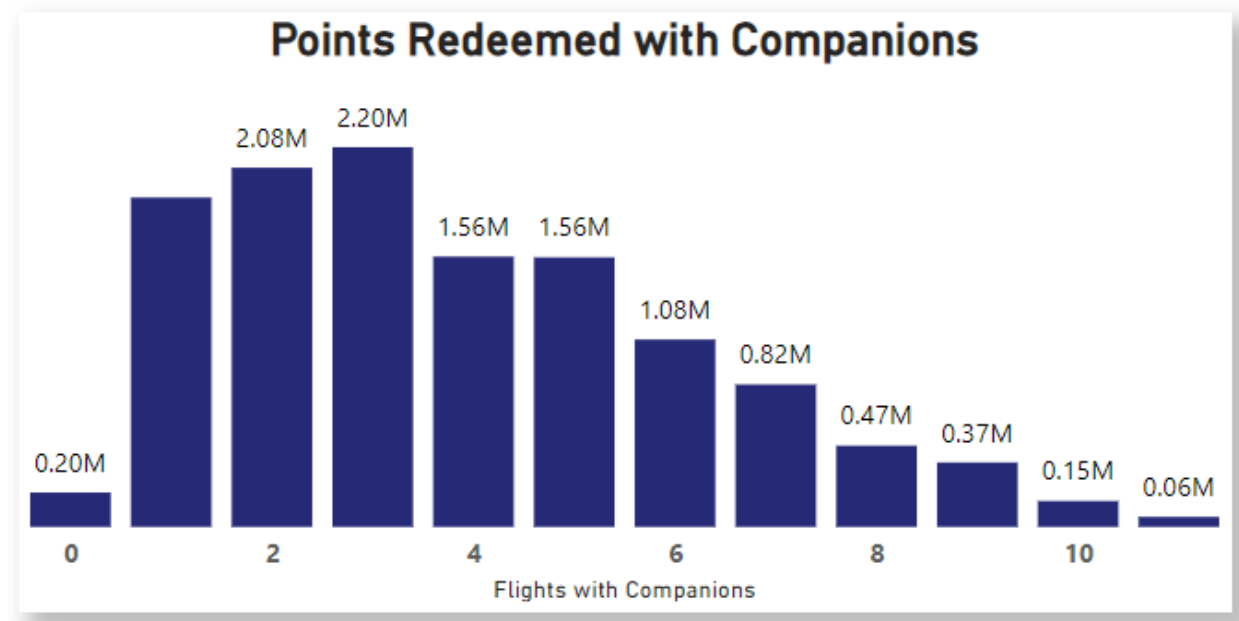
- **Strong Positive Correlation:** Customers earn more loyalty points for longer flights.
- **Outliers:** Some very long flights yield exceptionally high points, likely representing frequent or long-haul flyers.

- **Potential Points Cap:** The dashed line suggests a maximum accumulation limit, or it could be the highest value in this dataset.

Business Implications

- **Target Long-Distance Travelers:** Consider incentives to further reward these high-value customers.
- **Review Points Formula:** Is there a distance where points don't increase proportionally? This could inform potential adjustments.
- **Utilize for Prediction:** Model this relationship to forecast points liability and for targeted promotions.

Key Takeaway: This data highlights the strong link between flight distance and loyalty points accumulation, informing data-driven strategy for the airline.

