E-commerce User Behavior & Sales Perf...

Note: The source data and visualizations are in Chinese as this project analyzes a domestic e-commerce platform. All insights and strategic recommendations are presented in English.

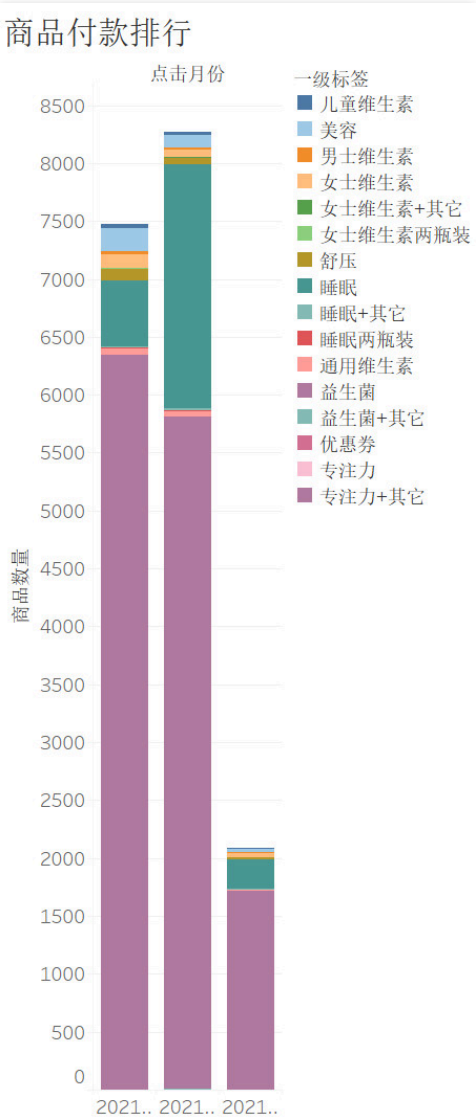## 1. Category Performance Overview (品类绩效总览)

Chart Title: Figure 1: Sales Volume by Product Category (Monthly Trend)

Key Insights:

- **Dominant Category: "Probiotics" (益生菌)** is the absolute market leader, accounting for the vast majority of sales volume in Q1-Q2 2021. It serves as the core revenue driver (Cash Cow).

