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## PRD: Size Recommendation Optimization

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### 1. Problem Statement

#### Background

Fashion e-commerce experiences return rates of approximately 35–40%, with nearly 40% of these returns driven by sizing and fit issues. Analysis of Myntra product reviews indicates that 24.4% of customers explicitly mention sizing-related problems, highlighting a gap between available size information and actionable guidance at the point of purchase.

Despite the availability of size charts, customers continue to face uncertainty due to inconsistent brand sizing and unstructured fit feedback, leading to avoidable returns and reduced trust.

#### User Pain Points

Customers frequently express confusion and frustration around sizing decisions:

- “Ordered M but had to exchange to XL.”
- “Size guide misleading.”
- “Brand fits differently than expected.”

These comments reflect uncertainty at the moment of purchase, resulting in exchanges, returns, and dissatisfaction.

#### Data Evidence

- 33% of analyzed brands exhibit high size inconsistency, with a coefficient of variation (CV) greater than 15%.
- Puma is identified as a high-inconsistency brand, showing wide measurement variation across sizes.
- Review analysis reveals that brands such as Roadster show low predictability between stated size and actual fit experience.
- Competitive benchmarking shows that no major fashion platform currently offers cross-brand size comparison.
- While Amazon partially addresses sizing uncertainty through structured fit signals, no platform currently enables users to compare sizing behavior across brands.

#### Business Impact

Size-related returns contribute directly to logistics costs, refunds, reverse supply chain expenses, and customer support overhead. Based on current estimates, even a conservative 10% reduction in size-related returns represents an annual cost saving opportunity of approximately ₹105 crore. Beyond cost, repeated sizing errors erode customer trust, reduce repeat purchase rates, and weaken long-term brand loyalty.

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## 2. Success Metrics

### Primary Metric

- Size-related return rate

Target: 10% reduction within the first rollout phase

### Secondary Metrics

- Add-to-cart conversion rate for apparel categories
- Reduction in multiple-size ordering behavior
- Decrease in fit-related customer complaints

### Guardrails

- Overall conversion rate must not decline
  - No increase in brand partner complaints related to sizing representation
  - Review sentiment polarity should remain neutral or improve
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## 3. MVP Feature Definition

### Feature Description

This feature surfaces aggregated fit feedback derived from customer reviews as a simple, visible badge on the product detail page. The badge indicates whether the product generally runs small, fits true to size, or runs large, along with the number of reviews supporting that signal. The goal is to provide quick, user-backed sizing guidance at the moment of size selection.

### Placement

- Product Detail Page (PDP)
- Positioned adjacent to the size selector (S / M / L / XL)

### Out of Scope

- Will not use user body measurements or personalization
  - Will not compare sizing behavior across different brands
  - Will not recommend a specific size to the user
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## 4. User Flow: Before vs After

### BEFORE (Current Experience)

- User opens a product detail page
- Views a static size chart that requires manual interpretation
- Scrolls through unstructured customer reviews to infer fit information
- Selects a size with uncertainty or orders multiple sizes to reduce risk

**Outcome:**

Low confidence during size selection, leading to higher size-related returns and exchanges.

**AFTER (With Fit Feedback Badge)**

- User opens a product detail page
- Immediately sees a fit feedback badge near the size selector indicating Runs Small, True to Size, or Runs Large, backed by review volume
- Uses this signal as a quick heuristic to adjust size choice if needed
- Selects a single size with higher confidence and proceeds to purchase

**Outcome:**

Reduced decision friction, improved confidence at purchase, and lower likelihood of size-related returns.

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**5. Edge Cases & Safeguards****Edge Case: Low Review Volume**

- Scenario: Product has insufficient reviews to derive a reliable fit signal.
- Safeguard: Do not display a fit badge until a minimum threshold of reviews (e.g., 10–15 fit-related reviews) is met. Instead, show a neutral state such as “Fit data not available yet.”

**Edge Case: Conflicting Fit Signals**

- Scenario: Reviews are evenly split between “Runs Small” and “Runs Large.”
- Safeguard: Display a neutral badge such as “Mixed fit feedback” with a tooltip encouraging users to check detailed reviews.

**Edge Case: New Product Launches**

- Scenario: Newly launched products have no historical reviews.
- Safeguard: Suppress the fit badge entirely and default to the existing size chart experience until sufficient data is collected.

