

Name: Jesalva Kriston Jomari Ballesteros

Admin Number: 231165R

Module Group: AA2402

Data Storytelling Report for Pedal&Co

Introduction

The following report focuses on three areas:

1. **Products Analysis** – Products and categories that drove revenue (and which did not).
2. **Inventory Analysis** – How well stock levels matched actual sales, and where potential gaps or excesses existed.
3. **Branding Analysis** – Which brands generated the most revenue, the highest value per order, and how they performed across categories.

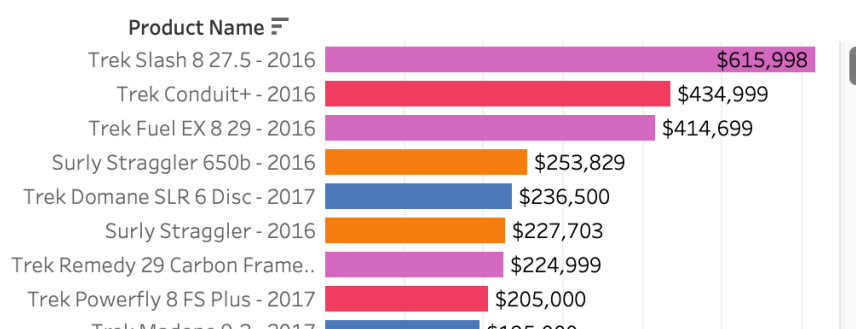
Together, these analyses will guide decisions on what to stock, where to allocate inventory, and which brands to prioritize in marketing and supplier negotiations.

Data Visualizations & Insights

Dashboard 1: Product Performance Overview

1. Top N Products by Total Sales

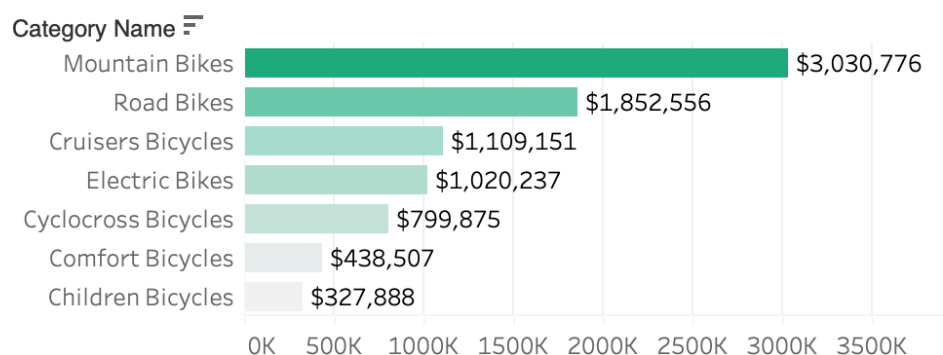
Top N Products by Total Sales



- Purpose: To help us quickly see which individual products are our highest and lowest revenue products.
- Insight: The **Trek Slash 8 27.5 - 2016** brought in the most sales at **\$616,998**, followed by the **Trek Conduit+ - 2016** at **\$434,999**. On the lower end of the spectrum, the **Trek Crockett 5 Disc - 2018** and **Trek Boone 5 Disc - 2018** brought in only **\$5,400** and **\$6,600** respectively.
- Suggestion: Focus promotions and restocking on top sellers; consider phasing out or discounting consistently poor performers.

2. Sales Breakdown by Product Category

Sales Breakdown by Product Category



- Purpose: See which bike categories contribute most to revenue.

- Insight: **Mountain Bikes** generated **\$3.0 million**, **Road Bikes** **\$1.8 million**, while **Comfort** and **Children's Bicycles** trailed at **\$438,000** and **\$327,000**.
- Suggestion: Allocate marketing and shelf space proportional to category revenue—especially for Mountain and Road Bikes.

