



**Data Analytics for Business Insights**

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# Driving Growth and Profitability: Key Strategies for New-Peth Shoes (2020–2023)

## Introduction

New-Peth Shoes Ltd. is a retailer of locally produced and imported branded shoes. Company has ambitious growth plans to compete with high-street shoe stores. It faces challenges due to a lack of expertise in analytics and data-driven decision-making. This report seeks to use analytical tools to derive actionable insights from the provided dataset. Key variables like sales details, customer demographics, product categories, shipping data and return records, allow for an evaluation of KPIs like **Sales, Profit, Profit-to-Sales Ratio, Order Volume, Customer Segmentation and Return Rates**.

This report uses tableau for interactive data visualizations and turns complex data into insights for strategic decisions. This analysis will help New-Peth Shoes enhance its sales performance, understand its customers' behaviour, strengthen its market position and improve operational efficiency for sustainable growth.

## Dataset Overview

This dataset includes five tables: **Sales, Shipping, Returns, Return Reasons**, and **Sales Representatives**. These give insight into sales performance, shipping efficiency and customer behaviour. Here are some important variables:

Order ID (unique identifier for each order), Customer ID (unique identifier for each customer), Order Date, Product ID, Product Name, Product Category, Region, City, Shipping Date and Ship Mode (method of order shipment), Profit (Profit from the order), Sales (total revenue), Return Code (reason for returns) and Days to Return (Number of days taken by customers to return items).

# 1. Dashboard: Overview of key Metrics

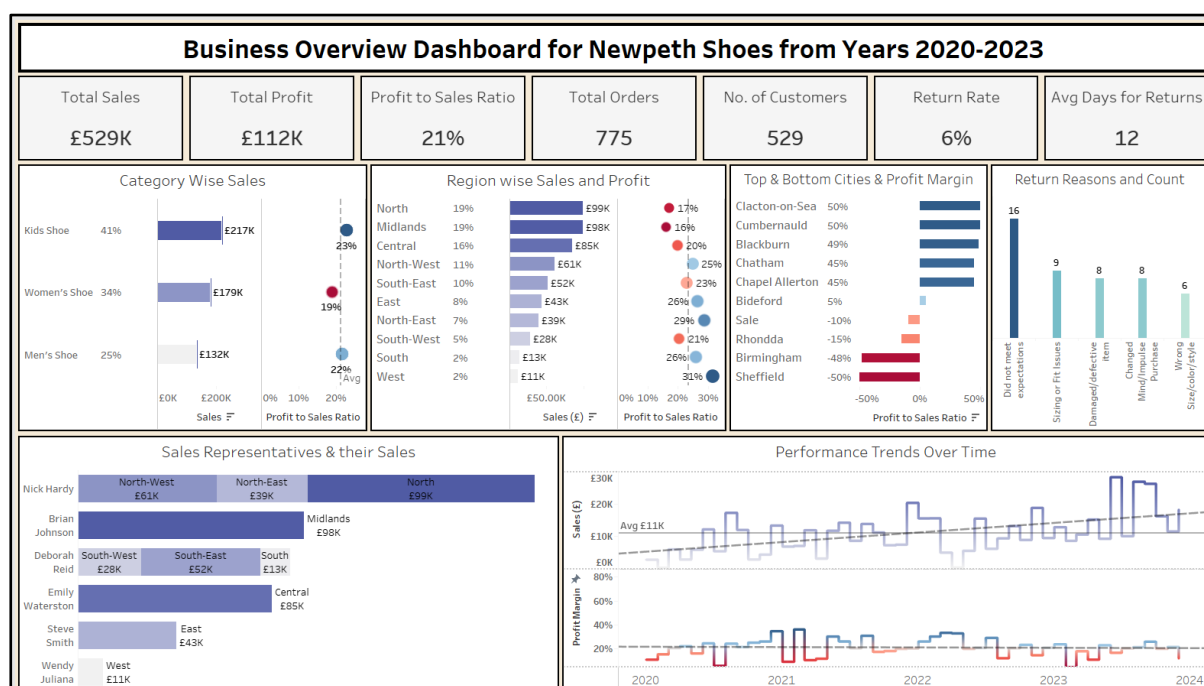


Figure 1 - Business Overview Dashboard

Figure 1 shows the business overview dashboard for New-Peth Shoes' performance by displaying strengths and areas for growth.

## Key Metrics Overview

The company performed well, with a strong profit margin of 21% and good sales of £529,000. There are 529 customers who placed 775 orders by 2023, with an overall **low return rate** of 6%, which indicates **good overall product quality** and customer satisfaction.

## Category-Wise Sales

**Kids' shoes** are seen as the **lead revenue generator**, with a share of 41% in total sales amounting to £217,000, establishing their **dominance in the product portfolio**. Alternatively, **women's shoes** depict relatively lower margins compared to men's and kids' shoes, an indication that this category is **possibly overcharged**, or there might be excess costs, which on optimization can surely enhance profitability.

## Region-Wise Sales

The **highest sales** by far come from the **North** at £99K and the **Midlands** at £98K, but their **profit margins** are **lower**, probably due to **competitive pricing**. Whereas the low sales regions, the **South-West** at £11K and the **South** at £13K, have much **higher profit margins**, indicating that these businesses operate in **niche or premium markets**.

## City-wise performance

Cities like **Clacton-on-Sea**, **Cumbernauld** and **Blackburn** have a high profit margin indicating **good market penetration**. While cities like **Sheffield**, **Birmingham** and **Rhondda** are in **losses**, which will require either **pricing strategy changes** or promotional strategy changes or **customer relationship improvement**.

