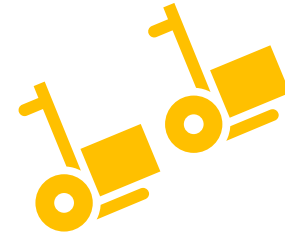




# WELCOME TO THE SALES RETURN INVESTIGATION PROJECT



CREATED BY:  
SHWETA SHETTY

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# Business Problem Statement



The company is experiencing high product returns, leading to significant revenue loss.



Additionally, there is a need to evaluate the performance of regional managers to identify the best candidate for promotion.



The company is also interested in better understanding customer demographics, shipping costs, and sales trends to optimise overall business performance.



# Key Objectives



## **1. Analyse Product Returns:**

Quantify revenue loss due to product returns, identify key products and regions driving these losses, and recommend solutions.

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## **2. Evaluate Regional Manager Performance:**

Assess the performance of regional managers and recommend the best candidate for promotion.

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## **3. Shipping Cost Analysis:**

Compare shipping costs across different regions and product categories to identify areas for cost optimization.

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## **4. Customer Segmentation:**

Analyse customer age groups to understand their revenue contribution.

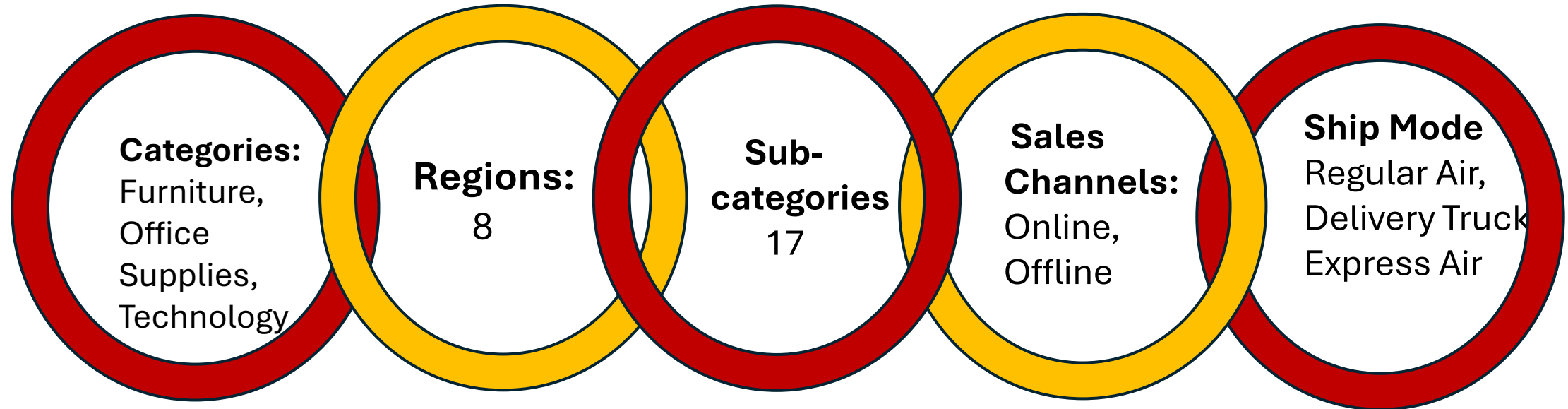
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## **5. Profitability Assessment:**

Identify top-performing products, regions, and customer segments that drive profitability.



## XYZ Superstore





# Data Overview

## Sales Transaction Data:

- Contains records of all sales transactions.

## Returned Items Data:

- Details on products returned by customers.

## Regional Managers Data:

- Information about regional managers overseeing sales performance.



## Data Collection

Sales Transactions: Details of sales and customer information.

Returned Items: Order ID, status.

Regional Managers: Details of regions and managers.

## Data Preparation

Import: Power Query was used to load data from the three files provided above.

Clean: Removed duplicates, handled missing values, and standardized formats.

## Data Analysis

Key Drivers: Used pivot tables and trend analysis to identify factors affecting returns.

Impact Assessment: Projected financial impact of a 50% reduction in returns.

Manager Evaluation: Analysed performance metrics to recommend a manager for promotion.

## Visualization

Charts & Graphs: Created to illustrate key findings and trends.

## Recommendations

Provided actionable strategies for reducing returns.





# Group 1: Comprehensive Financial Analysis

# Introduction To Financial Analysis



## **Purpose:**

Overview of the company's financial performance, including profitability trends, product categories, regional insights, and customer segments. It highlights changes in profits, identifies top-performing categories and regions, and examines shipping costs and sales patterns.

## **Objective:**

To provide a snapshot of financial health, key insights, and trends, supporting informed decision-making.