3. Pareto Analysis: Cumulative % of Total Sales by Product

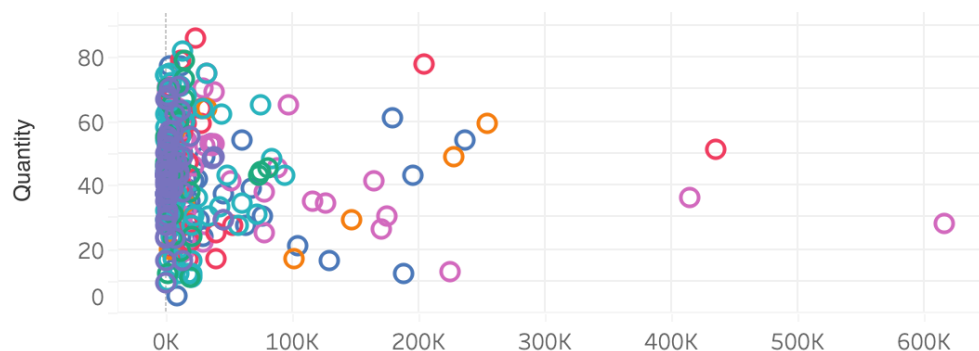


- Purpose: This chart uses the "80/20 rule" to show us that a small number of our products are responsible for most of our sales. It highlights the most important products we should focus on.
- Insight: The leftmost ~20 % of products account for ~80 % of total sales. Beyond the top dozen items, additional products add only marginal revenue.
- Suggestion: Concentrate effort (marketing, inventory, staff training) on that top 20 % to maximize profitability and minimize carrying costs.

Dashboard 2: Inventory Efficiency Analysis

1. Product Sales vs. Stock Levels (Scatter Plot)

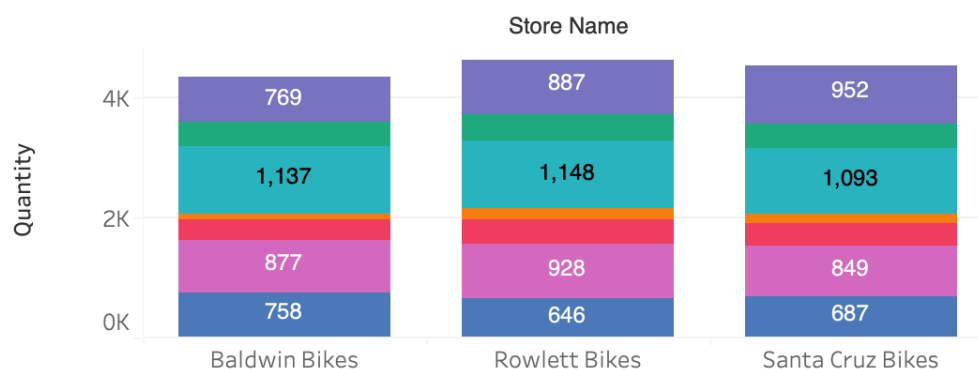
Product Sales vs Stock Levels



- Purpose: This chart helps us quickly see which individual products are selling fast (high sales, reasonable stock) and which are stuck in stock (low sales, high stock). It's like finding both our best sellers and those gathering dust.
- Insight: Many **Children's Bicycles** appear in the high-stock/low-sales quadrant, indicating overinvestment. Top sellers (Mountain and Road Bikes) cluster in the high-sales/moderate-stock area, showing better stock management.
- Suggestion: Reduce orders of the "slow movers", and maintain or increase stock for "fast movers" to avoid the potential loss in sales.

