



K-Means Customer Segmentation: A Data-Driven Sales Strategy

As a data-driven consulting agency, we tackled a mid-sized retail store's struggle with customer retention. We implemented K-Means clustering to segment customers based on purchasing behavior.

Our approach created targeted strategies for each segment. Let's explore how this transformed their business.

From Transactions to Customer Insights

1

Raw Transaction Data

Detailed records of purchases, including product codes, quantities, and timestamps.

2

Data Aggregation

Consolidated transactions by customer to reveal purchasing patterns over time.

3

Feature Engineering

Created RFM metrics: Recency, Frequency, and Monetary value per customer.

4

K-Means Clustering

Applied algorithm to identify natural groupings in customer behavior data.

The challenge: Transforming granular transaction records into actionable customer profiles. Our approach bridged this gap through strategic data transformation.

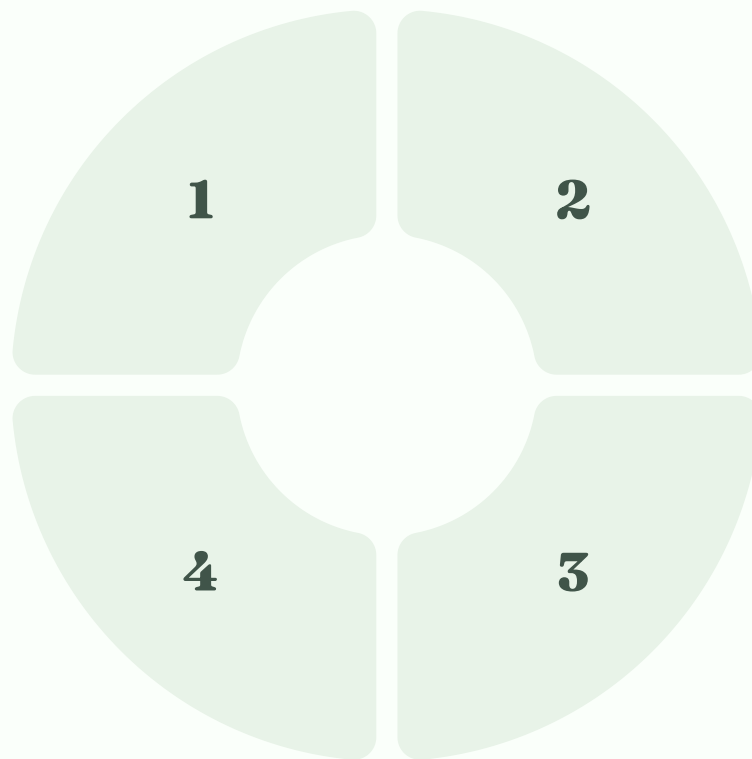
Four Customer Clusters Identified

Inactive Customers

Haven't purchased in a long time.
Low spending and very infrequent purchases.

Growing Customers

Recently started purchasing or increased spending. Medium frequency with high potential.



Churn Risk Customers

Purchase occasionally but not regularly. Mid-range spending with inconsistent engagement.

Loyal Customers

High-value customers with frequent purchases. Significant contributors to revenue.



Inactive Customers Profile



High Recency

Haven't made purchases in a significant amount of time.



Low Spending

Minimal investment in products when they do purchase.



Infrequent Purchases

Rarely engage with the store's offerings.



Inactive Customers Challenges

Lost Interest

These customers no longer find value in the store's offerings. Their engagement has completely dropped off.

Competitor Migration

Many have likely moved to competing retailers. Their loyalty has shifted elsewhere.

Generic Marketing Ineffectiveness

Standard promotional approaches fail to resonate. They require highly personalized communication to reconnect.

Inactive Customers Strategy

Win-Back Campaigns

Send personalized emails or SMS with exclusive discounts like "We miss you! Enjoy 20% off."