## Return count & Reasons

**Reasons** for returning are dominated by **unmet expectations** at 13, indicating possible **gaps in product description or imagery**. Therefore, addressing these could reduce returns as much as those outnumbering other reasons such as size or damage.

## Sales Representatives and their Sales

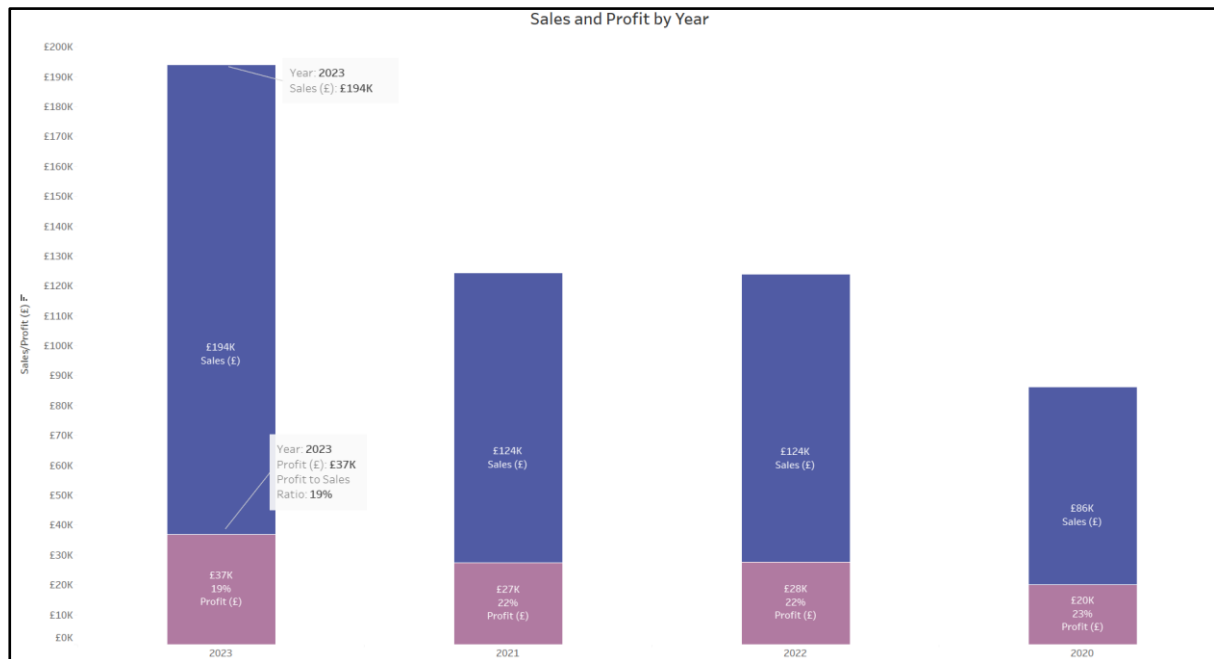
**Nick Hardy's excellent performance** in the **North**, with sales of £199,000, underlines his power in revenue generation. **Steve Smith** and **Wendy Juliana** do present **problems in the East and West**, respectively, where low sales indicate that focused training and development of skills will be required to **enhance their performance** and overall regional contributions.

## Trends Over Time

From 2020 through 2023, **sales** continue to **rise upward**, peaking during **seasonal spikes**. This may **reflect** the timing of **seasonal campaigns**. The company can **manipulate these trends** for future maximum revenues.

**Periodical declines** in the **profit-to-sales ratios** are reflections of **weaknesses in controlling the estimates** during certain periods.

## 2. Sales Analysis



*Figure 2 - Year wise Sales and Profit*

Sales see a **huge growth** from £86K in 2020 to £194K in 2023, making **2023** the **most successful year** for sales as well as profit. But profits grew at a slower pace, with the profit-to-sales ratio dropping to 19%, indicating **rising operational costs**. The steady sales but still profit levels between **2021** and **2022** suggest **potential cost inefficiencies** during those years, highlighting the need for **cost optimization** to sustain profitability alongside sales growth.