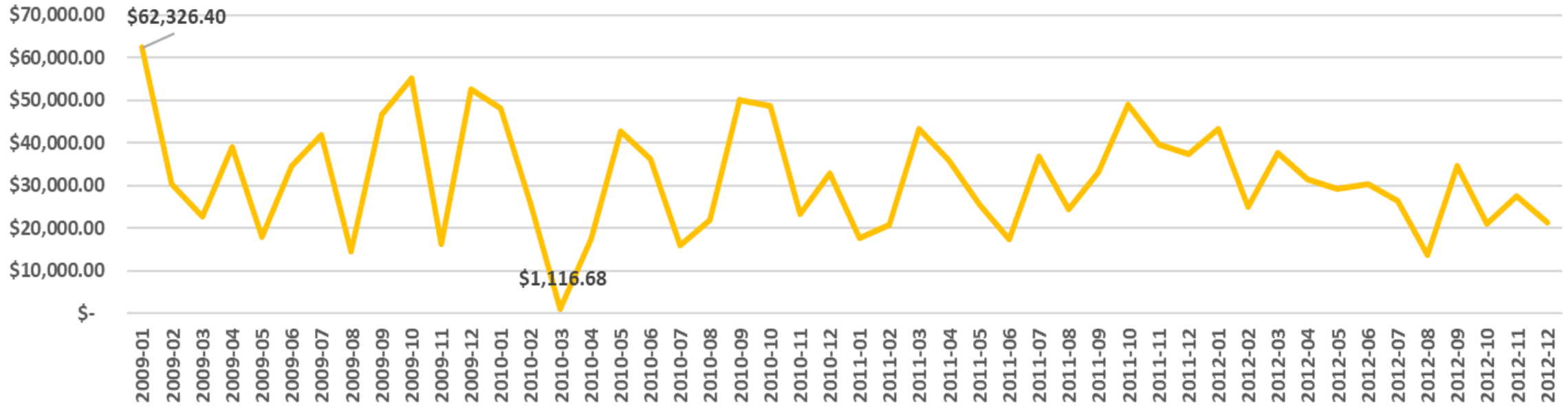
## **Contents:**

1. Yearly Profit Trends: Tracks profit changes over time.
2. Profit by Product Categories: Identifies top contributing categories.
3. Profit by Product Sub-Categories: Assesses specific sub-category impacts.
4. Profit by Region: Analyses regional performance.
5. Profit by Customer Segment: Determine profitable customer segments.
6. Shipping Costs Analysis: Compare shipping costs' impact.
7. Sales Trends by Day of Week: Identifies day-specific sales patterns.
8. Age Group Profitability: Analyses revenue by customer age groups.

# Yearly Profit Trends

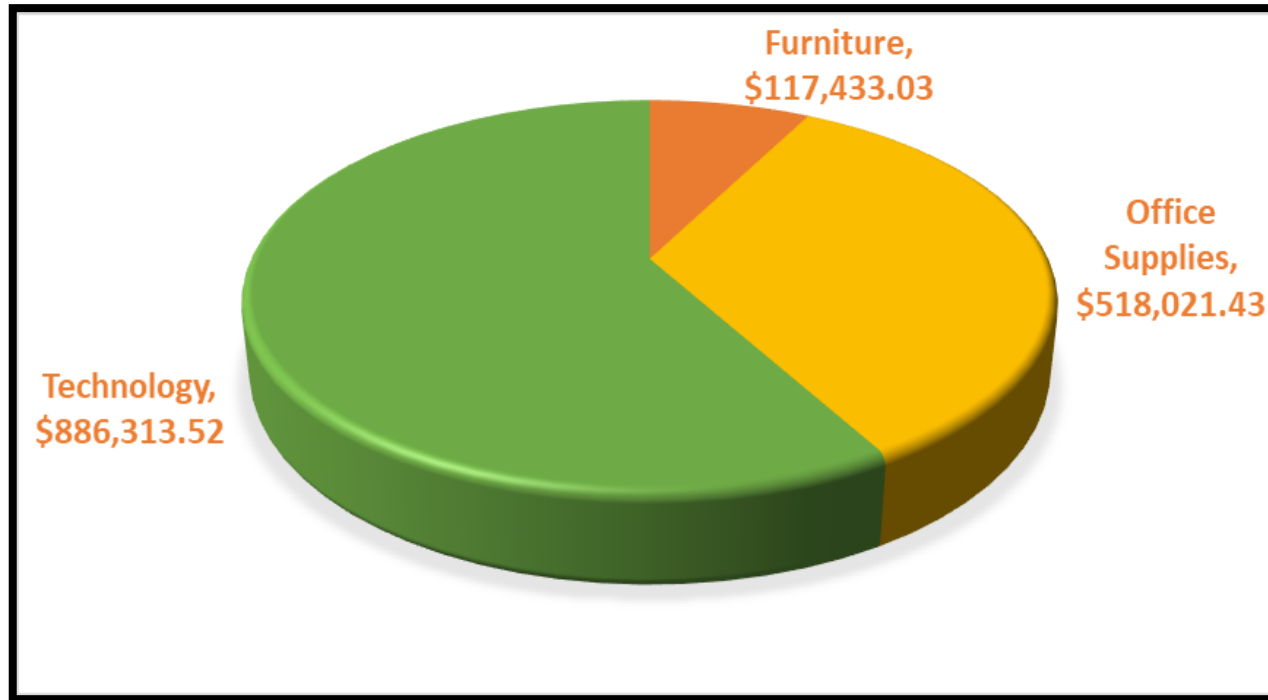


Yearly-Monthly Profit



- Highest Profit: January 2009 achieved the highest profit.
- Profit Fluctuations: Profit levels varied over time, with both increases and declines observed in different months.
- Consistent Highs: September and October regularly showed strong profits each year.
- Significant Dip: A notable profit drop occurred in March 2010, with a low of \$1,116.68. Further analysis is needed to understand the reasons behind this decline.