Limited-Time Offers

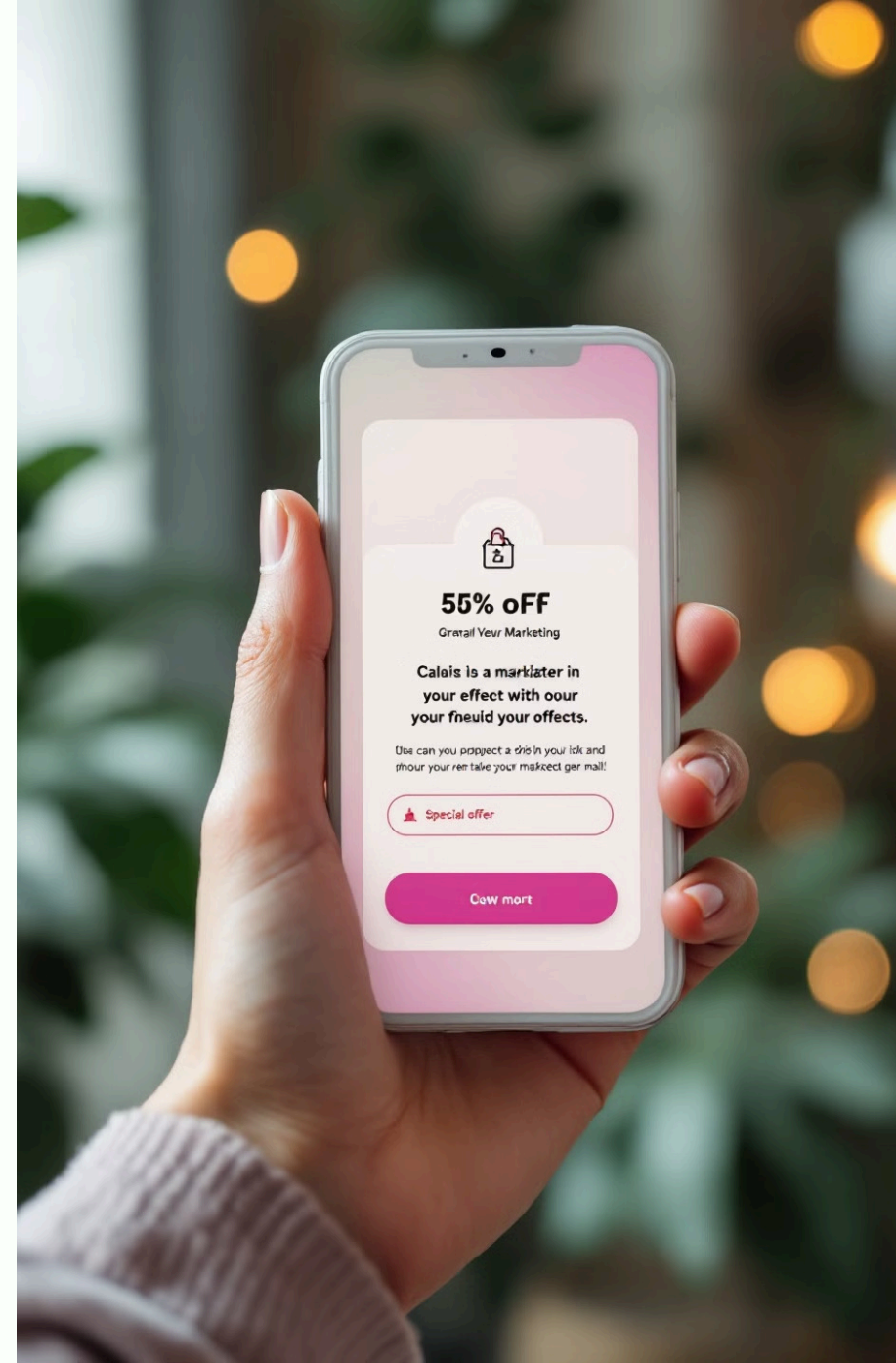
Create urgency with time-sensitive promotions: "48-hour special for returning customers!"

Reactivation Surveys

Ask why they stopped purchasing and provide tailored solutions based on feedback.

Retargeting Ads

Deploy digital ads across Google, Facebook, and Instagram to maintain brand visibility.



Churn Risk Customers Profile



These customers purchase occasionally but lack consistency. With mid-range spending but minimal engagement, they're on the verge of stopping completely without proper incentives.

Churn Risk Customers Challenges

Majority make decisions primarily based on cost rather than brand loyalty.