### 3. Top Performing Categories and Sub-Categories

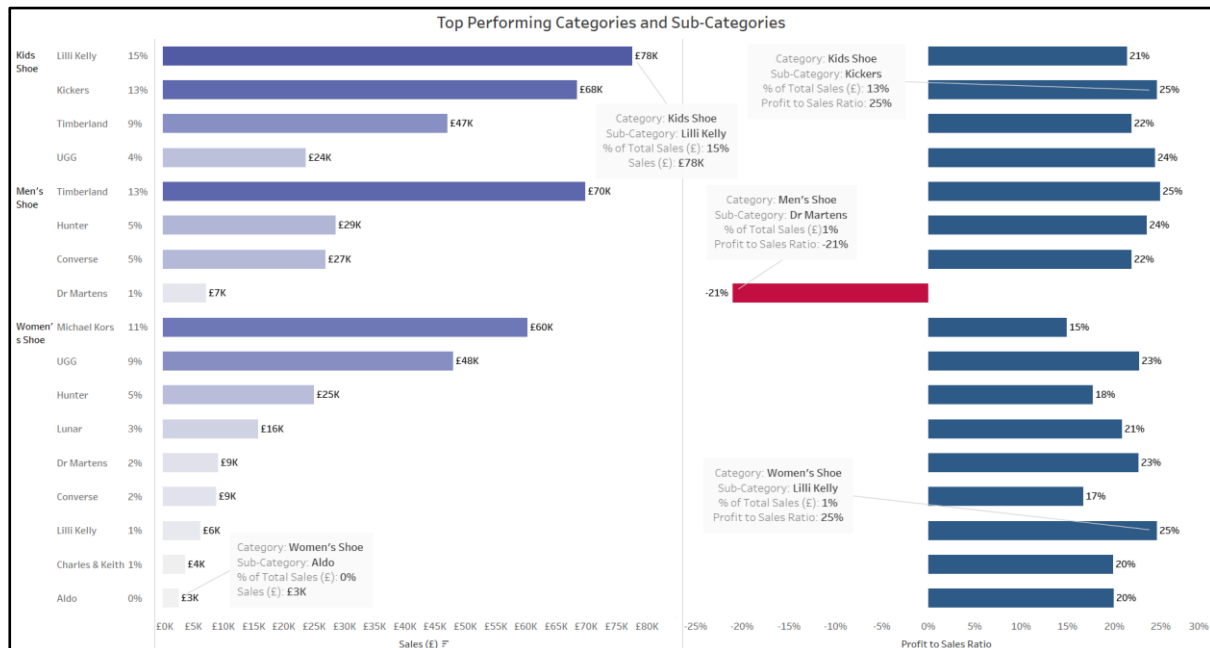


Figure 3 - Top Performing Categories and Sub-Categories

#### Kids' Shoes

- **Lilli Kelly** dominates sales (£78K) with a **21% profit-to-sales** ratio, which shows a **strong demand** and decent profitability.
- **Kickers** achieves a higher profit-to-sales ratio (25%), despite lower sales (£68K), highlighting **effective pricing** or cost management.

#### Men's Shoes

- **Timberland** leads the category with £70K in sales and a solid **25% profit-to-sales ratio**, suggesting both popularity and profitability.
- **Dr Martens** struggles with a **-21% profit-to-sales ratio**, indicating possible **over-discounting** or **high costs** despite its niche appeal as seen below in Figure 4.

#### Women's Shoes

- **Michael Kors** generates the highest sales (£60K) but a relatively low **15% profit-to-sales** ratio, pointing to potential **pricing inefficiencies**.



- **Aldo** and **Charles & Keith** **underperform** massively, with negligible sales and limited profitability potential, indicating the need for **reassessment** of these products.

### 3.1. Discount Effect on Poor Performing Products

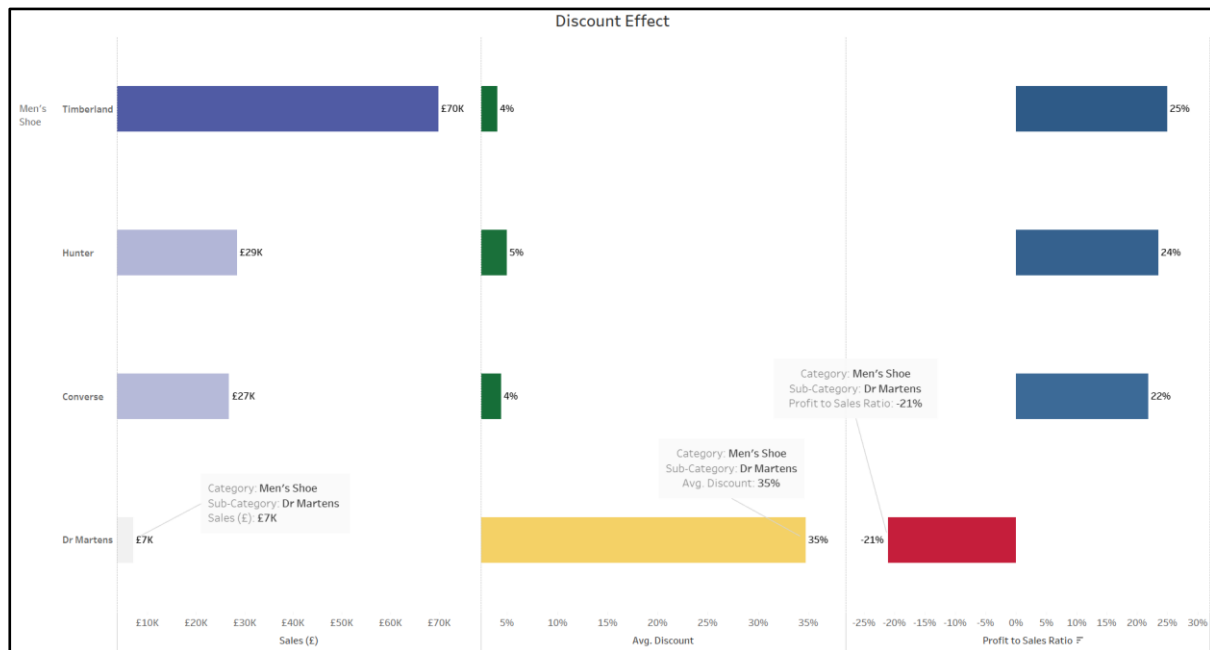


Figure 4 - Discount Impact on Dr. Martens

Figure 5 shows the effect of discount on poor performing products. **Dr. Martens** has the **highest average discount** in the Men's Shoes sub-categories at 35%. This heavy discounting turns the model into a **significant loss maker** with a **negative profit margin** of -21%. Despite such a high discount, it **only** realized **£7K** sales, implying that the heavy discount did little in increasing the sales volume. This suggests **steep discounts** are **not a very viable means** for profitability.