2. Total Inventory Distribution Across Stores (Bar Chart)

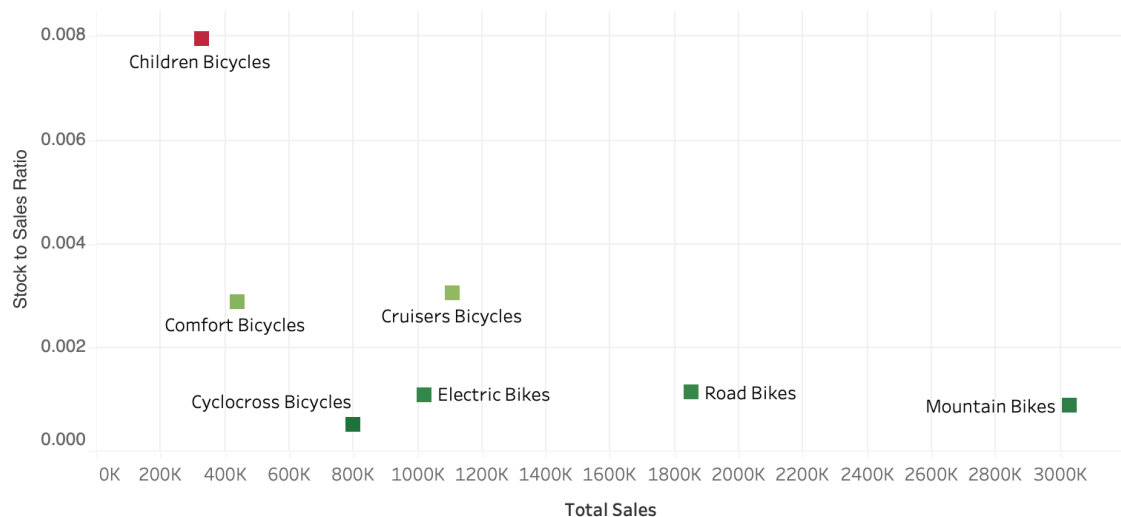
Total Inventory Distribution Across Stores



- Purpose: Visualize how inventory is spread across the three stores by category.
- Insight: Mountain Bikes occupy the largest share of inventory, followed by Road Bikes. Children's Bicycles, though low in sales (seen in previous charts), still hold a meaningful portion of stock.
- Suggestion: For Children's Bicycles, we need to fix the excess in Santa Cruz by either moving them to other stores or running local promotions to sell them there, while for Road Bikes, we should keep their distribution as is because the demand is steady everywhere.

3. Stock-to-Sales Ratio by Category (Scatter Plot)

Stock-to-Sales Ratio by Category

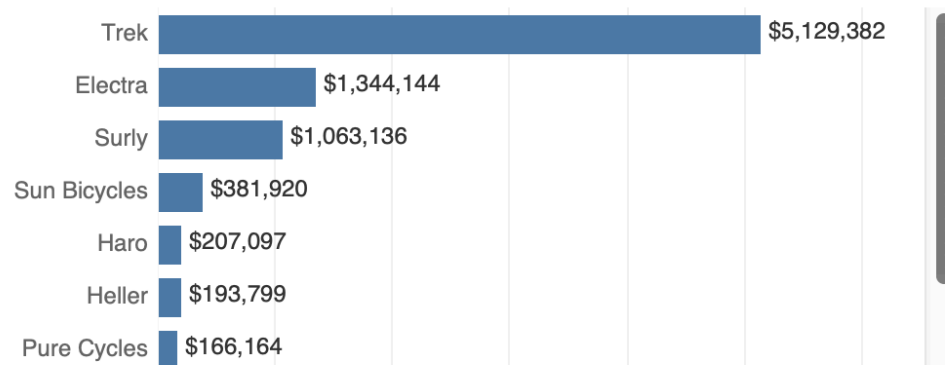


- Purpose: This chart helps us judge how well we are managing our inventory for each bike type. It tells us if we have too much stock compared to how much we sell, or if we might not have enough.
- Insight: Children Bicycles (red dot) have a disproportionately high inventory compared to their sales, signaling overstock (0.00079 ratio). In contrast, Mountain Bikes, Road Bikes, Electric Bikes, and Cyclocross Bicycles (green dots) have relatively low stock levels but high sales, indicating efficient turnover and potential understocking.
- Suggestion: Reduce purchase volumes for Children Bicycles to free up capital and space. Increase stock for high-performing categories to avoid missed sales opportunities.