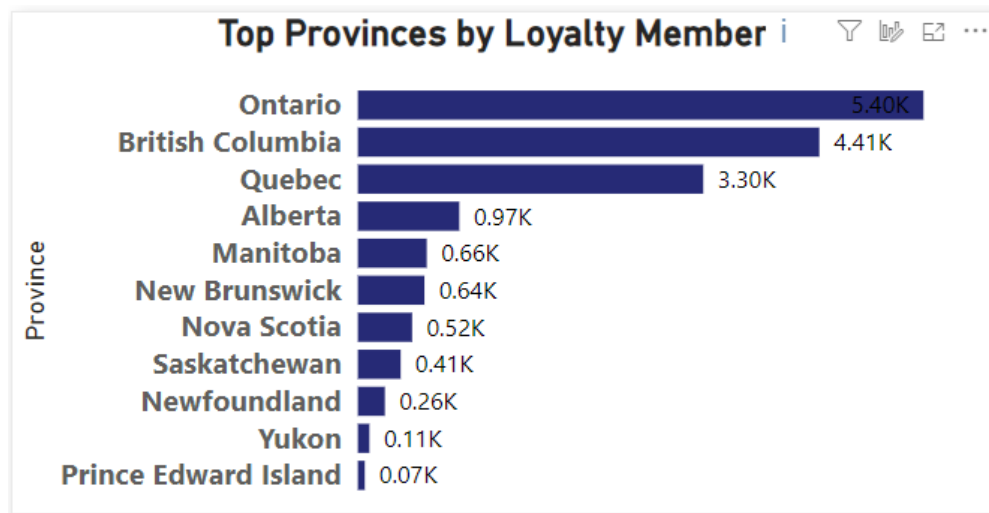


Points Redeemed vs. Flight Companions

- **Peak with Small Groups:** Customers redeem the most points with 2 or 3 companions, suggesting strong loyalty engagement within these groups.
- **Diminishing Returns:** Points redeemed decrease as group size grows beyond 3. Larger groups are either less likely to redeem or book less frequently.
- **Lowest for Solo & Large Groups** Single travelers (0 companions) and very large groups (10 companions) redeem the fewest points.

Strategic Implications

- **Target 2-3 Companion Groups:** Promotions for this group could have a high return on investment.
- **Investigate Larger Group Redemption:** Explore why point redemption drops for larger groups – this may reveal loyalty program improvement opportunities.
- **Key Takeaway:** Flight companions significantly impact point redemption. Understanding this pattern assists in targeted loyalty strategy.



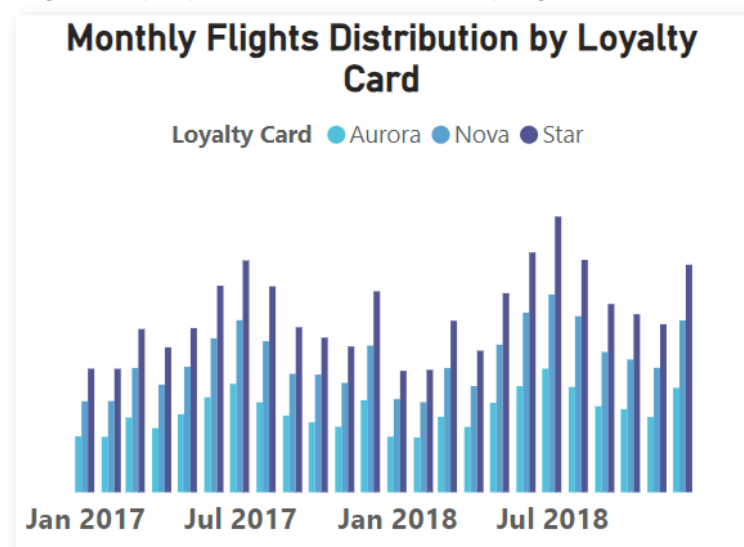
Geographic Insights: Member Distribution Across Canada

- **Ontario Dominance:** The highest membership concentration is in Ontario, making it the primary market for the loyalty program.
- **BC & Quebec as Key Markets:** These provinces follow Ontario, highlighting their importance as well.
- **Alberta's Potential:** Alberta represents a smaller, but still significant market segment.
- **Opportunity in the East:** Lower membership in Eastern and Northern provinces suggests potential for targeted expansion.