- **Secondary Categories:** "Sleep Aids" (睡眠) and "Pressure Relief" (舒压) products show stable but significantly lower sales volume compared to Probiotics.
- **Action:** Inventory and marketing resources should be heavily tilted towards Probiotics to maximize GMV.
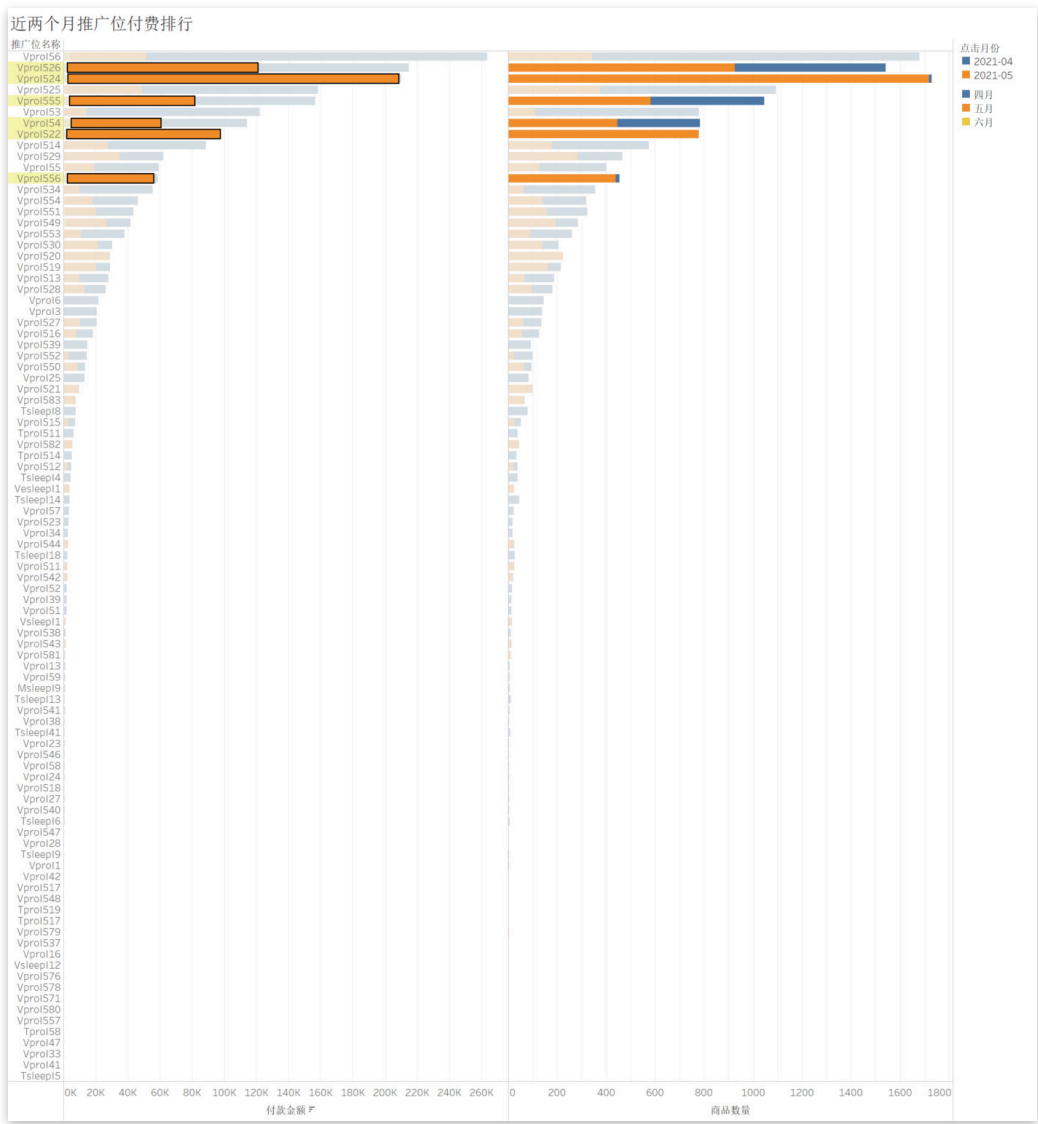
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2. Ad Placement Efficiency (推广位效能分析)

Chart Title: Figure 2: Top Performing Ad Slots by Payment Amount

Key Insights:

- **Pareto Distribution in Ads:** A small number of ad slots (e.g., **Vprol56**, **Vprol26**) are driving the bulk of revenue.
- **Performance Gap:** There is a long tail of underperforming ad slots (bottom 50%) that are consuming budget but generating minimal returns.
- **Action:**
  - Scale Up: Increase bidding budget for top-tier slots like Vprol56.

- **Cut Loss:** Stop or optimize the bottom 20% of ad slots to improve overall ROAS (Return on Ad Spend).

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3. User Decision Cycle Analysis (用户决策周期分析)

Figure 3: User Decision Efficiency Dashboard

(Overview of decision time correlation, rankings, and interaction paths)

Key Insights by Chart:

- **[Top-Left] The "Golden 120 Seconds" Rule:**
  - The scatter plot reveals a strong negative correlation between decision time and conversion. The highest density of transactions occurs within **120 seconds** (2 minutes) of the first click, confirming the **impulse–buying nature** of interest–based e–commerce.

- **[Top-Right & Bottom-Left] Product Efficiency Ranking:**
  - Analysis of sales within the 1500s window shows that **Probiotics (益生菌)** drive the fastest purchase decisions, indicating strong user trust.
  - In contrast, **Sleep Aids** require a longer decision cycle, suggesting users need more time to read detailed reviews or descriptions.

