

# Improving Revenue & Satisfaction in Olist Marketplace

An End-to-End Analytics Case Study | 100K Orders Analyzed (2016-2018)



# Executive Summary: The Big Picture



## Scale

Analyzing 100,000 orders to identify operational problems that are slowing down the platform's growth.



## The Problem

Late deliveries are the silent killer, causing a massive **40% drop** in customer satisfaction ratings



## The Solution

Speed is key. On-time delivery ensures a high customer retention rate, making logistics a powerful marketing tool.

# The Olist Ecosystem: Connecting Sellers to Logistics

## The Bridge Model

Olist acts as a strategic bridge in the Brazilian e-commerce market, allowing independent sellers to reach customers nationwide.

## The Challenge

We own the customer experience but rely on partners for fulfillment. Our goal is to optimize this critical connection point.

# From Raw Data to Actionable Insights



## Python - Data preparation

Identified and flagged data inconsistencies to prevent analysis errors , created custom features to enhance the analysis



## SQL - Analysis

Executed queries to aggregate revenue streams, calculate delivery delay rates per city, and rank seller performance.



## Power BI - Visualization

Designed interactive dashboards to monitor Sales, Logistics, and Satisfaction.

# Interactive Dashboard Gallery

## Overview

### Olist Analysis

Filters

Completion Rate %

**97.02%**

Count of order\_id

**99.441K**

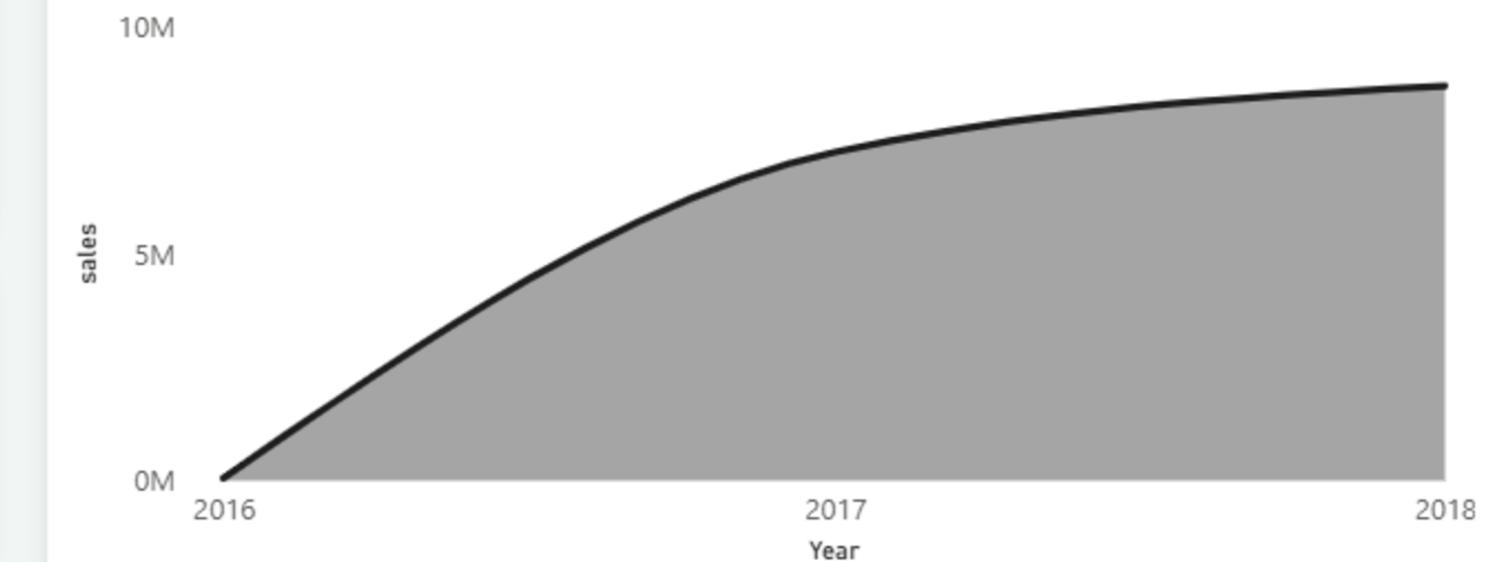
Total Completed Orders