## 4. Products Analysis

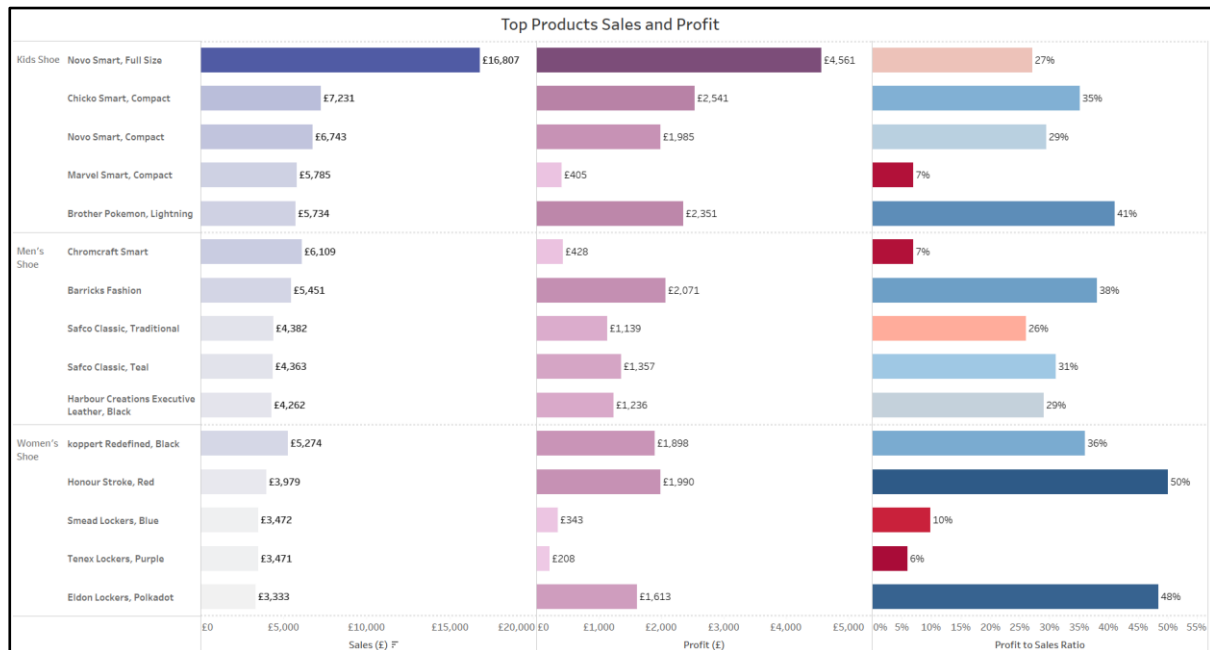


Figure 5 - Top Products Sales and Profit

Figure 6 shows the sales and profit breakdown for top 5 products by categories.

Products in **women's shoes** category focus more on profitability rather than volume, considering a wide range of **high-margin products**: for example, "**Honour Stroke, Red**" achieves an impressive **50% profit margin**, showing efficiency either in pricing or cost control.

"**Koppert Redefined, Black**", although its sales are balanced at £5,274, it has a **strong 36% profit margin**, showing its contribution to revenue and profitability.

Contrarily, the **low-margin products** include "**Smead Lockers, Blue**" with a margin of 10%, while "**Tenex Lockers, Purple**" sits at 6%, hence some **inefficiencies** related either to **high costs** or **poor discounting**.

The **kids' shoes** category enjoys **balanced profit-to-sales** relationships, though some profit margins in variability do exist. "Marvel Smart, Compact" shows strong sales but a low 7% profit margin, indicating cost or **pricing challenges** that need resolution.

In **men's shoes**, "**Chromcraft Smart**" leads in sales (£6,109) but its 7% profit margin underscores **profitability challenges** despite demand.