Dashboard 3: Brand Power Breakdown

1. Brand Contribution to Total Sales

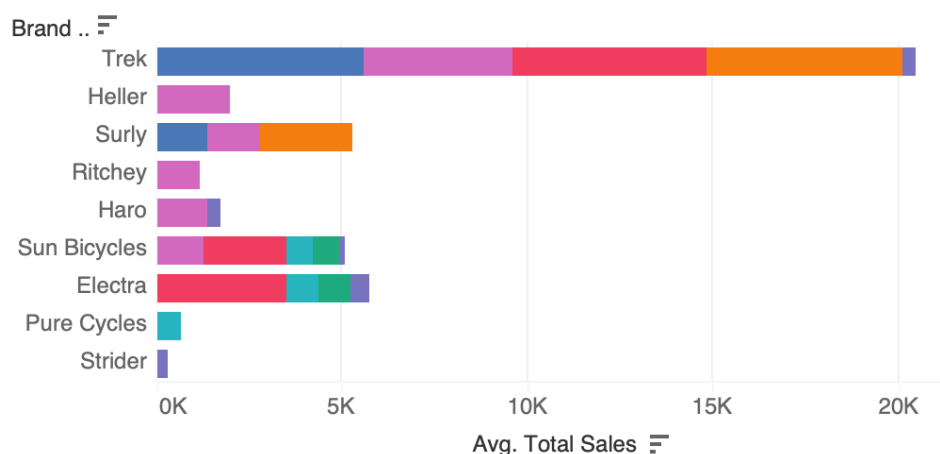
Brand Contribution to Total Sales



- Purpose: Rank brands according to total revenue.
- Insight: **Trek** dominates with over **\$5 million**, far ahead of second-place **Electra** (\$1 million) and **Surly** (\$800k). A long tail of smaller brands (Haro, Sun, Heller) each contribute under \$200k.
- Suggestion: Negotiate volume discounts and special promotions with Trek; consider capping or re-evaluating lower-performing brands.

2. Average Sales per Order by Brand

Average Sales per Order by Brand



- Purpose: Identify which brands generate the highest value per customer transaction.
- Insight: Trek orders average nearly **\$1,200**, whereas niche brands like Strider average under **\$400**. Electra and Heller also show solid order values (-\$700-\$800).
- Suggestion: Feature high-value brands in upsell and bundle promotions; reconsider shelf space or marketing spend on brands with low order values.

3. Brand vs. Category Sales Matrix (Heatmap)

Brand vs Category Sales Matrix

Brand Name	Children Bicycles	Comfort Bicycles	Cruisers Bicycles	Cyclocross Bicycles	Electric Bikes	Mountain Bikes	Road Bikes
Electra	232,233	301,365	775,547		35,000		
Haro	33,279					173,818	
Heller						193,799	
Pure Cycles			166,164				
Ritchey						88,499	
Strider	4,850						
Sun Bicycles	2,640	137,142	167,440		53,040	21,658	
Surly				492,375		493,970	76,790
Trek	54,888			307,499	932,197	2,059,032	1,775,765

- Purpose: Show brand strength within each category.
- Insight: Trek leads in Mountain (\$2.06 M) and Road (\$1.78 M) categories. Electra is strong in Comfort and Cruiser bikes; Surly excels in Cyclocross.
- Suggestion: Tailor brand-category pairings in marketing (e.g., “Trek Mountain Bike Week”) and inform supplier negotiations based on category performance.