Long gaps in engagement indicate weak connection to the brand.

High percentage actively explore alternatives before making purchase decisions.



Churn Risk Customers Strategy

1

Personalized Discounts

Offer targeted promotions based on past purchases to increase perceived value.

2

Loyalty Program Introduction

Implement points-based rewards to incentivize repeat purchases.

3

Subscription Model

Create "subscribe & save" options for recurring needs to lock in regular business.

4

Engaging Email Sequences

Deliver useful content, tips, and reminders to maintain connection between purchases.



Loyal Customers Profile



Loyal Customers Challenges

Challenge	Impact	Risk Level
Brand Fatigue	Diminishing excitement about offerings	Medium
Value Recognition	Need for ongoing appreciation	High
Competitive Offers	Temptation from other retailers	Medium
Evolving Preferences	Changing needs over time	Low



Loyal Customers Strategy



Exclusive Perks & Early Access

Offer VIP treatment like shopping 24 hours before public sales launch.



Referral Program

Implement "Refer a friend & get \$10 off" incentives to leverage word-of-mouth.



Surprise Gifts & Recognition

Send unexpected tokens of appreciation to create delight moments.

Growing Customers Profile

1

Potential Loyalists

On track to become brand advocates

2

Increasing Engagement

Growing interest in products

3

Medium Spending

Modest but consistent investment

4

Recent Discovery

New to the brand experience

Growing Customers Challenges

Habit Formation

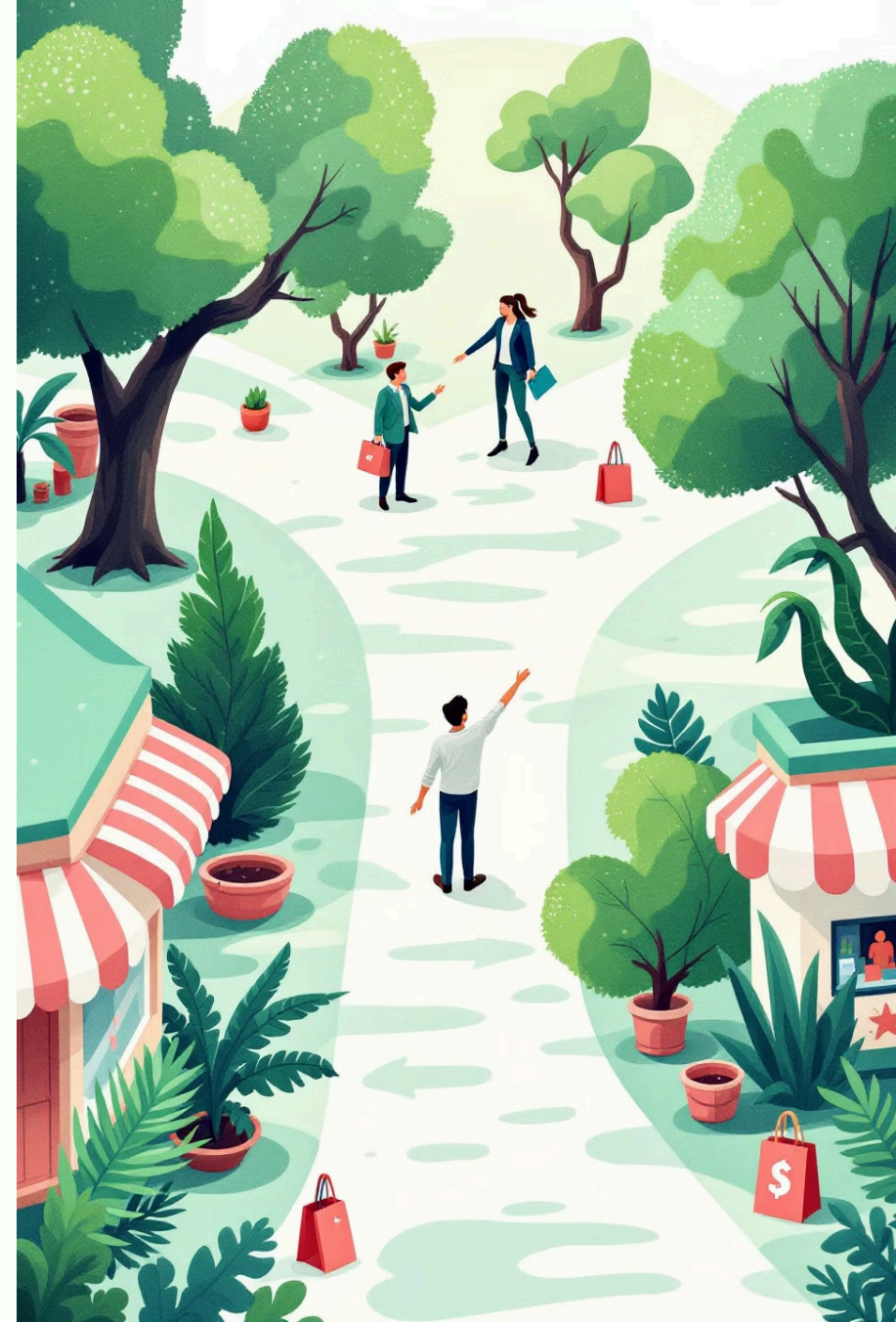
They haven't established strong shopping routines with your brand yet. Their purchasing patterns remain inconsistent.