## 5. Shipping Performance by Region

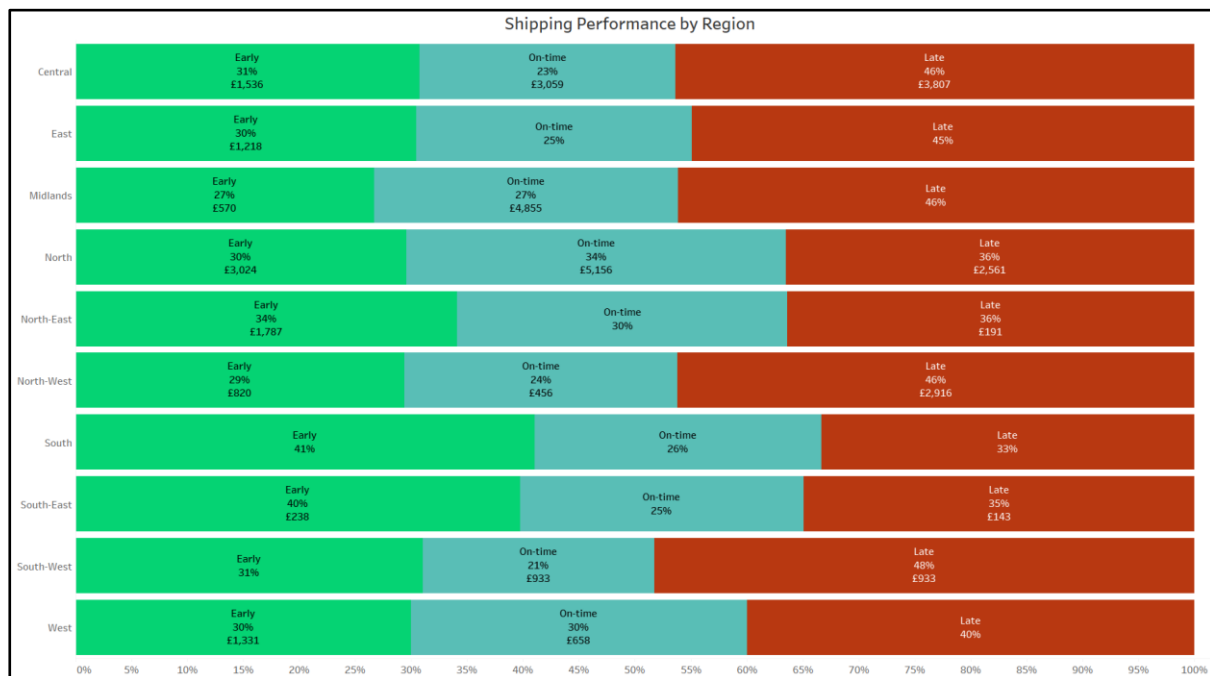


Figure 6 - Regional Shipping Performance and Revenue Loss

Figure 8 shows the shipping performance by region. The **revenue loss** due to delay in shipment is **immense**, particularly the **Central and Midlands** areas where it is £3,807 and £4,855 respectively. The **South-West** has a very **high delay rate** of 53%, which has only achieved £933 in early shipment. The **North** and **North-East** have an **impressive rate of early shipment**; however, delays affect revenue negatively, especially in the **North-West**, which has faced a **loss** of **£2,916**. Minimizing these delays, especially in the most affected regions, would result in improved revenue generation. Variability of early shipments signals internal inefficiencies, while sustained delays might indicate either supply chain disruption or changed demand and, hence, show the need for process optimization to manage the logistics better.

## 6. Returns Analysis

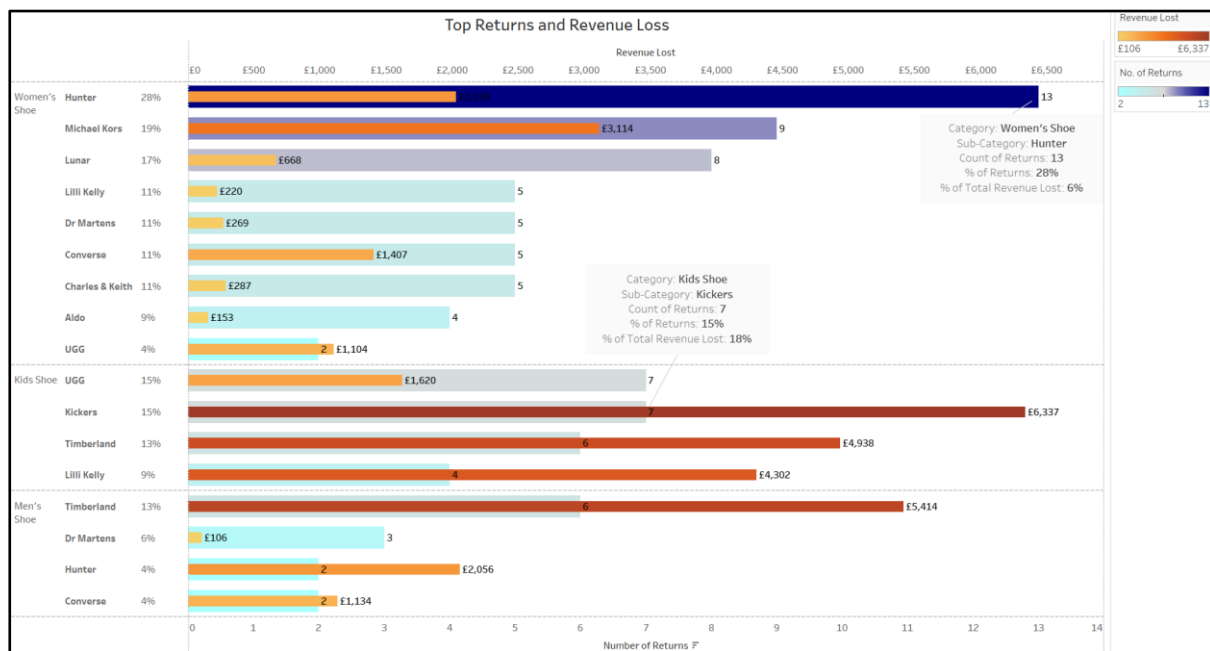


Figure 7 - Top Returned Products and Revenue Loss

### Women's Shoes

**Hunter** has the **highest returns** (13) but **only £2,030** in revenue loss, which indicates consistent returns of this lower-priced product, amounting to **little financial impact**. This calls for improvement in quality or customer expectations.

**Michael Kors** has a high revenue loss (£6,337) from 9 returns, which indicates that where **customer expectations** are **not met** for high-value products, there is financial risk due to inappropriate pricing and perceived value.

**Lunar** and **Lilli Kelly** are the two products with **minimal revenue loss**, indicating very **high** customer **satisfaction** and effective product positioning.

### Kids' Shoes

**UGG** has the **biggest loss** in revenues at **£6,337** from just **7** returns, thus underlining the risk of unmet expectations with such high-value products and pointing to the necessity for better quality control.

**Kickers** with **7** returns alone have **lost £4,938**, showing durability or design problems. Therefore, needs to be addressed urgently to prevent further losses.

## Men's Shoes

**Timberland lost £5,414** in revenue from just **6** returns, highlighting the disproportionate effect that returns have on this type of high-valued item, which likely indicates some **quality or sizing issues**.

**Low returns** and negligible revenue loss for **Dr. Martens** are just the evidence of very **good alignment** with **customer demand**, a perfect demo for minimizing conflict and minimize the financial impact.