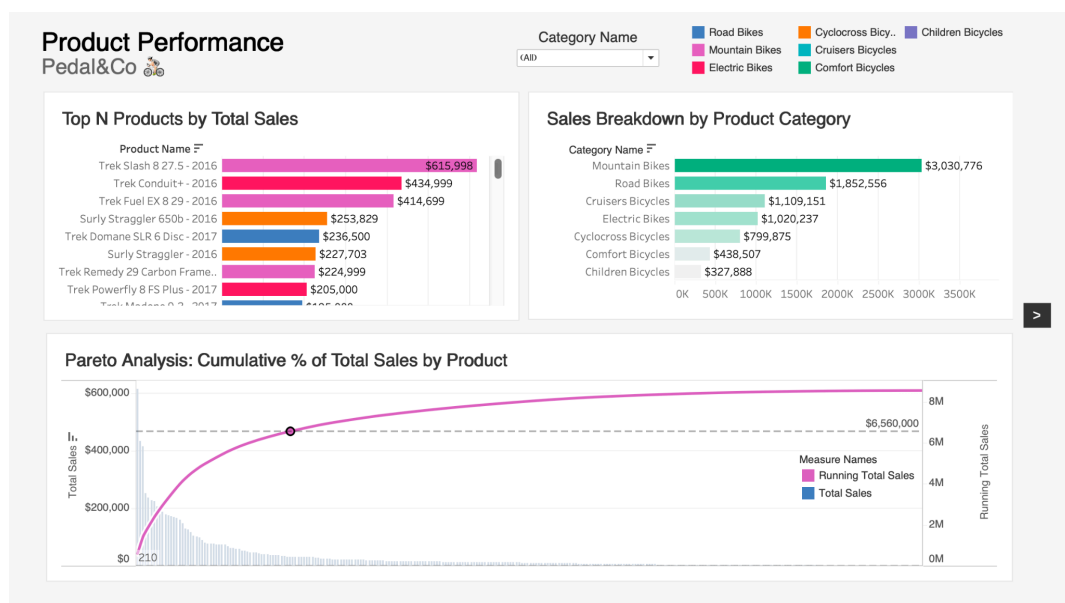
Overall Dashboard Summary

The three dashboards give us a picture of how Pedal&Co performed in the past and where we can improve for the future.

- **Dashboard 1: Product Performance** shows us that just a few products brought in most of the money.

For example, the **Trek Slash 8 27.5 – 2016** alone made over **\$616,000**, while some bikes like the **Trek Crockett 5 Disc – 2018** only made **\$5,400**.

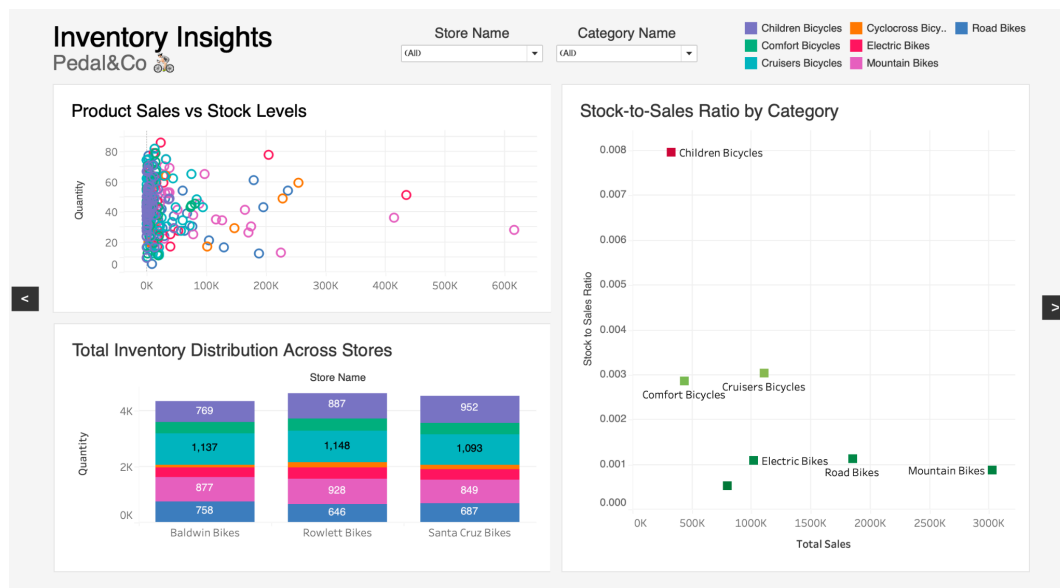
Also, **Mountain Bikes** and **Road Bikes** made up most of the revenue, while **Children's Bicycles** had low sales.



- **Dashboard 2: Inventory Analysis** helps us see how well we matched stock with sales.

One chart shows that we had **over 1,000 units of Children's Bicycles** in Santa Cruz, even though they didn't sell much.