**96K**

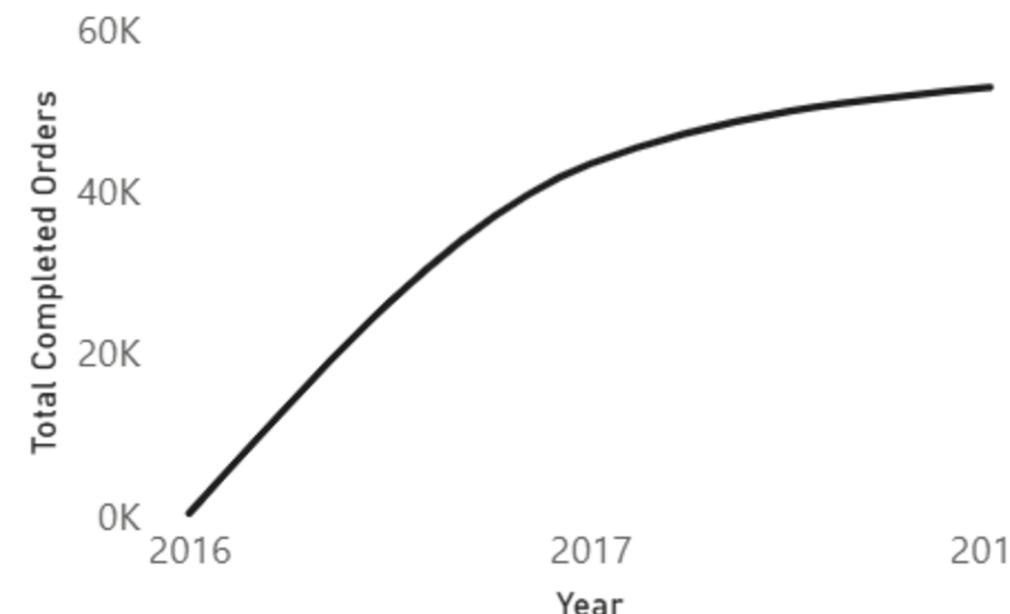
Sales

**16.01M**

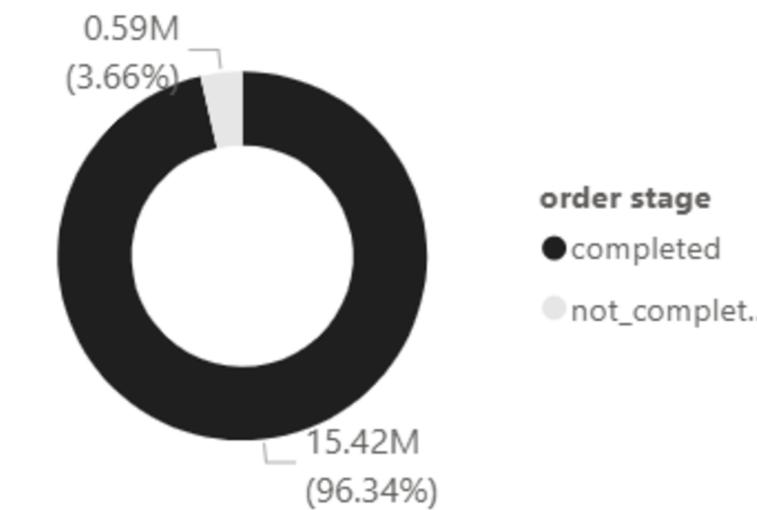
sales by Year



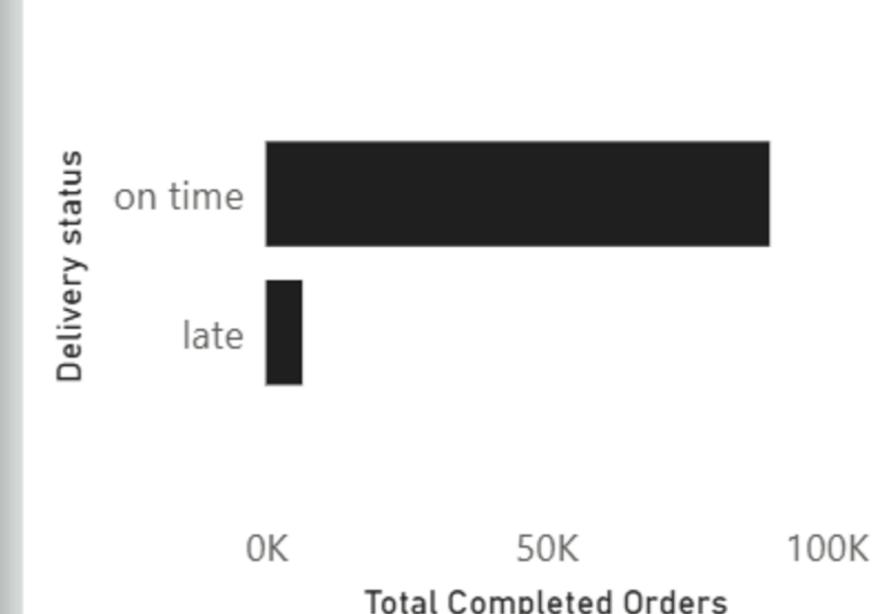
Total Completed Orders by Year



Sum of payment value by order stage



Total Completed Orders by Delivery status



# Payment & Completion Behavior

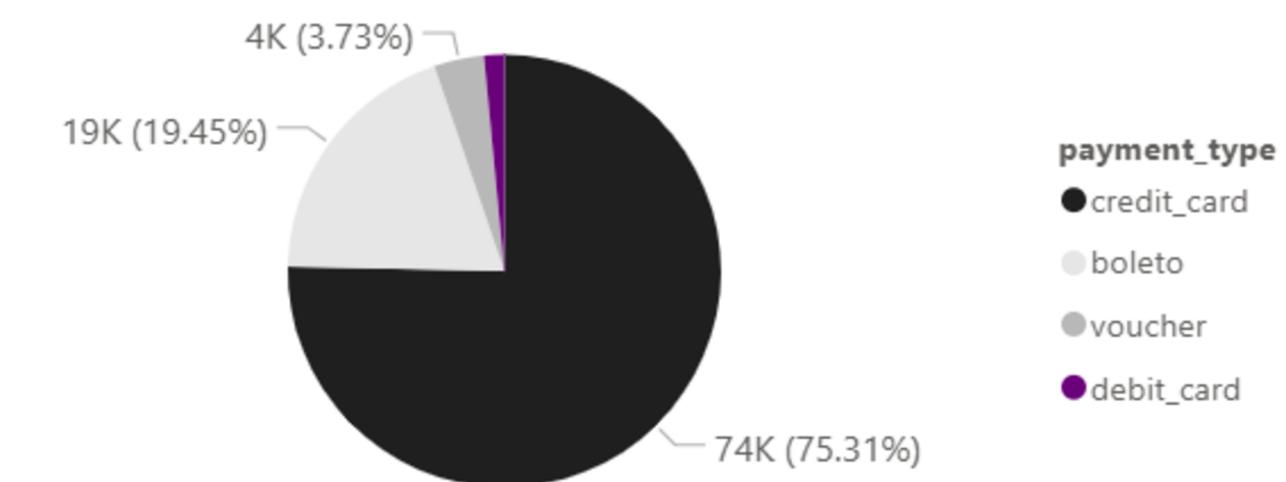
## Olist Analysis

Filters

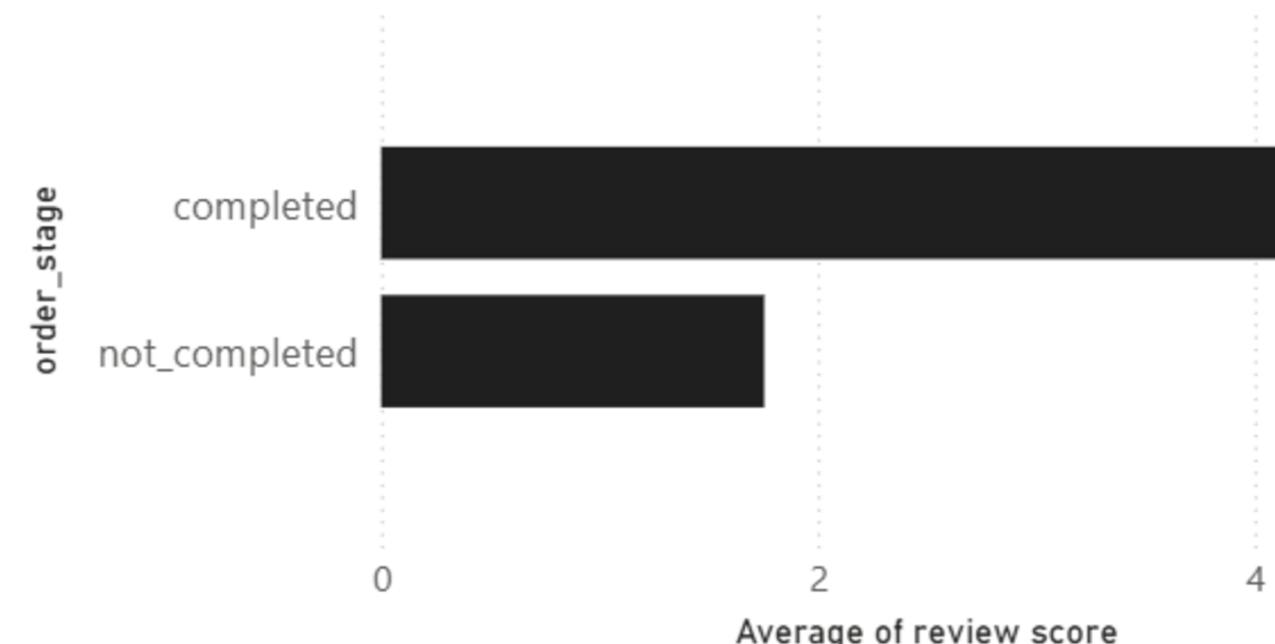
Cancellation Rate % by payment\_type



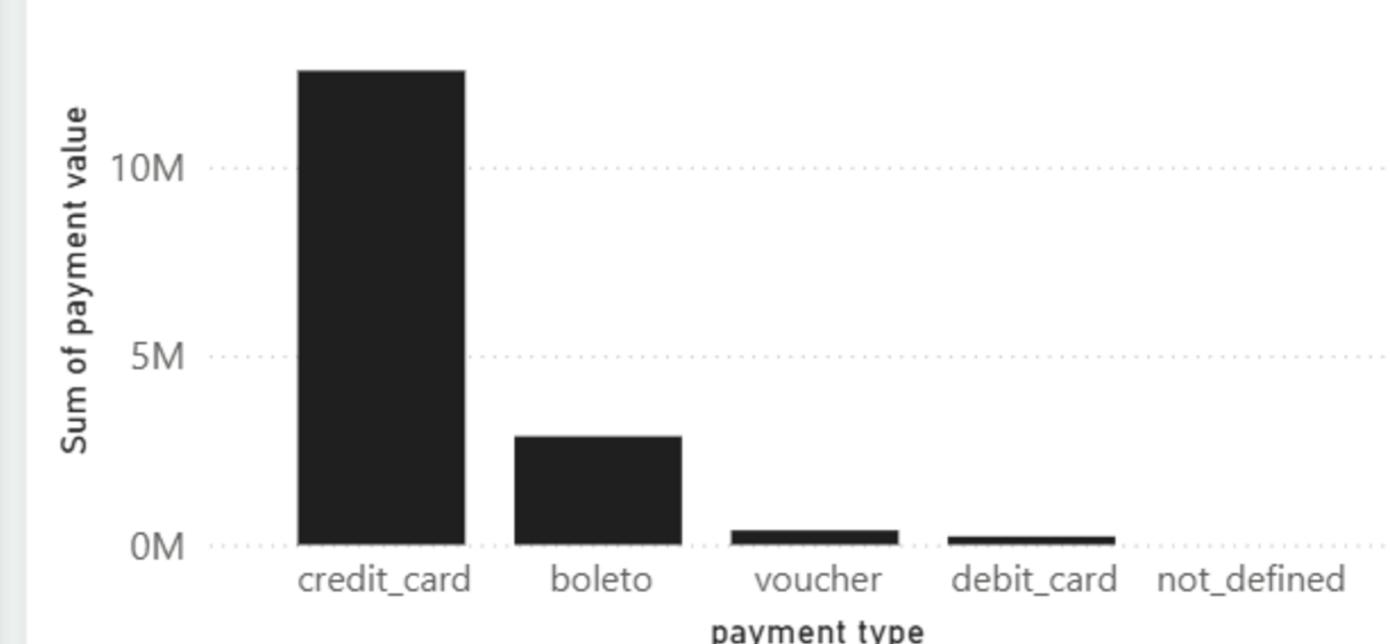