### 6.1. Return reasons Distribution over Household type and Category

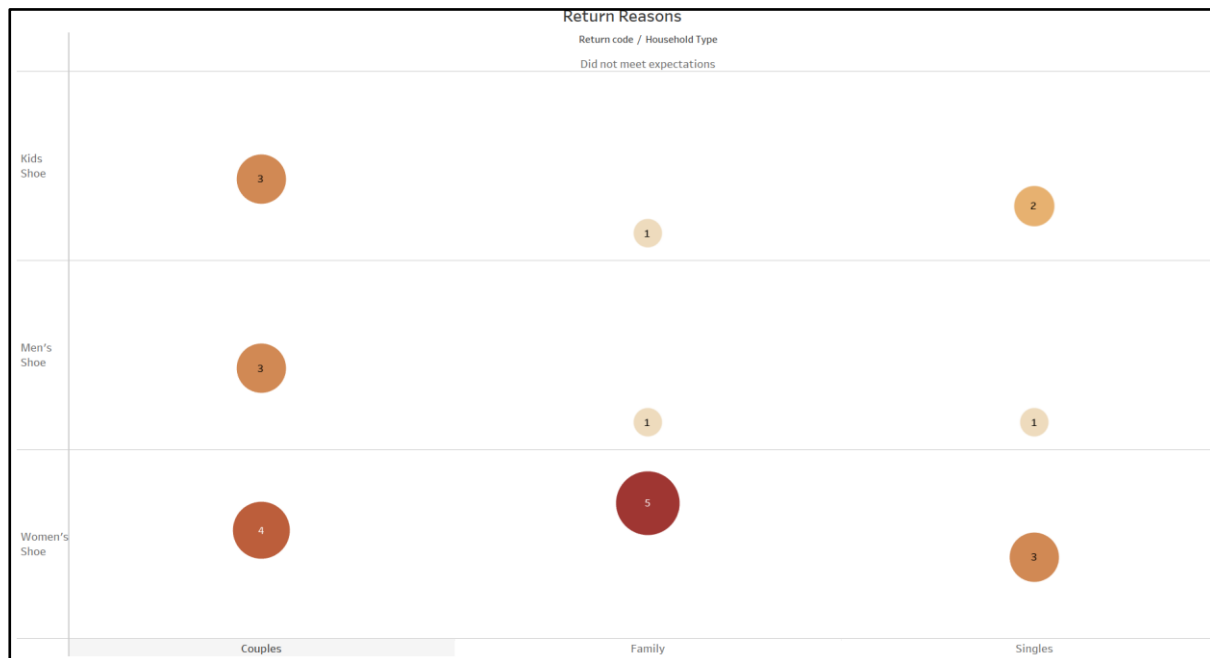


Figure 8 - Return Reasons Distribution for Household Types and Category

**Most returns** were because, the **product did not meet expectations**, especially for women's shoes, which made up **12 of the 47** returns. **Couples** represent the **highest** number of **returns**. This potentially suggests that this demographic might have **unique preferences** or **expectations** that are **not being met**.

## 7. Cohort Analysis

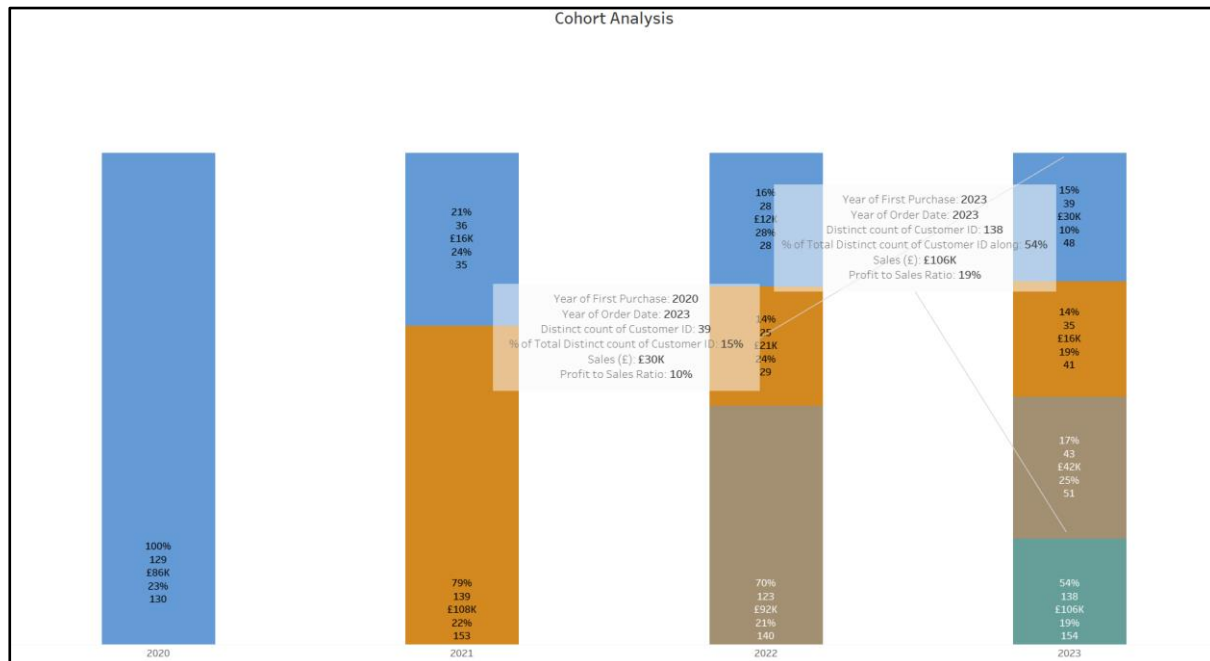


Figure 9 - Customer Cohort Analysis

The **decline in sales** and contribution from the 2020 acquired customers, from £86,189 to £29,966, indicates a **retention problem**. This shows a need to understand why the older customers are disengaging and what actions are required to be taken to re-engage them.

The decline in profit margin from older customers could mean that either the acquisition cost is higher, the cost of retention is higher, or there is poor targeting of profitable segments. This requires an urgent attention to maximize the profitability of returning customers.

Acquisition of **138 new customers** in **2023** gave the **highest sales**, £106,231, which is a positive going trend. The challenge will be how to maintain this without the same pattern being repeated when these newer ones become older.