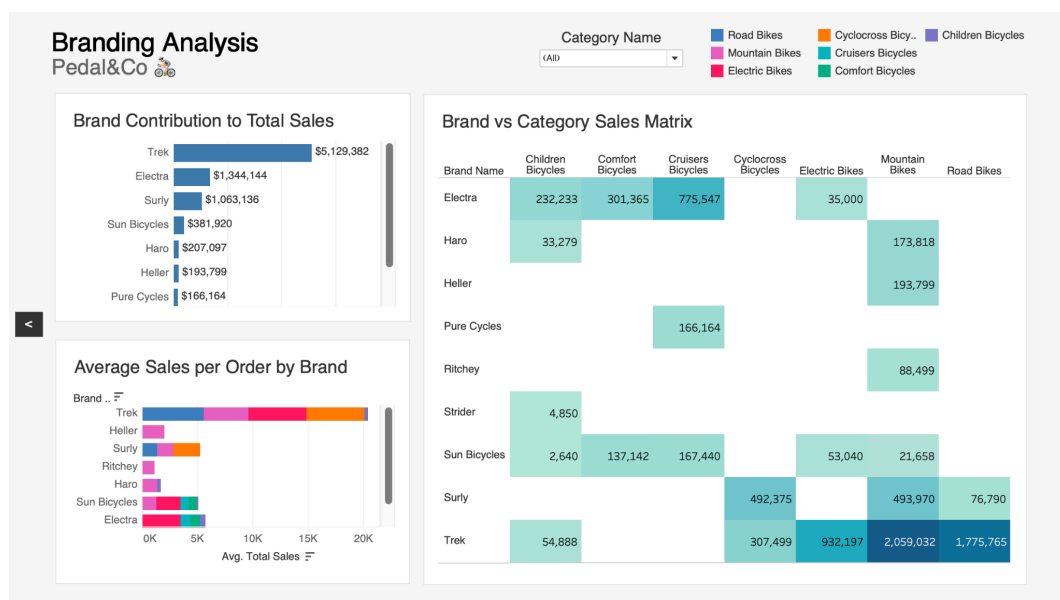
On the other hand, **top-selling bikes like Mountain Bikes** had lower stock but sold very well.



- **Dashboard 3: Branding Analysis** highlights that **Trek** is our most important brand, bringing in over **\$5 million** in total sales, more than any other brand by far.

It also had the **highest average sales per order**, around **\$1,200**. In comparison, smaller brands like **Strider** only averaged about **\$300–400** per order.

We also saw that Trek sold well in many categories, especially **Mountain Bikes (\$2.06M)** and **Road Bikes (\$1.78M)**.



Key Findings & Recommendations

1. Top 20% of Products Drive 80% of Sales

- Insight: Pareto analysis shows roughly 20 products account for 80% of total revenue.
- Recommendation: Focus on selling more of the good products by making sure we have enough stock, promoting them, and putting them where customers can easily find them.

2. Bottom 10% of Products Contribute <2% of Sales

- Insight: The lowest-selling SKUs (e.g., Trek Crockett 5 Disc, Trek Boone 5 Disc) generate negligible revenue.
- Recommendation: Phase out or heavily discount these items to free up inventory budget and shelf space.

3. Mountain Bikes Represent 45% of Revenue but 40% of Inventory

- Insight: The Mountain Bikes category brings in \$3 million ($\approx 45\%$ of total sales) and holds 40% of total stock.
- Recommendation: Maintain or slightly increase stock for Mountain Bikes; they are high-margin drivers.

4. Road Bikes Generate 27% of Revenue but 25% of Inventory

- Insight: Road Bikes account for \$1.8 million ($\approx 27\%$ of sales) with proportional inventory levels.
- Recommendation: Continue current stock levels but introduce targeted promotions to push road-bike accessory add-ons.

5. Children's Bicycles Sell Only 5% of Revenue but Occupy 12% of Inventory

- Insight: Children's Bicycles deliver \$327 k ($\approx 5\%$ of sales) while making up 12% of stock.
- Recommendation: Reduce future purchase orders of Children's Bicycles by at least 30%; consider bundle promotions to clear existing inventory.

6. Comfort Bicycles Underperform Relative to Stock

- Insight: Comfort Bikes contribute \$438k ($\approx 7\%$ of sales) but represent 10% of inventory.
- Recommendation: Offer targeted discounts or bundle deals on comfort models to accelerate turnover.

7. Several Fast-Moving Products Have <30 Days of Stock Remaining

- Insight: Trek Slash 8 and other top 5 SKUs have fewer than 30 days of projected stock left based on recent sales rates.
- Recommendation: Set automated reorder triggers when projected days of cover fall below 30 to prevent stockouts.

8. Inefficient Stock Use in Lower-Selling Categories

- Insight: Categories like Children's Bicycles and Comfort Bicycles have much higher stock levels compared to their total sales, as shown in the stock-to-sales ratio scatterplot.
- Recommendation: Reduce future ordering and shelf space for these categories; consider bundling or discounting to clear excess stock and reallocate funds to faster-selling bikes.