Strategic Implications

- **Optimize Ontario Focus:** Tap into Ontario's strong base with tailored promotions, routes, and rewards.
- **Prioritize BC & Quebec:** Invest in these key markets to strengthen engagement.
- **Explore Alberta Growth:** Consider strategies to increase loyalty penetration in this province.
- **Target Eastern Growth:** Promotions and expanded routes could increase membership in underrepresented regions.
- **Investigate Regional Differences:** Understand what drives membership concentration in certain provinces to inform tailored loyalty strategies.

Key Takeaway: Loyalty membership varies significantly across Canada. This data empowers geographically targeted loyalty initiatives to maximize program success.



Clustered Bar Chart Insights: Flights by Loyalty Tier

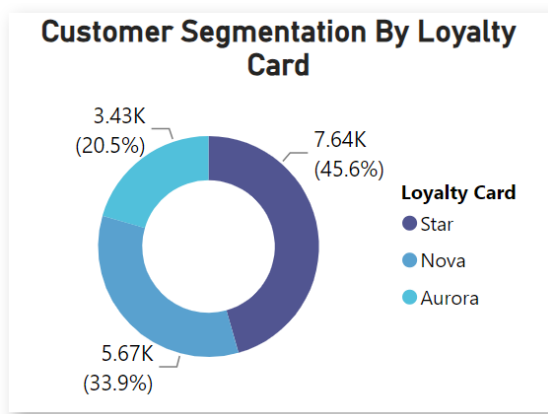
- **Multiple Tiers:** The chart visualizes flight patterns for three loyalty tiers (e.g., Aurora, Nova, Star).
- **Shared Seasonality:** All tiers likely follow similar seasonal trends seen in overall bookings.
- **Tier Volume:** Bar heights reveal which tier flies the most. Higher bars suggest frequent flights within a tier.
- **Tier Growth:** Track how flight volume changes over time within each tier to gauge program success or engagement shifts.

Strategic Implications

- **Targeted Loyalty Programs:** Understand what drives flight frequency in each tier to create tailored rewards and incentives.
- **Tier-Specific Promotions:** Tailor promotions to boost engagement in less-active tiers or during off-peak periods.

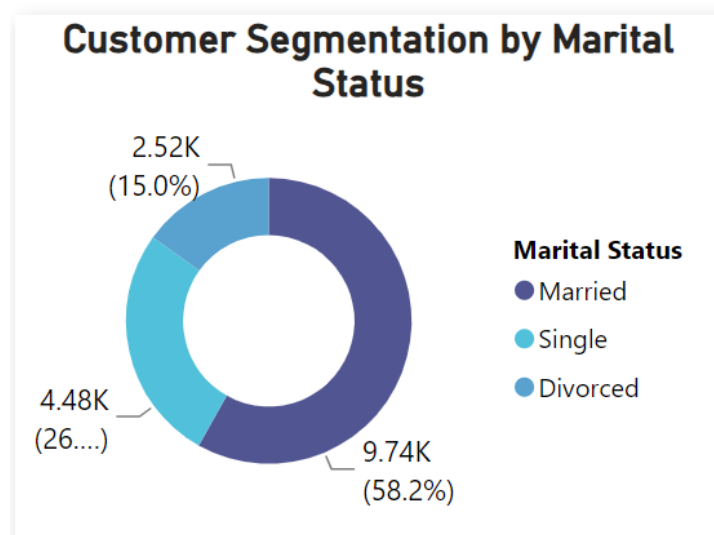
Key Takeaway: Analyzing flights by loyalty tier provides insights to enhance customer engagement and program design.