Total Completed Orders by payment\_type



Average of review score by order\_stage



Sum of payment value by payment type



# Payment & Completion Behavior

## Olist Analysis

Filters

Cancellation Rate %

**1.24%**

Total Late Orders

**7K**

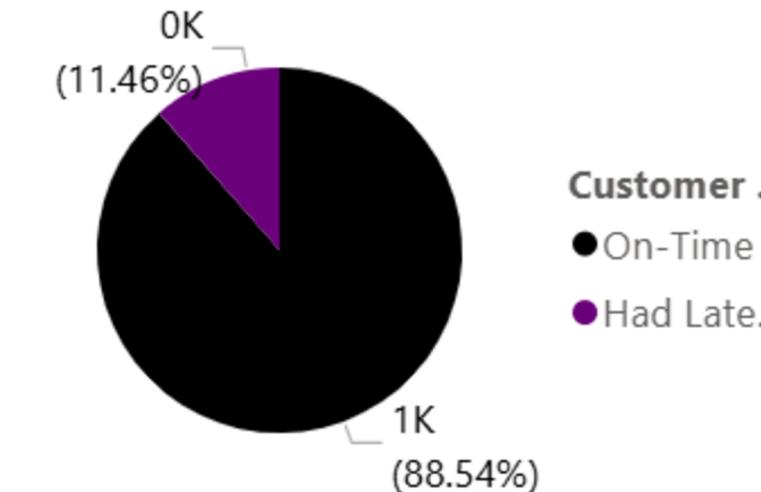
Retention Rate %

**3.00%**

Late Order Rate %

**8.20%**

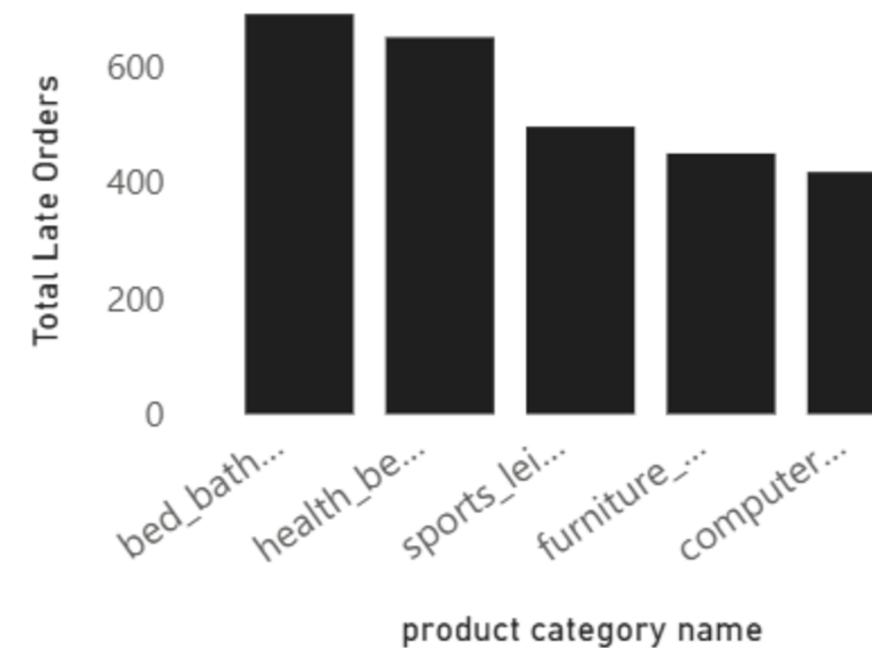
Repeat Customers by Customer Delivery Experience



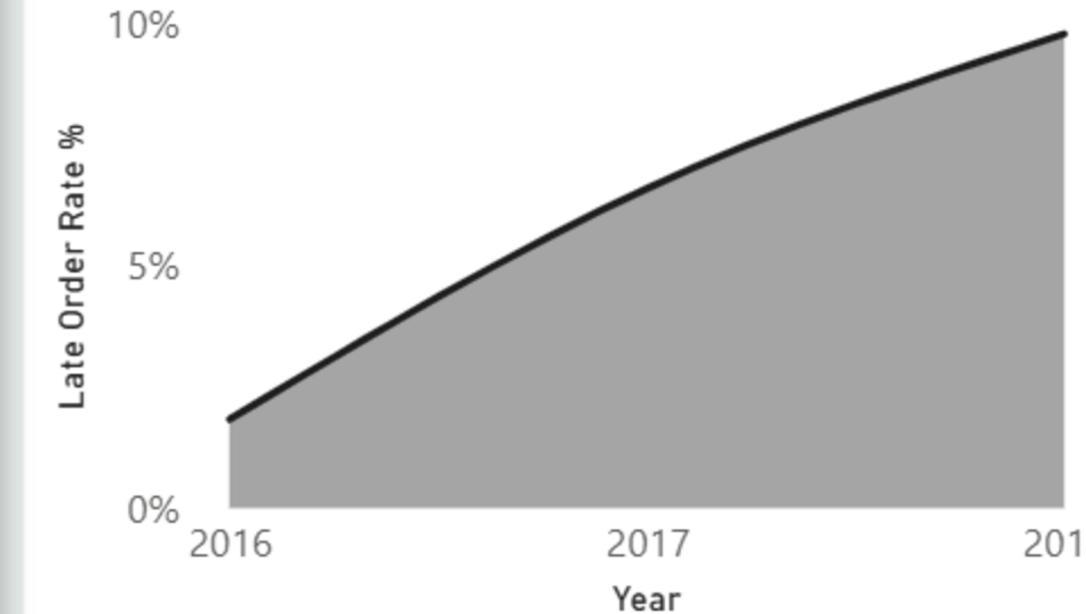
Retention Rate % by Customer Delivery Experience