Brand Switching

Without proper nurturing, they may easily try competitors. Their loyalty isn't solidified.

Value Reinforcement

They need regular reminders of your brand's benefits. They require validation of their initial interest.



Growing Customers Strategy

1

Upselling & Cross-Selling

Recommend related products with "People who bought this also loved these!" messaging.

2

Welcome Email Series

Send onboarding emails introducing brand values and best-selling products.

3

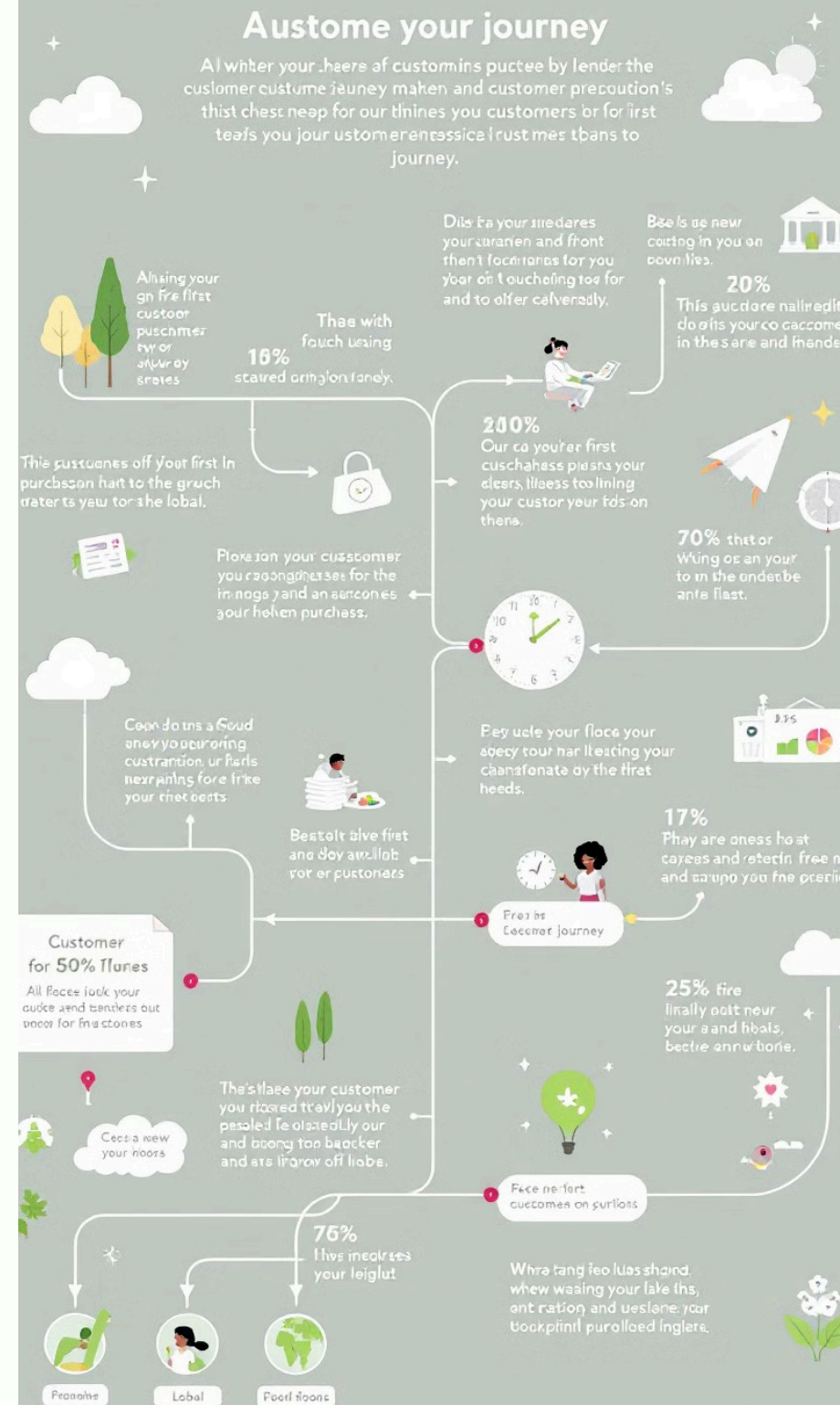
Early Loyalty Rewards

Encourage second purchases with small incentives: "Get 10% off your next purchase!"

4

Follow-Up Messages

Check in after purchases to offer support, usage tips, or complementary products.



Our Expert Team

Vasilis Katsikas