## 8. Recommendations

### Improve Profit Margins:

Discounts by Dr. Martens: The average discount shall be reduced from 35% to match the profitable sub-categories such as Timberland and Converse, which, despite having only a 4% discount, maintain healthy profit-to-sales ratios.

Low-Margin Product Pricing Strategy: Review pricing or cut costs for high-sales but low-margin products like "Chromcraft Smart" and "Marvel Smart, Compact". Analyse competitors' pricing and customer demand to find the optimal price point.

Focus on High-Margin Items: Prioritize promoting products like "Koppert Redefined, Black," which deliver strong profits even with moderate sales. Expand the product line for similar high-margin items to capitalize on profitability potential.

### Optimize Product Portfolio:

Low-Margin Items: Evaluate the feasibility of continuing low-margin products like "Smead Lockers, Blue" and "Tenex Lockers, Purple." If cost reductions or price increases are not viable, consider reallocating resources to higher-performing products.

### Addressing Supply Chain and Delivery Delays:

Root Cause Analysis: Investigate issues such as labour shortages, supply chain bottlenecks, and inefficient delivery methods that cause delays.

Optimization: Apply data-driven route planning and scheduling to lower shipping times and improve reliability.

Supply Chain Oversight: Hold supply chain partners to higher levels of accountability in pursuit of improved on-time shipment performance and fewer late deliveries.

## Target Sales for Sales representatives

| Target Sales for Sales Representatives |              |              |
|--|--------------|--------------|
| Sales Representatives.. ₦              | 2023 Sales ₦ | Target Sales |
| Nick Hardy                             | 78,526       | 104,753      |
| Brian Johnson                          | 38,782       | 51,736       |
| Deborah Reid                           | 34,960       | 46,637       |
| Emily Waterston                        | 21,170       | 28,241       |
| Steve Smith                            | 16,523       | 22,042       |
| Wendy Juliana                          | 4,043        | 5,394        |

*Table 1 - Target Sales for Sales Representatives*

From Table 1, clear objectives have been established to boost sales across regions and maximize the performance of each representative. To set the sales target, first, the **year-on-year growth rates** for each year from 2020 to 2023 were calculated and then averaged over three years. **This gave an average growth rate of 33%**, which can be a realistic and data-driven estimate of how much the company can grow in 2024.

For Nick Hardy, 2023 sales stand at £78,526 and are expected to reach £104,754, a 33% increase, leveraging the high-performing regions such as North and North-East. Brian Johnson achieved £38,782 in the Midlands and is expected to achieve £51,735 by increasing market penetration. Deborah Reid achieved £34,960 in the South and is targeted to achieve £46,637 through better customer retention.

Emily Waterston performed very well in Central at £21,170 and aspires to £28,241 by minimizing delays. This would necessitate areas of improvement with Steve Smith having £16,523 and Wendy Juliana having £4,043 to meet targets of £22,042 and £5,394 through training and strategic efforts.



#### Returns Reduction and Improvement in Customer Satisfaction:

**Enhanced Size Guides:** Provide better size guides and detailed product descriptions, especially for women's shoes, to address size and fit-related returns. Incorporate customer reviews and images to set realistic expectations.

**Impulse Purchase Returns:** Explain the high returns of Michael Kors or similar products in women's shoes. Free trials or flexible return policies may be some of the measures to reduce dissatisfaction.

**Damaged/Defective Items:** Improve packaging and handling to minimize returns due to damage or defect, especially within the kids' and women's shoes product categories.

#### Strategic Customer Retention:

**Re-engage Existing Customers:** Create loyalty programs and targeted offers for the reactivation of older customers whose spend naturally declines over time.

**Focus on New Customers:** Continue developing and nurturing relations with new customers gained in 2023 by delivering consistent value and excellent customer service.

#### Focused Marketing Campaigns:

**Key Segment Promotions:** Design targeted promotions for fast-moving categories like kids' and ladies' shoes. These campaigns will be based on a deep, insightful analysis to provide customization.

**Cross-Sell Opportunities:** Accessorize and upsell to relevant products, thereby enhancing average order value and deeper customer relationships.

## Appendix A: Data Cleaning and Data Preparation

The data was already clean, and no cleaning or any preprocessing was required. All columns were complete and consistent, missing/wrong values were not seen, directly integrable with Tableau to begin analysis. Further, for sales representatives' regions, I divided them into sub-regions, such as 'South' becoming 'South-East' and 'South-West'.

|    | A          | B                     | C              | D            | E |
|----|------------|-----------------------|----------------|--------------|---|
| 1  | Region     | Sales Representatives | Years employed | Commission % |   |
| 2  | North      | Nick Hardy            | 8              | 6            |   |
| 3  | South      | Deborah Reid          | 4              | 3            |   |
| 4  | Central    | Emily Waterston       | 7              | 5            |   |
| 5  | East       | Steve Smith           | 4              | 3            |   |
| 6  | West       | Wendy Juliana         | 3              | 2            |   |
| 7  | Midlands   | Brian Johnson         | 7              | 6            |   |
| 8  | North-West | Nick Hardy            | 8              | 6            |   |
| 9  | North-East | Nick Hardy            | 8              | 6            |   |
| 10 | South-East | Deborah Reid          | 4              | 3            |   |
| 11 | South-West | Deborah Reid          | 4              | 3            |   |
| 12 |            |                       |                |              |   |
| 13 |            |                       |                |              |   |
| 14 |            |                       |                |              |   |
| 15 |            |                       |                |              |   |
| 16 |            |                       |                |              |   |
| 17 |            |                       |                |              |   |
| 18 |            |                       |                |              |   |
| 19 |            |                       |                |              |   |
| 20 |            |                       |                |              |   |
| 21 |            |                       |                |              |   |
| 22 |            |                       |                |              |   |
| 23 |            |                       |                |              |   |
| 24 |            |                       |                |              |   |
| 25 |            |                       |                |              |   |

< > Sales Shipping Returns Return Explanation Sales Representatives

### Calculated Fields in Tableau:

To enable meaningful analysis and visualization, I created the following calculated fields in Tableau:

**Profit to Sales Ratio:** It depicts the profitability in relation to sales.



**Return Rate:** It calculates the percentage of orders returned, providing insights into customer dissatisfaction and operational inefficiencies.

