



TravelTide Rewards Program 2023

Data-Driven Segmentation and Retention Strategy

Introduction

TravelTide is enhancing customer retention through a rewards program designed to increase engagement and loyalty. Elena proposed five initial perks as potential levers. This report evaluates their effectiveness against behavioral data, segments customers into distinct groups, and identifies where personalization can create greater impact.

While some of Elena's ideas are strongly validated, others benefit from refinement and tailoring. The analysis demonstrates how a data-driven, segment-specific rewards strategy can both confirm the intuition behind the original proposals and translate them into targeted actions with measurable business value.

Objectives

- Evaluate whether Elena's proposed perks match behavioral data.
- Segment users into clear groups and align them with specific perks.
- Provide actionable recommendations for campaign personalization.

Methodology

- Data Scope: ~5M sessions,
- Filtered: Sessions: **Jan–Jul 2023**. Cohort: **5,782 active users** (>7 sessions).

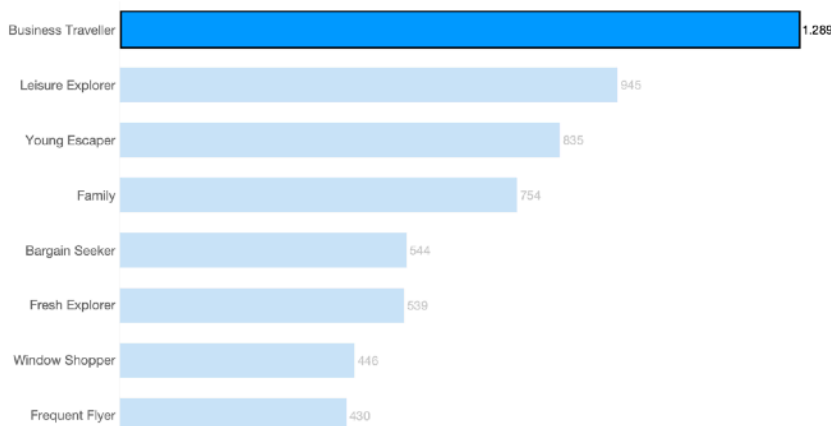
The segmentation was derived through a structured, multi-step SQL process applied to session-level and booking-level data.

1. **Feature Engineering** – Key behavioral variables were created, such as booking rate, discount usage, weekday travel ratio, average trip length, and ancillary purchases (bags, seats).
2. **Segment Scoring** – Based on these features, each user was evaluated against defined thresholds (e.g., high discount reliance → Bargain Seeker, high weekday share → Business Traveler).
3. **Disambiguation Rules** – When users exhibited multiple traits, prioritization rules ensured a unique assignment to the most representative segment (e.g., frequent bookers with short stays prioritized as Business Travelers).
Overrides ensure uniqueness:
 - Window Shopper (0 bookings) overrides all.
 - Frequent Flyer (top 10% flights) overrides others.
 - Fresh Explorer (≤ 28 days since signup) overrides others.
 - Tie-breaker: Family > Bargain Seeker > Business > Leisure.

This layered approach ensures that segments are both interpretable (business-driven) and data-grounded (derived from consistent SQL logic).

Segment Profiles and Perks

Business Travelers Dominate the Customer Base - but Retention Opportunities Span All Segments



Business Travelers (~22%)

Business Travelers are defined through a composite Business Score, capturing behaviors and attributes typically associated with professional travel. The score emphasizes the following dimensions:

- **High weekday travel rate:** strongest indicator, reflecting trips that both *depart and return within the work week*, consistent with business schedules and short trip durations
- **Short booking sessions:** efficient, task-focused behavior with minimal browsing
- **Few or no extra seats per flight:** indicating solo rather than group travel
- **Minimal baggage per flight:** suggesting quick stays, often limited to carry-on only

Perk match: *Priority Boarding* (refinement of Elena's "No cancellation fees")

Leisure Explorers (~16%)

Leisure Explorers are users who do not fall into any of the specialized segments (Business, Family, Bargain Seeker, Young Explorer, or Frequent Flyer). They represent a broad group of travelers and are characterized by general leisure-oriented trips without distinct or extreme behavioral patterns.

- **Demographically diverse:** no strong concentration by age or family status (can include singles, couples, or groups of friends).
- **Travel behavior:** balanced trip lengths, typically vacation-driven rather than business-related.
- **Spending profile:** moderate hotel and flight costs, neither strongly budget-driven nor luxury-oriented.
- **Engagement:** average browsing and booking activity, limited reliance on discounts or special offers.
- **Motivation:** primarily traveling for relaxation, leisure, and occasional exploration, rather than systematic optimization or frequent travel.