**Edge Case: Changes in Product Sizing Over Time**

- Scenario: Brand updates sizing patterns due to manufacturing or supplier changes.
- Safeguard: Compute fit badges using rolling review windows (e.g., last 6–9 months) to ensure signals reflect recent sizing behavior.

**Edge Case: Misleading or Irrelevant Reviews**

- Scenario: Reviews mention quality or fabric but not fit, skewing signals.
  - Safeguard: Include only explicitly fit-related reviews in badge calculations and exclude neutral or non-fit feedback.
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## 6. Non-Goals (Explicit)

- This feature does not replace detailed size charts.
  - This feature does not guarantee size accuracy for every body type.
  - This feature does not provide personalized size recommendations.
  - This feature does not alter brand sizing standards or measurements.
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## 7. Experimentation & Rollout Plan (A/B Test)

### Experiment Objective

Evaluate whether displaying inline fit feedback badges on the product detail page reduces size-related returns without negatively impacting conversion.

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### Experiment Setup

#### Experiment Type

- A/B Test

#### Audience

- Users browsing apparel categories (T-shirts, Shirts, Tops)
  - Logged-in and logged-out users included
  - Excludes brand-new products with insufficient review data
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### Variants

#### Control (A)

- Existing product detail page
- Static size chart only
- No fit feedback badge

#### Treatment (B)

- Product detail page with fit feedback badge displayed near the size selector
  - Badge shows “Runs Small / True to Size / Runs Large” with review count
  - All other page elements remain unchanged
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### Traffic Split

- 50% Control
- 50% Treatment

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### **Experiment Duration**

- 3–4 weeks
  - Extended if return-related metrics require longer observation window
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### **Success Criteria**

#### **Primary Success Metric**

- $\geq 10\%$  reduction in size-related return rate in Treatment vs Control

#### **Secondary Metrics**

- Improvement or neutrality in add-to-cart conversion rate
- Reduction in multiple-size ordering behavior
- Reduction in fit-related customer complaints

#### **Guardrail Metrics**

- No statistically significant drop in overall conversion rate
  - No increase in brand partner complaints
  - Review sentiment polarity remains neutral or improves
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### **Decision Rule**

- Roll out feature to 100% traffic if:
    - Primary metric meets or exceeds target
    - No guardrail metrics are violated
  - Iterate or roll back if:
    - Conversion drops materially
    - Fit badge creates confusion or mistrust
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## **8. Rollout Strategy**

### **Phase 1: Limited Rollout (10%)**

- Enable fit feedback badges for 10% of traffic in selected apparel categories
- Focus on high-volume products with sufficient review data
- Closely monitor conversion, add-to-cart behavior, and early return signals

**Goal:** Validate no negative impact on core business metrics

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### **Phase 2: Expanded Rollout (50%)**

- Expand to 50% of traffic across all eligible apparel products
- Include additional brands with varying size consistency profiles
- Begin collecting brand-level feedback and customer support signals

**Goal:** Confirm scalability and consistency of impact across brands

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### **Phase 3: Full Rollout (100%)**

- Roll out feature to all eligible products and users
- Establish ongoing monitoring dashboards for fit accuracy and returns
- Incorporate feedback loops with brand and sourcing teams

**Goal:** Institutionalize the feature as a core part of the PDP experience

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## **9. Risks & Mitigations**

### **Risk: Misleading Fit Signals Due to Low or Biased Reviews**

- **Impact:** Users may lose trust if the badge feels inaccurate
  - **Mitigation:** Enforce a minimum review threshold and exclude non-fit-related reviews from calculations
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### **Risk: Conflicting Fit Feedback Creates Confusion**

- **Impact:** Users may hesitate or overthink size selection
  - **Mitigation:** Display a neutral “Mixed fit feedback” state and link to detailed reviews
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### **Risk: Brand Pushback on Sizing Representation**

- **Impact:** Brand partners may dispute public fit indicators
  - **Mitigation:** Share methodology transparently with brands and restrict signals to aggregated, anonymized data
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### **Risk: Conversion Drop Due to Overemphasis on Fit Issues**

- **Impact:** Highlighting size issues may reduce purchase intent
  - **Mitigation:** Position badges as guidance, not warnings, and closely monitor conversion guardrails
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## **10. Future Enhancements (Post-MVP)**

- Introduce brand-level sizing consistency indicators
  - Enable cross-brand size comparison using historical fit data
  - Explore personalized size recommendations using user purchase and return history
  - Extend fit feedback signals to product listing pages (PLP)
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