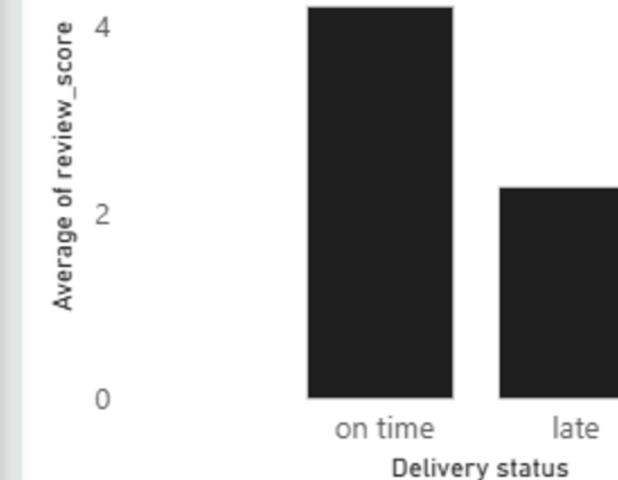
Total Late Orders by product category name



Late Order Rate % by Year



Average of review\_score by Delivery status



# Delivery delays lead to a 40% decrease in satisfaction.

**4.29**

## On-Time Delivery

Average customer rating when packages arrive as scheduled

**2.57**

## Late Delivery

Average rating when orders miss their delivery window

**1.7**

## Star Drop

Average decrease in satisfaction scores due to delays

Customer trust is fragile. Our analysis proves that delivery speed is the primary currency of trust. When a package arrives late, ratings plummet by 1.7 stars, directly damaging brand reputation.

# On-Time Delivery Drives 89% Retention

89%

## Repeat Customer Rate

Customers with perfect first deliveries become loyal buyers

First impressions matter. Data shows that **89% of repeat customers** are those who experienced a perfect first delivery. This proves that logistics performance is the strongest driver of Customer Lifetime Value.

# Diagnosing the Failure Points

## Geography: Regional Hurdles

High-demand cities face critical challenges:

- **São Gonçalo:** 24.9% delay rate
- **Salvador:** 17.5% delay rate
- Northeast Brazil needs immediate intervention

## Sellers: The Performance Gap

Not all sellers perform equally. Our analysis isolated underperforming sellers who delay **1 in every 4 orders (24%)**, dragging down the platform's average.

# Fixing the Supply Chain

01

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## Enforce Seller SLAs

Implement strict Service Level Agreements. Sellers with delay rates exceeding 10% will face penalties or temporary suspension to protect the customer experience.

02

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## Regional Hubs

Partner with local last-mile carriers in Northeast Brazil, specifically Salvador, to bypass current logistical bottlenecks and improve delivery times.

# Driving Revenue & Retention

## Loyalty Program

Launching a tiered rewards system targeting on-time deliveries to increase long-term customer value.

## Predictive AI

Deploy predictive models to forecast seasonal demand spikes like Black Friday and allocate carrier capacity in advance, preventing system crashes.

## Priority Lane

Providing a premium delivery option for high-value customers, with next-day delivery guaranteed for an additional fee.

# Projected Business Outcomes

## Revenue Stabilization

Implementing seller SLAs and regional hubs will reduce delivery delays, directly stabilizing platform revenue growth and reducing churn.

## NPS Recovery

Improvements in on-time delivery will help restore customer satisfaction scores, thereby increasing average ratings.

## Churn Reduction

Loyalty programs and predictive AI will help reduce customer attrition rates, increasing long-term value and repeat purchase rates.

Data-driven logistics optimization is the path to sustainable growth in Brazil's competitive e-commerce market.