Customer Segmentation By Loyalty Card:



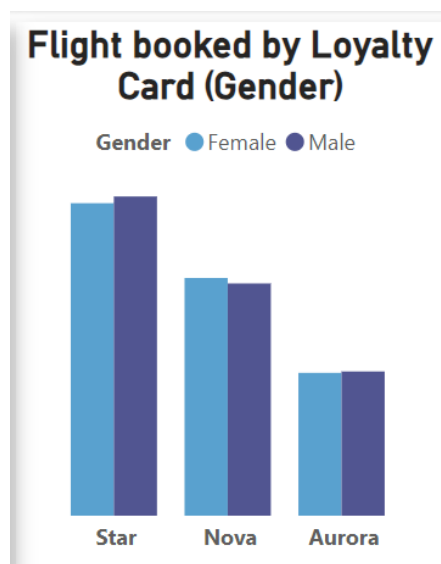
- The 'Star' loyalty card tier has the largest membership, with 7.64K members, representing nearly half (45.6%) of all members. This could imply a highly engaged base or a long-running loyalty program.
- The 'Aurora' tier follows with 5.67K members, which is roughly one-third (33.9%) of the loyalty member base.
- The 'Nova' tier has the smallest representation at 3.43K members (20.5%), which might be a premium or a newly introduced tier.

Customer Segmentation by Marital Status:



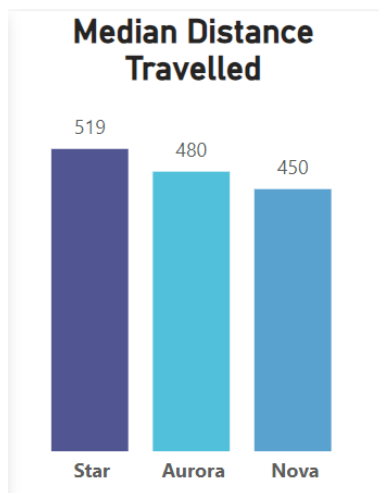
- The majority of loyalty members are 'Married', making up 58.2% of the member base.
- 'Single' members make up 26%, and 'Divorced' members account for 15%.

Flights Booked by Loyalty Card (Gender):



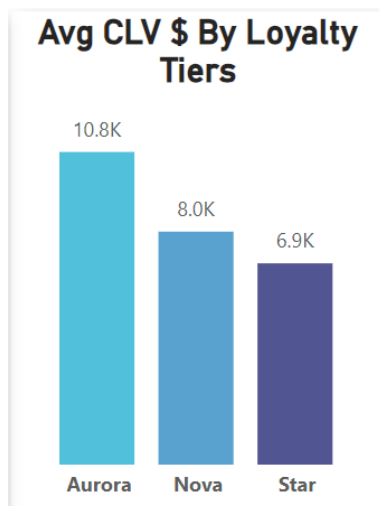
- The chart suggests that 'Star' members, regardless of gender, book the most flights, indicating higher engagement or more frequent travel opportunities for this group.
- 'Nova' members book the fewest flights across both genders.

Median Distance Travelled by Loyalty Card:



- 'Star' members have the highest median distance traveled at 519 units, 'Aurora' follows at 480 units, and 'Nova' has the lowest at 450 units. This suggests 'Star' members may have access to or prefer longer flights, or that 'Star' status is awarded based on distance traveled.

Average Customer Lifetime Value (CLV) by Loyalty Tiers:

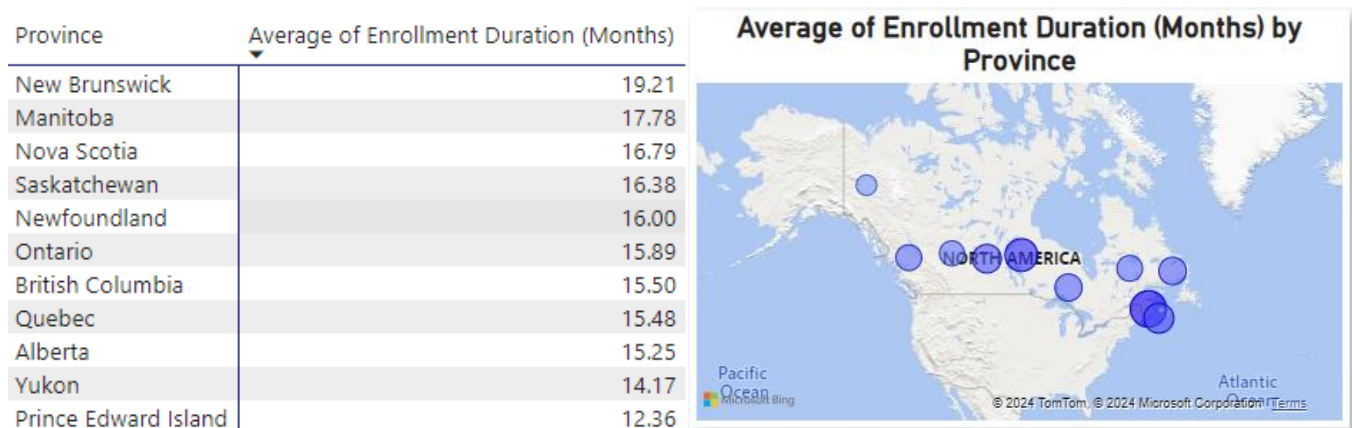


- 'Aurora' members have the highest average CLV at \$10.8K, which may reflect more premium services or higher spending.
- 'Nova' members have an average CLV of \$8.0K, and 'Star' members have an average CLV of \$6.9K.

Insights and Business Actions:

- The airline could target the 'Nova' tier with promotions to increase engagement, considering they book the fewest flights and have the lowest median distance traveled.
- The high average CLV of 'Aurora' members despite fewer flights suggests they may purchase more premium services or expensive fares; hence, ensuring their satisfaction and retention could be valuable.
- The predominance of married individuals in the loyalty program might indicate a focus area for family or couple-related promotions or offers.
- The gender distribution across loyalty tiers might help tailor marketing efforts more effectively towards each gender within each tier.

- The data provides insights into the value and behavior of each loyalty tier, which can guide personalized marketing, service enhancements, and loyalty program adjustments to incentivize higher tiers of membership.



Enrollment Duration Insights: Cancelled Members by Province

- **Regional Differences:** New Brunswick boasts the longest average enrollment (19.21 months) before cancellation, while Prince Edward Island has the shortest (12.36 months).
- **Mapping Trends:** The map visual showcases the geographical distribution of these averages.

Why It Matters

- **Loyalty Varies:** Customer loyalty, local competition, or regional marketing might explain these differences.
- **Focus on Short Durations:** Provinces with quicker cancellations warrant deeper analysis to improve retention.

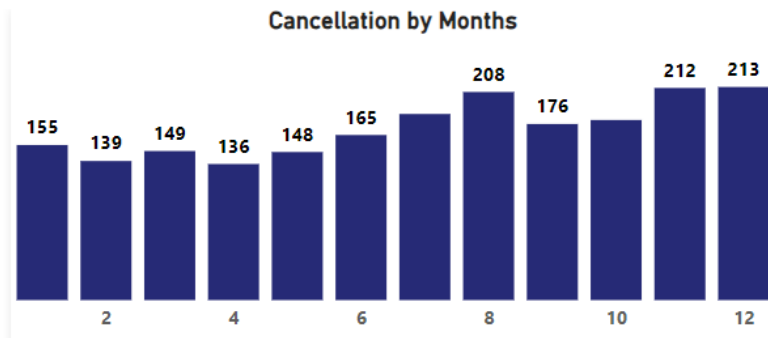
Actions

- **Investigate Short Enrollments:** Why does Prince Edward Island, for example, have faster cancellations?
- **Targeted Retention:** Craft province-specific strategies to boost loyalty in high-cancellation areas.
- **Data Correlation:** Explore if enrollment duration links to flight frequency, satisfaction, or market competition within provinces.

Key Takeaway: Enrollment duration before cancellation varies by province. This data informs targeted customer retention strategies.

Remember: Averages can be deceptive. Look at the full distribution of enrollment lengths within provinces for a more complete picture.

