Problem Statement

The mission is to enhance the experience of group rides by resolving pain points associated with custom split payments. This will improve customer satisfaction, reduce operational burden, and increase payment success rates. Addressing this issue aligns with RideNext's goal to deliver a seamless and trusted global rideshare marketplace.

Problem Validation

Metric	Value	Implication
Percentage of Tickets	50% of total tickets	Major driver of support burden
Avg. Resolution Time	56.68 minutes	Highlights operational inefficiency
CSAT	2.26 (Custom Splits)	Demonstrates customer dissatisfaction severity
Scalability		Urban markets like NYC, Chicago, and SF report the highest ticket volumes, indicating scalable benefits if resolved.

Root Cause Analysis

Possible Issues Identified:

1. **Calculation Errors**:
    - Misalignment between final amounts due and what is processed.
2. **Pre-Authorization Failures**:
    - Single failures delay the entire group's payment process.
3. **Communication Gaps**:
    - Riders are not informed promptly about payment retries or failures.
4. **Limited Automation**:
    - Lack of robust error-handling mechanisms for retries or fallbacks.
5. **Transparency Issues**:
    - Minimal visibility into how splits are calculated and processed.

Impact Analysis:

- High ticket volume for payment issues.
- Low CSAT (2.26 average for custom split-related issues).
- Operational inefficiency with long resolution times (average: 56.68 minutes).

Proposed Solutions

1. **Must-Have: Real-Time Pre-Authorization System (Primary single-targeted solution)**

Objective: Address pre-authorization failures upfront to prevent group payment blocks and reduce customer support burden.

Implementation: (Exclusive focus on this feature for the 2-to-3-week timeline)

1. Shift pre-authorization to the booking confirmation phase.
2. Re-validate closer to the ride start if the booking is made far in advance.
3. Redistribute costs among successful riders if one rider's pre-authorization fails.
4. Notify affected riders in real-time and provide an opportunity to update payment methods.
5. Display detailed fare and payment breakdowns in the app and provide real-time updates on pre-authorization status and retries.
6. Automate retry logic for failed pre-authorizations within a specified window before escalating to customer support.

Impact:

- Reduces delays, minimizes retries, and prevents group payment blocks.
- Provides transparency to riders and drivers.

2. **Performance Feature: Real-Time Split Assignment Based on Drop-Off Points**

Objective: Calculate and assign exact fare splits for riders at the beginning of the ride.

Implementation:

1. Develop algorithms to calculate fare splits based on drop-off points:
    - Base fare shared equally among riders.
    - Distance-based fare proportional to each rider's travel distance.
2. Introduce a buffer (+5%) to account for minor deviations due to route changes.
3. Pre-authorize each rider's calculated share before the ride starts.
4. Notify riders about pre-authorization status (success/failure).
5. Display fare split breakdown in the app during booking and in real-time.

Impact:

- Enhances user transparency, reduces post-ride disputes, and increases pre-authorization success rates.

3. Delighter: Pre-Selected Split Options

Objective: Simplify the payment process for riders.

Implementation:

1. Allow riders to pre-select split percentages and methods during ride booking.
2. Sync this selection with the pre-authorization flow.

Impact:

- Enhances user experience and transparency.

Prioritization

Feature	Impact	Effort	Priority
Real-Time Pre-Authorization	High	Moderate	Must-Have
Real-Time Split Assignment	High	High	Performance
Pre-Selected Split Options	Medium	Low	Delighter

Implementation Plan

1. Pilot Launch

- **Target Markets**: NYC and SF (highest ticket volumes).
- **Duration**: 4 weeks with weekly evaluation checkpoints.
- **Control Group**: Use historical baseline data for pre-authorization failure rates and CSAT scores.
- **Success Metrics**:
  - 95%+ pre-authorization success rate.
  - 40% reduction in related support tickets.
  - Improved CSAT to 4.0+.

2. A/B Testing

- **Group A**: Existing flow (no changes).
- **Group B**: Real-Time Pre-Authorization System.
- **Measurement Focus**:
    - Differences in CSAT, resolution time, and ticket volumes.

3. Feedback Loops

- Collect qualitative feedback from riders and drivers during the pilot.
- Implement app-based surveys post-ride for Group B users.

4. Iteration Phase

- Refine fallback logic, buffer percentages, and retry timing based on pilot data.
- Address outliers and adjust to dynamic pricing variability.

5. Global Rollout

- Expand rollout to other urban markets with high custom split usage.
- Incorporate lessons learned during the pilot.

Metrics for Success

Metric	Target
Support Tickets Reduction	Decrease by 40% in 6 weeks
Improved CSAT	From 2.26 to 4.0+
Pre-Authorization Success Rates	Maintain 95%+
Driver Satisfaction	95% on-time payouts
Resolution Time	Reduce from 56.68 minutes to ~33 minutes

Flow Comparison Before and After Suggested Solutions

Stage	Before Suggested Solutions	After Suggested Solutions
Ride Booking	Riders choose to split costs but don't know their exact share.	Riders see their exact share (split pre-calculated).
Pre-Authorization	No pre-authorization or group failures block payments.	Each rider's share is pre-authorized upfront.
During Ride	No updates on payment status or split progress.	Riders can track split progress in the app.
Post-Ride Adjustments	Riders dispute unclear charges.	Automated adjustments ensure accuracy.
Payment Failures	Group payment blocked due to one rider's failure.	Fallback logic ensures successful group payments.

Example Calculation

Ride Details:

- Total Fare: $100
- Base Fare: $20 (shared equally among riders).
- Rider A (10 miles): 50% of distance.
- Rider B (6 miles): 30% of distance.
- Rider C (4 miles): 20% of distance.

Calculation:

- **Base Fare**: $20 ÷ 3 = $6.67 per rider.
- **Distance Fare**:
  - Rider A: $80 × 50% = $40.
  - Rider B: $80 × 30% = $24.

    - Rider C: $80 × 20% = $16.
- **Total Share**:
    - Rider A: $46.67.
    - Rider B: $30.67.
    - Rider C: $22.67.

Pre-authorizations are processed for these amounts, ensuring clarity and fairness.

Assumptions made:

- **Data Accuracy**: GPS and routing algorithms are assumed to provide accurate distance and drop-off estimates for fare calculation.
- **Dynamic Pricing**: A 5% buffer is assumed sufficient to account for pricing variability during rides.
- **Rider Behavior**: Riders will promptly update their payment methods if notified of pre-authorization failures.
- **Operational Scalability**: The proposed solution will scale effectively to global markets without significant modifications.
- **Technical Feasibility**: Payment processing systems can handle the automation of retries and fallback logic without performance issues.

Long-term roadmap:

- Month 3: Real-time pre-authorization pilot successfully completed.
- Month 6: Real-time split assignment and fallback logic live in key markets.
- Month 9: Pre-selected payment options and wallet integration rolled out.
- Month 12: Full global rollout of enhanced group payment features.
- Month 18: Data-driven personalization features live, enabling predictive payment success.

Note: There were minor instances when AI was used, like to document this, phrase this in a professional manner, etc.