Perk match: *Seasonal Promotions* (related to Elena's "Free Hotel Night")

Young Escapers (~14%)

Young Escapers are defined through a composite *Young Explorer Score*, reflecting demographic and behavioral patterns associated with younger, budget-conscious short-trip travelers. The score emphasizes the following dimensions:

- **Age under 30:** key demographic indicator, capturing a younger customer base
- **Short-stay travel behavior:** preference for brief trips, often for leisure or spontaneous getaways
- **Lower hotel costs:** suggesting budget accommodation choices or limited willingness to spend on lodging
- **Lower flight costs:** indicating price-sensitive booking behavior, favoring cheaper or short-haul flights

Perk match: *Last-minute Deals* (a refined, youth-focused version of Elena's free-night idea)

Families (~13%)

Family Travelers are characterized by behaviors and attributes that indicate family-oriented travel patterns. The segment is defined through a composite *Family Score*, which emphasizes the following dimensions:

- **Traveling with children:** highest weight, strong indicator of family needs and planning
- **Multiple bags per flight:** reflecting longer stays or additional luggage requirements when traveling as a family
- **Booking multiple seats per flight:** suggesting group or family travel rather than solo trips
- **Married customers:** a supporting demographic factor, though less decisive than children and luggage

Perk match: *Free Checked Bag* (directly validates Elena's proposal)

Bargain Seekers (~9%)

Bargain Seekers are defined through a composite *Score*, which highlights strong price sensitivity and discount-driven booking behavior. The score emphasizes the following dimensions:

- **High discount usage rate:** dominant factor, indicating that booking decisions are strongly motivated by promotions and special offers
- **Long booking sessions:** reflecting extended time spent browsing and comparing before making a purchase decision
- **High engagement (click activity):** frequent interactions with offers, suggesting active searching for the best possible deal

Perk match: *Personalized Discount Alerts* (strong validation of Elena's "Exclusive Discounts")

Fresh Explorers (~9%)

New Customers are identified through a binary indicator, marking travelers who made their most recent booking within the first 28 days after signup. This definition emphasizes:

- **Recency of signup** (customers are still in their onboarding phase)
- **Early booking activity** (an initial transaction within the first month of joining)

Perk match: *Welcome Voucher* (not on Elena's list, lifecycle-specific addition)

Window Shoppers (~8%)

Non-Bookers are identified through a binary indicator, capturing customers who have not completed any bookings despite having an account. This definition emphasizes:

- **Zero booking rate:** the customer has engaged with the platform but has not converted into an active traveler
- **Presence in the customer base without transaction activity:** indicating untapped potential or disengagement

Perk match: *Wishlist & Price Alerts* (not in Elena's list, but critical for activation)

Frequent Flyers (~7%)

Frequent Flyers are identified through a binary indicator, capturing the top 10% of customers by number of flight bookings. This definition emphasizes:

- **Exceptionally high booking frequency:** customers who consistently travel more often than the majority
- **Position within the top decile of flight activity:** 90th percentile and above in total bookings

Perk match: *Loyalty Program* combined with *targeted cross-sell offers* (e.g., bundles, ancillaries), expanding Elena's "Discounts" idea into a retention- and value-oriented strategy. (expands Elena's "Discounts" idea to a retention-oriented perk)

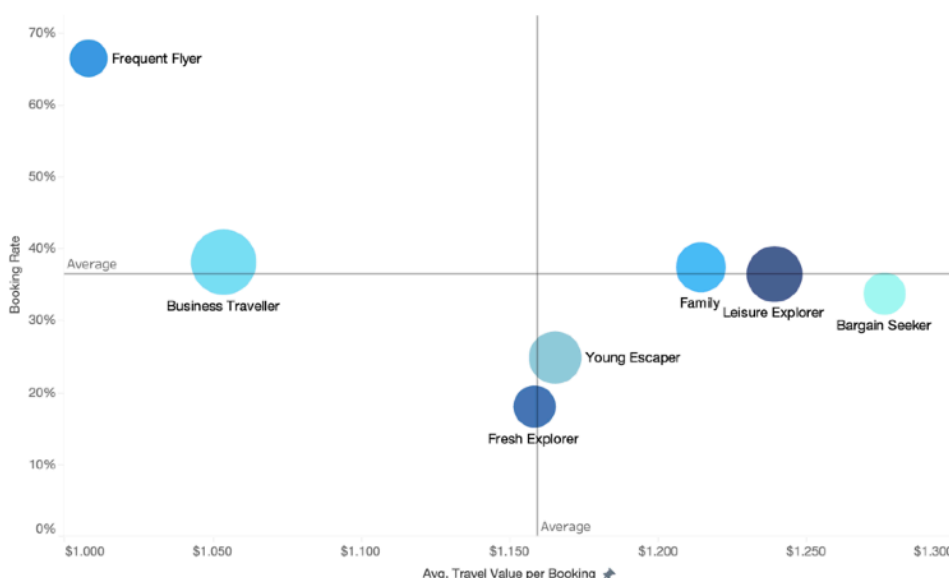
Key Findings

Retention Remains Solid — Future Growth Requires Segment-Specific Activation

Targeted strategies to activate Window Shoppers, upsell Frequent Flyers, and convert Explorers