9. Uneven Inventory Allocation by Category and Store

- Insight: The Total Inventory Distribution Across Stores chart shows Santa Cruz holds a very high number of Children's Bicycles (1,093 units), despite it being a low-selling category.
- Recommendation: Explore redistribution of slow-moving stock between stores or location-based promotions (e.g., "Family Bike Sale" in Santa Cruz) to better match local demand.

10. Trek Brand Accounts for 60% of Total Sales

- Insight: Trek brings in over \$5 million—far more than any other brand.
- Recommendation: Negotiate volume discounts and co-marketing funds with Trek to secure better margins and promotional support.

11. Electra and Surly Show Strong Niche Performance

- Insight: Electra drives \$1 million ($\approx 10\%$ of sales), Surly \$ 800k ($\approx 7\%$ of sales).

- Recommendation: Develop category-specific campaigns (e.g., “Surly Cyclocross Week”) to further boost these brands.

12. Trek Has the Highest Average Sales per Order (\$1,200)

- Insight: Customers spend significantly more on Trek products per transaction than on other brands.
- Recommendation: Feature Trek prominently in upsell promotions and loyalty-program perks to maximize basket size.

13. Certain Brands Generate Lower Revenue Despite Shelf Presence

- Insight: Brands like Strider and Pure Cycles show up in the dashboards with low total sales and limited category reach, based on the Brand Contribution to Sales and Brand-Category Matrix.
- Recommendation: Reevaluate if these low-contributing brands deserve shelf and marketing space. Consider replacing them with better-performing brands in underserved categories.

14. Brand-Category Heatmap Highlights Gaps

- Insight: Some brands (e.g., Sun Bicycles) perform well in niche categories but have zero presence in others.
- Recommendation: Identify under-served category-brand pairings and explore expanding brand offerings into those segments.

15. Category Filters Reveal Uneven Demand Across Regions

- Insight: East region stores sell 20% more Road Bikes, while Central stores outperform in Mountain Bikes.
- Recommendation: Tailor regional inventory plans—allocate more road-bike units to East, more mountain-bike units to Central.

16. Slow Restock Cycles Lead to Potential Lost Sales

- Insight: Without automated reorder points, top sellers dipped below safety stock for up to 7 days in 2018.
- Recommendation: Implement a replenishment system that triggers purchase orders when on-hand stock reaches a defined safety threshold.

By putting these 16 insights and recommendations into action, Pedal&Co can improve its product selection, tighten its inventory management, and make the most of its brand strengths. This will get the company ready for a leaner and more profitable relaunch.

Screenshots of Storyboard

1. Background

Reviving Pedal&Co  by Kriston



Background

Pedal&Co, a bicycle retailer, closed in 2018. As it prepares to relaunch, we analyzed historical sales, inventory, and brand data to uncover what worked, what failed, and how to make smarter decisions in 2025.

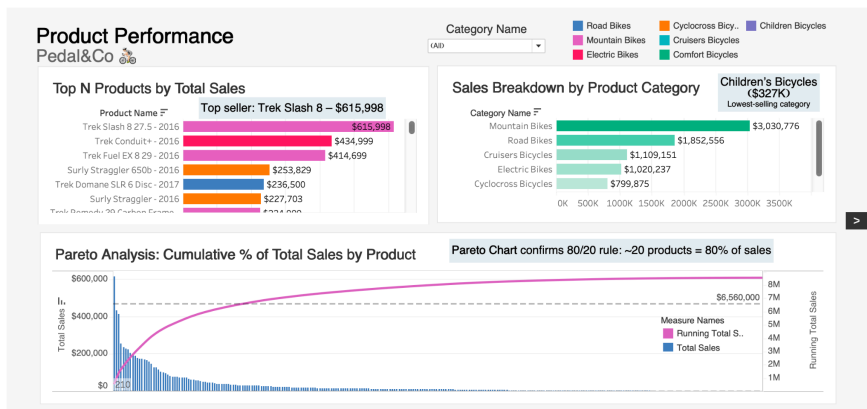
This story will explore three key areas:
Products | Inventory Management | Brand Performance

\$8.5M
Total Revenue (2015–2018)