- **[Bottom-Right] Interaction Path Visualization:**

- Visualizes the density of user actions over time. The "long–tail" distribution confirms that while most users convert quickly, a significant portion of high–value users engage in prolonged research before paying.

Strategic Actions:

1. **Landing Page Optimization:** Simplify the checkout process to minimize friction within the critical first 2 minutes (the impulse window).
2. **Content Differentiation:** For "Slow-Decision" products (e.g., Sleep Aids), provide more detailed video reviews and Q&A sections to aid the longer research process.

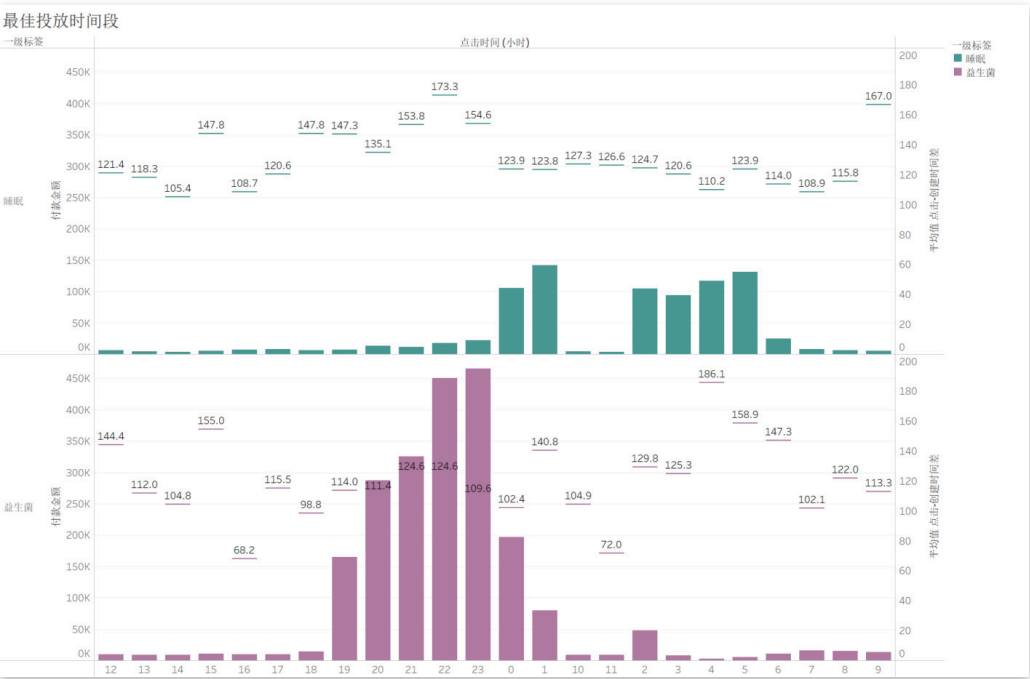# 4. Prime Time for Advertising (最佳投放时段)

Chart Title: Figure 4: Sales Volume & Decision Time by Hour of Day

Key Insights:

- **Late Night Peak:** Sales volume for the core product (Probiotics) skyrockets between **20:00 and 23:00 (8 PM - 11 PM)**.
- **Behavioral Pattern:** Users are most active and willing to pay during late-night leisure hours, likely while scrolling through content feeds before bed.
- **Action:** Implement **Dayparting strategy** (分时段投放). Allocate 60-70% of the daily budget to the 20:00-23:00 window to maximize conversion rates.

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5. Strategic Recommendations (策略总结)

Based on the data analysis, the following strategies are proposed to drive growth:

1. **Focus on "Short-Video" Logic:** Since the optimal decision time is <120s, ad creatives (videos/images) must highlight the "Pain Point & Solution" within the first 5 seconds to trigger immediate purchase.
2. **Optimize Ad Portfolio:** Aggressively cut budget for low-performing slots and consolidate resources into the "Vprol" series slots during evening peak hours.
3. **Product Bundling:** Since Probiotics is the main traffic entry point, use cross-selling tactics to bundle "Sleep Aids" with Probiotics to increase the Average Order Value (AOV).