Lead Data Scientist specializing in clustering algorithms and predictive analytics for retail environments.

George Birmpakos

Retail Strategy Expert with 15+ years experience implementing data-driven customer retention programs.

Konstantinos Kalentzis

Marketing Analytics Lead focused on translating customer insights into actionable marketing strategies.

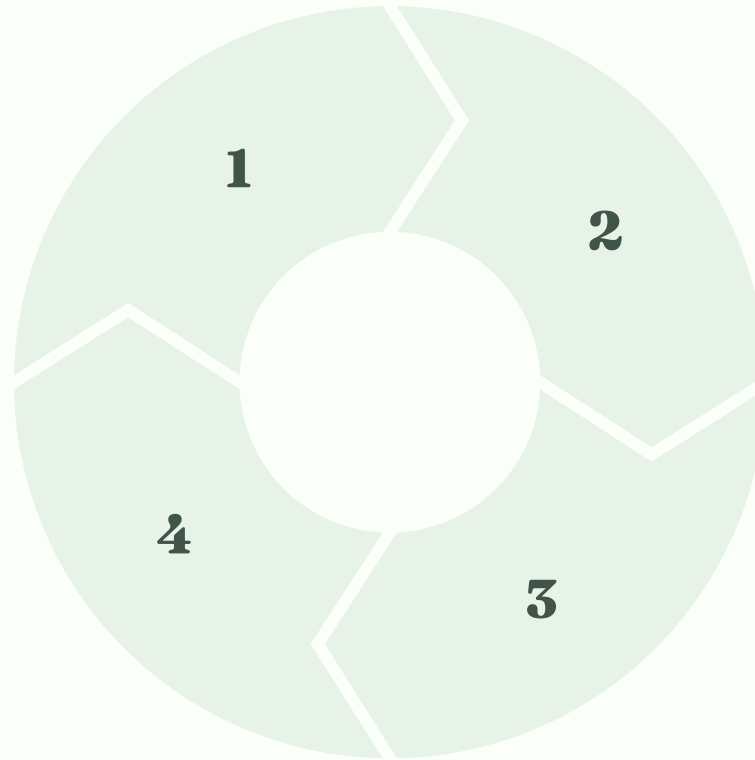
Questions & Next Steps

Implementation Support

Hands-on assistance with strategy execution

Results Measurement

Clear tracking of business impact



Ongoing Analysis

Regular review of segment performance

Strategy Refinement

Continuous improvement of approach

We're here to answer your questions and help you move forward. Let's discuss how we can implement these strategies to transform your customer relationships.