Cancellation Insights: Monthly Trends



- **Year-End Spike:** Cancellations peak dramatically in October-December, with December being the highest.
- **Mid-Year Stability:** Cancellations are more consistent in the middle of the year.
- **Early Year Decline:** Fewer cancellations occur in early months (e.g., February).

Potential Drivers

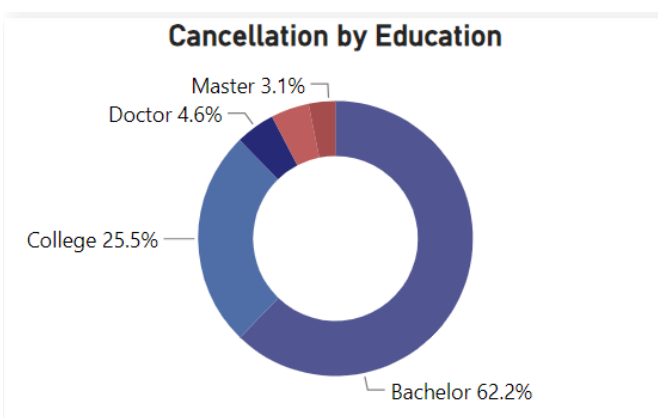
- **Yearly Reassessment:** Members may review memberships as the year ends, deciding not to renew.
- **Benefits Expiration:** Annual fees or expiring benefits might trigger cancellations.
- **Holiday Budgeting:** Financial pressures during the holiday season could lead to membership cuts.

Strategic Implications

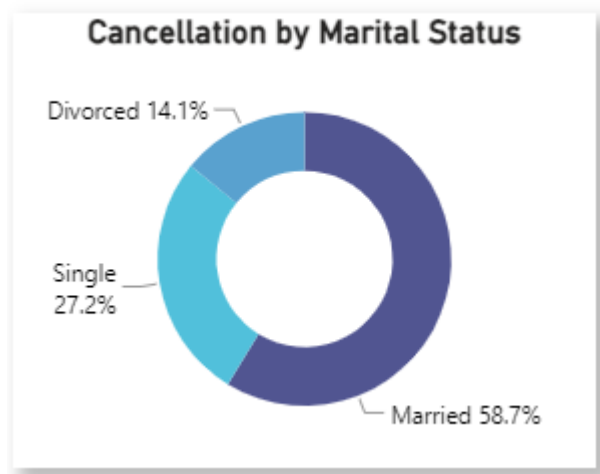
- **Pre-Emptive Retention:** Target campaigns before the year-end spike to encourage renewals.
- **Stagger Renewal Cycle:** Avoid concentrating renewals or benefit expirations during peak cancellation months.
- **Year-End Incentives:** Counteract the trend with special offers or benefits during this period.

Key Takeaway: Loyalty cancellations follow a clear seasonal pattern, offering opportunities for proactive retention strategies.

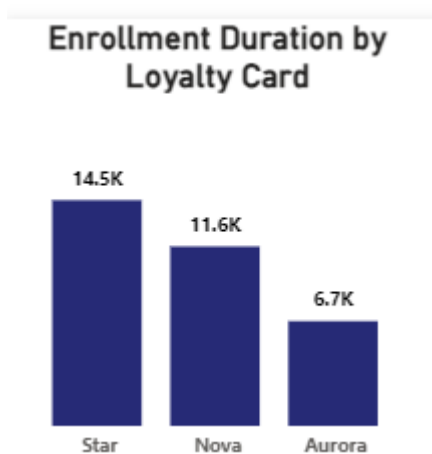
Cancellation Insights: Demographics & Card Tiers



- **Education Matters:** Bachelor's degree holders cancel the most (62.2%). This group might be the largest in the program or have unique needs.



- **Marital Impact:** Married members have the highest cancellation rate (58.7%). Life changes could influence their travel decisions.



- **Tiered Durations:** Aurora cardholders have the shortest enrollment before canceling. This suggests dissatisfaction or mismatched benefits.