Zooming in



- **Window Shoppers (~8%)** represent a relevant non-booking group; activating them through wishlist features or price alerts could unlock new customers.
- **Frequent Flyers** show the **highest booking rate** but **below-average travel value**, suggesting strong retention but a clear need for value expansion via ancillaries, bundles, or premium perks (e.g., lounge access).
- **Family, Leisure Explorers, and Bargain Seekers** jointly account for **~39% of the customer base** and deliver **above-average travel value** – a prime target for retention and tailored perks.
- **Business Travelers** form a stable, high-value core, while **Fresh and Young Explorers** are high-spend but under-converting segments, where conversion incentives (e.g., welcome vouchers, last-minute deals) could drive growth.
- Overall, growth opportunities lie in activating non-bookers, increasing spend among frequent flyers, and boosting conversion for explorer segments, while retaining the high-value core.

Recommendations

Elena's original list provided a strong starting point. Our contribution lies in **segment-specific tailoring**: making perks more personalized, measurable, and strategically aligned with TravelTide's diverse customer base.

To translate the findings into impact, we recommend a two-tiered approach:

1. Solidify the Core

- **Build on Elena's validated ideas**: Her proposals around **discounts** and **free baggage** proved central; refining them by segment (Bargain Seekers, Families) maximizes fit and efficiency.
- **Reposition for Business Travelers**: Adapt the "No cancellation fees" idea into a **Priority Boarding perk**, aligning better with their high-value, time-sensitive travel behavior.

2. Unlock Growth Opportunities

- **Activate non-bookers**: Introduce **Wishlist & Price Alerts** to convert Window Shoppers (~8%) into first-time customers.
- **Upsell loyal travelers**: Expand Frequent Flyers' value contribution through **loyalty extensions** and targeted cross-sell (e.g., bundles, ancillaries).
- **Convert underperforming explorers**: Use **Welcome Vouchers (Fresh Explorers)** and **Last-minute Deals (Young Escapers)** to raise conversion in high-potential but low-booking segments.
- **Broaden "Free Hotel Night"** into **Seasonal Promotions**, maintaining its appeal but making it more scalable.

Next Steps

To ensure that the proposed retention strategy delivers measurable impact, we recommend the following actions:

1. **A/B Testing of Perks:** Implement controlled experiments to evaluate the effectiveness of different perk types across user segments. Test setup should compare segment-specific perk assignments (treatment) against generic or random assignments (control), measured over a defined campaign period. This will help identify which incentives resonate best and where adjustments are required.
2. **Iterative Segmentation Refinement:** Monitor the performance of current features and segment scores, and update weightings or feature definitions as new behavioral insights emerge. Where necessary, consider developing sub-segments to enable even more precise targeting.
3. **Performance Monitoring:** Establish key retention and engagement KPIs (e.g., churn rate, booking frequency, open/click rates of perk emails) and track them through automated dashboards.
4. **Customer Feedback Integration:** Introduce direct feedback mechanisms (e.g., short surveys, satisfaction scores) to validate quantitative findings with qualitative insights.
5. **Enhanced Personalization:** Extend personalization beyond perk allocation by tailoring email content and messaging style to specific user segments.
6. **Operationalization:** Develop scalable processes and automation pipelines for perk distribution, ensuring minimal manual intervention once strategies are validated.
7. **Compliance Review:** Confirm that all personalization and communication efforts comply with relevant data privacy regulations and ethical standards.

By following these steps, TravelTide can move from data-driven hypotheses to a continuously optimized retention program that is both scalable and sustainable.

Limitations and Considerations

While the analysis provides a strong foundation for retention strategy design, two important caveats must be considered:

1. **Data Scope:** Findings are based on a limited cohort (5,782 active users from Jan–Jul 2023). This sample may not fully capture seasonal effects or represent future customer behavior.
2. **Assumptions and Bias:** Segment definitions inevitably reflect modeling choices and prioritization rules. As such, they carry inherent assumptions and may simplify complex traveler behaviors.

For these reasons, **empirical validation through testing is essential** to ensure that the proposed segmentation and perk assignments accurately reflect reality and can be generalized across the wider customer base.

Conclusion

Elena's original perk proposals provided a strong foundation for TravelTide's rewards strategy. By tailoring them to distinct customer segments, we ensure that perks are not only attractive but also behaviorally aligned.

This analysis highlights a clear path forward: secure the high-value core (Business Travelers, Families), unlock growth from untapped segments (Window Shoppers, Explorers), and expand value among loyal Frequent Flyers.

Through this shift from generic to **data-driven, segment-specific rewards**, TravelTide can enhance retention, drive incremental value, and build long-term customer loyalty.