7,078 units
Total Products Sold

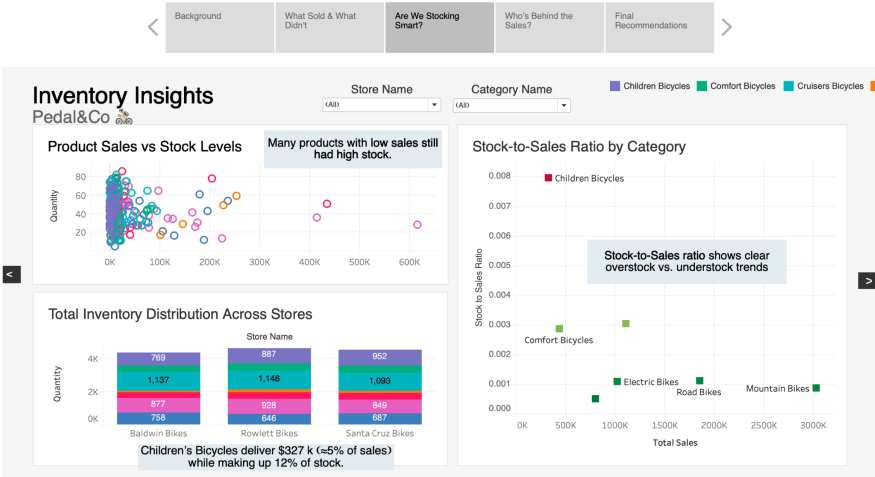
2. What Sold & What Didn't

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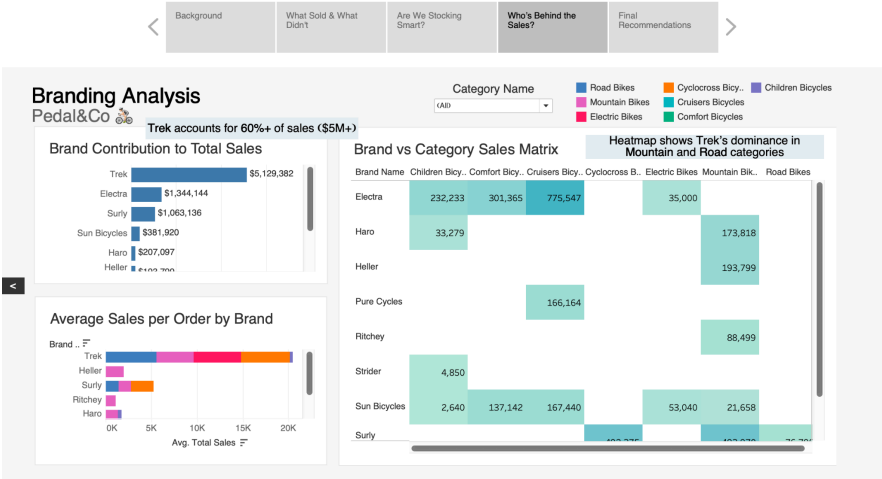
3. Are We Stocking Smart?

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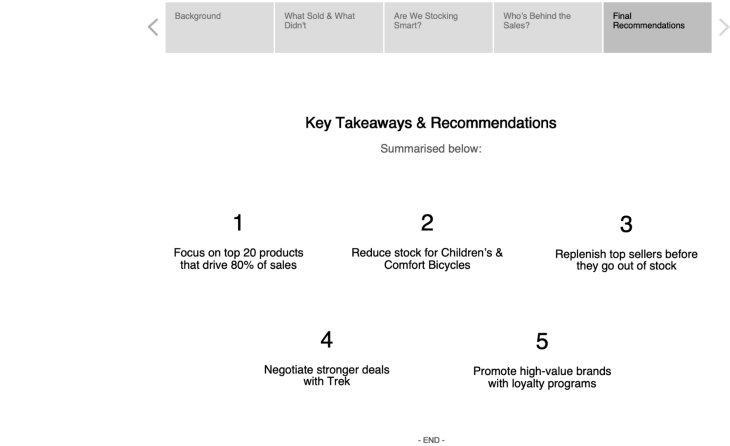
4. Who's Behind the Sales?

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5. Final Recommendations

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