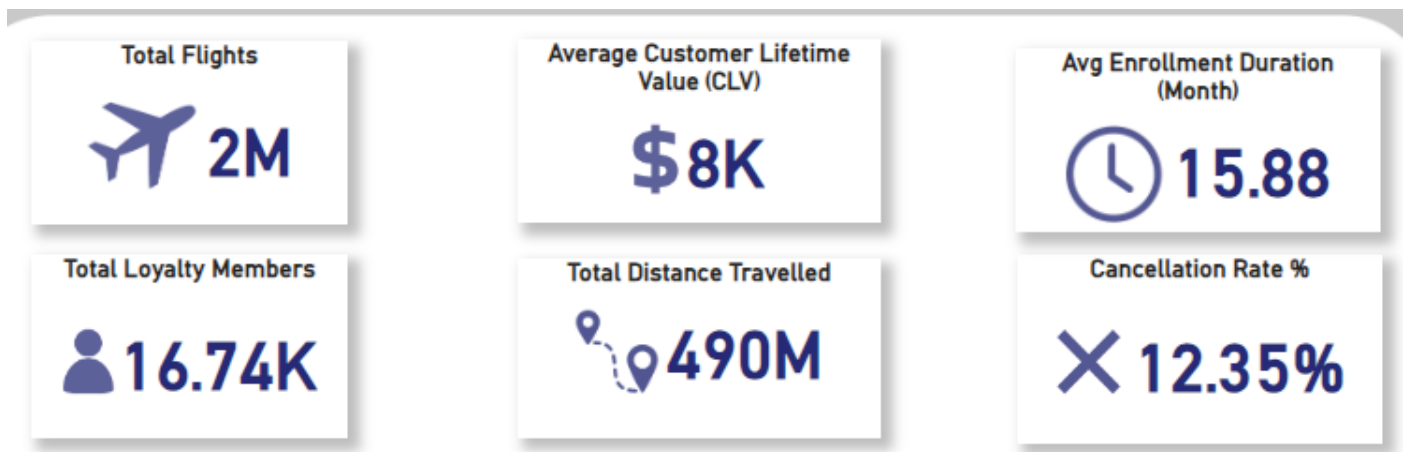
Actions

- **Deep Dive: Bachelor's Holders:** Why do they cancel so frequently? Address their specific travel needs and preferences.
- **Aurora Focus:** Investigate why this tier churns quickly. Improve rewards or communication to increase their loyalty.
- **Tailor to Married Members:** Explore incentives or benefits that resonate with this demographic to boost retention.

Further Analysis

- **Get Feedback:** Survey cancelling members to understand their reasons.
- **Match Needs to Benefits:** Analyze which rewards different demographics actually use.
- **Track Aurora Engagement:** Look for patterns in point redemption or activity to guide program improvements.

Key Takeaway: Cancellation rates vary by demographics and card tiers. This data allows for targeted loyalty program optimization.



Dashboard Insights: Understanding Program Health

- **Robust Activity:** 2 million flights signal strong customer engagement.
- **Healthy CLV:** An average \$8K CLV suggests successful customer retention and satisfaction.
- **Average Enrollment:** 15.88 months enrollment duration provides a baseline for improvement.
- **Member Base:** 16.74K members illustrate the loyalty program's reach.
- **Distance = Reach:** 490 million units traveled suggest revenue potential and market scope.
- **Watch Cancellation:** 12.35% cancellation rate needs context. Compare to industry benchmarks to assess retention success.

Actions

- **Maintain Engagement:** Keep the 2 million flight trend positive.
- **Boost CLV Further:** Can you upsell or improve offerings to increase the value per customer?
- **Extend Enrollment:** Explore why the average duration is 15.88 months. What drives cancellation?
- **Grow the Base:** Can targeted marketing increase the reach of the loyalty program?

Key Takeaway: These metrics offer a snapshot of loyalty program health. Use them to benchmark performance and target improvement areas.