Return Rate

COUNTD([Order ID (Returns)]) / COUNTD([Order ID])

The calculation is valid.
4 Dependencies
Apply
OK

**Count Orders:** It counts the total number of orders, a critical KPI for understanding sales volume and customer activity.

Count Orders

SUM({INCLUDE : COUNTD([Order ID])})

The calculation is valid.
2 Dependencies
Apply
OK

**Avg days to return:** This calculates the average time it takes for customers to return orders, helping assess return behaviour and refine return policies.

Avg Days to Return

AVG([Days to return])

The calculation is valid.
3 Dependencies
Apply
OK

**Actual days to ship:** This measures the actual shipping time for each order, allowing for comparison against allowed shipping times.

Actual Days to Ship

×

DATEDIFF('day',[Order Date],[Ship Date])

▶

The calculation is valid.

3 Dependencies ▾

Apply

OK

**Allowed days to ship:** This helps determine if orders were shipped within the allowed timeframe.

Allowed Days to Ship

×

CASE [Ship Mode]  
WHEN 'Same Day' THEN 0  
WHEN 'First Class' THEN 1  
WHEN 'Second Class' THEN 3  
WHEN 'Standard Class' THEN 5  
END

▶

The calculation is valid.

3 Dependencies ▾

Apply

OK

**Shipping Status:** It evaluates shipping performance by determining whether orders were shipped on time.

Shipping Status

×

if [Allowed Days to Ship] > [Actual Days to Ship]  
THEN 'Early'  
ELSEIF [Allowed Days to Ship] = [Actual Days to Ship]  
THEN 'On-time'  
ELSE 'Late'  
END

▶

The calculation is valid.

2 Dependencies ▾

Apply

OK

**Revenue Lost:**

Revenue Lost

×

IF [Returned] = 'Yes' THEN [Sales (£)]  
ELSE 0  
END

▶

The calculation is valid.

6 Dependencies ▾

Apply

OK

**2020 Sales:** Sales for the year 2020.

2020 sales

×

IF YEAR([Order Date]) = 2020 THEN [Sales (£)]  
END

The calculation is valid. 3 Dependencies ▾ 

Apply

OK

**2021 Sales:** Sales for the year 2021.

2021 Sales

×

IF YEAR([Order Date]) = 2021 THEN [Sales (£)]  
END

The calculation is valid. 4 Dependencies ▾ 

Apply

OK

**2022 Sales:** Sales for the year 2022.

2022 Sales

×

IF YEAR([Order Date]) = 2022 THEN [Sales (£)]  
END

The calculation is valid. 4 Dependencies ▾ 

Apply

OK

**2023 Sales:** Sales for the year 2023.

2023 Sales

×

IF YEAR([Order Date]) = 2023 THEN [Sales (£)]  
END

The calculation is valid. 6 Dependencies ▾ 

Apply

OK

Growth Rate 2021:

Growth Rate 2021

×

$$\frac{(\text{SUM}([2021 \text{ Sales}]) - \text{SUM}([2020 \text{ sales}]))}{\text{SUM}([2020 \text{ sales}])}$$

The calculation is valid.

2 Dependencies ▾

Apply

OK

Growth Rate 2022:

Growth Rate 2022

×

$$\frac{(\text{SUM}([2022 \text{ Sales}]) - \text{SUM}([2021 \text{ Sales}]))}{\text{SUM}([2021 \text{ Sales}])}$$

The calculation is valid.

2 Dependencies ▾

Apply

OK

Growth Rate 2023:

Growth Rate 2023

×

$$\frac{(\text{SUM}([2023 \text{ Sales}]) - \text{SUM}([2022 \text{ Sales}]))}{\text{SUM}([2022 \text{ Sales}])}$$

The calculation is valid.

2 Dependencies ▾

Apply

OK

Average Growth Rate:

Average Growth Rate

×

$$[\text{Growth Rate 2021}] + [\text{Growth Rate 2022}] + [\text{Growth Rate 2023}] / 3$$

The calculation is valid.

1 Dependency ▾

Apply

OK

## Target Sales:

Target Sales

×

$$([2023 \text{ Sales}] * 0.334) + [2023 \text{ Sales}]$$

►

The calculation is valid.

1 Dependency ▾

Apply

OK

## Year of First Purchase:

Year of First Purchase

×

$$\{ \text{FIXED } [Customer \text{ ID}]: \text{DATETRUNC('year', MIN([Order Date]))} \}$$

►

The calculation is valid.

1 Dependency ▾

Apply

OK

## Top and Bottom N (Set Calculation):

Edit Set [Top and Bottom N]

×

Name:

Top and Bottom N

How would you like to combine the two sets?

Sets:

Bottom N by Parameter ▾

⊕

Top N by Parameter ▾

☒ ☒ All members in both sets

☐ ☐ Shared members in both sets

☐ ☒ "Bottom N by Parameter" except shared members

☐ ☒ "Top N by Parameter" except shared members

Separate members by

,

East, Green Tea, 2012

OK

Cancel

Apply