# Profit By Product Categories



**Technology:** Leading with \$886,313.52 in profits, this category is the most profitable.

**Office Supplies:** Contributing \$518,021.43, this category also plays a significant role in overall revenue.

**Furniture:** With a profit of \$117,433.03, this category contributes the least but still adds to total profits.

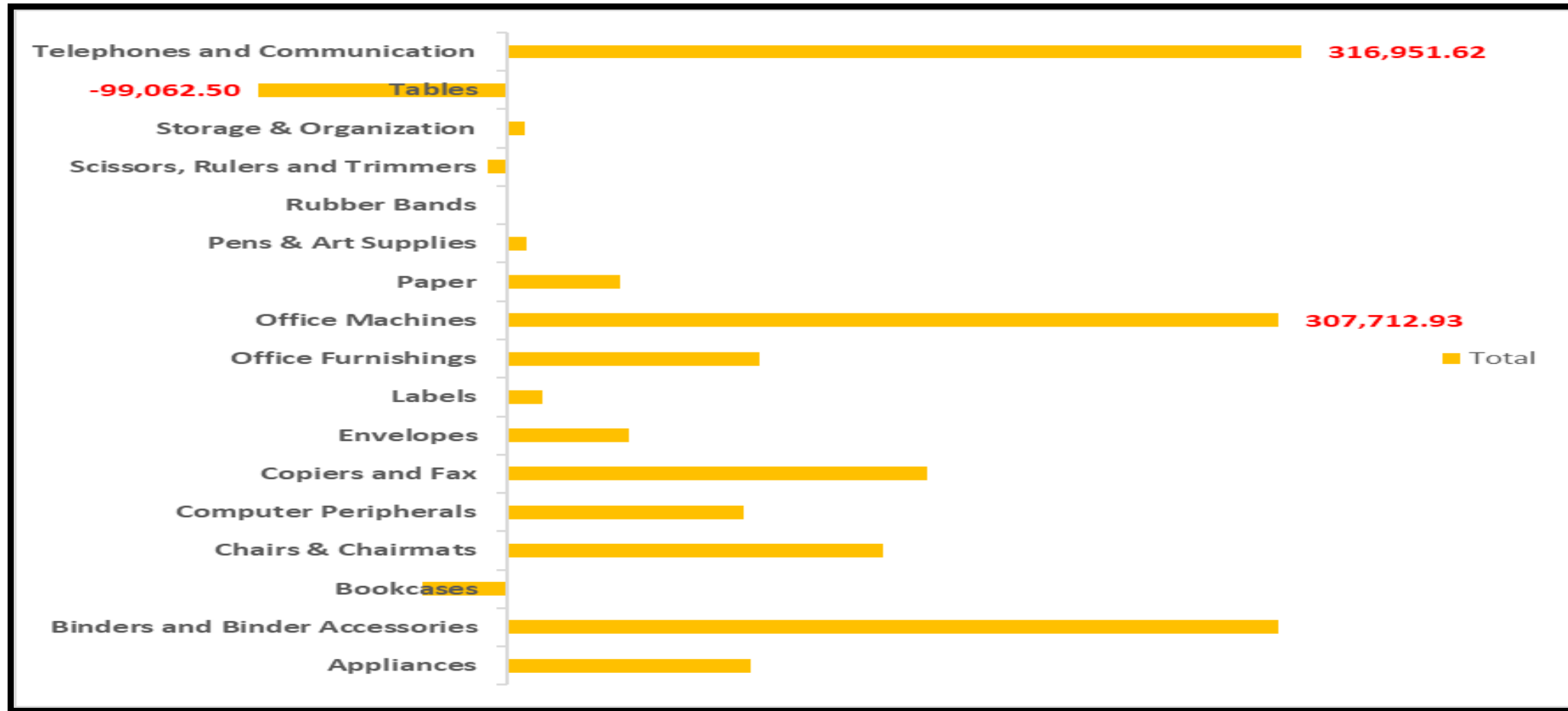
## Recommendations:

**Focus on Technology:** Allocate more resources to the Technology category to leverage its high profitability.

**Office Supplies:** Explore growth opportunities in this sector to boost profits further (e.g. expand product line, offer eco-friendly products for eco-conscious customers, seasonal promotions, discount on bulk purchases)



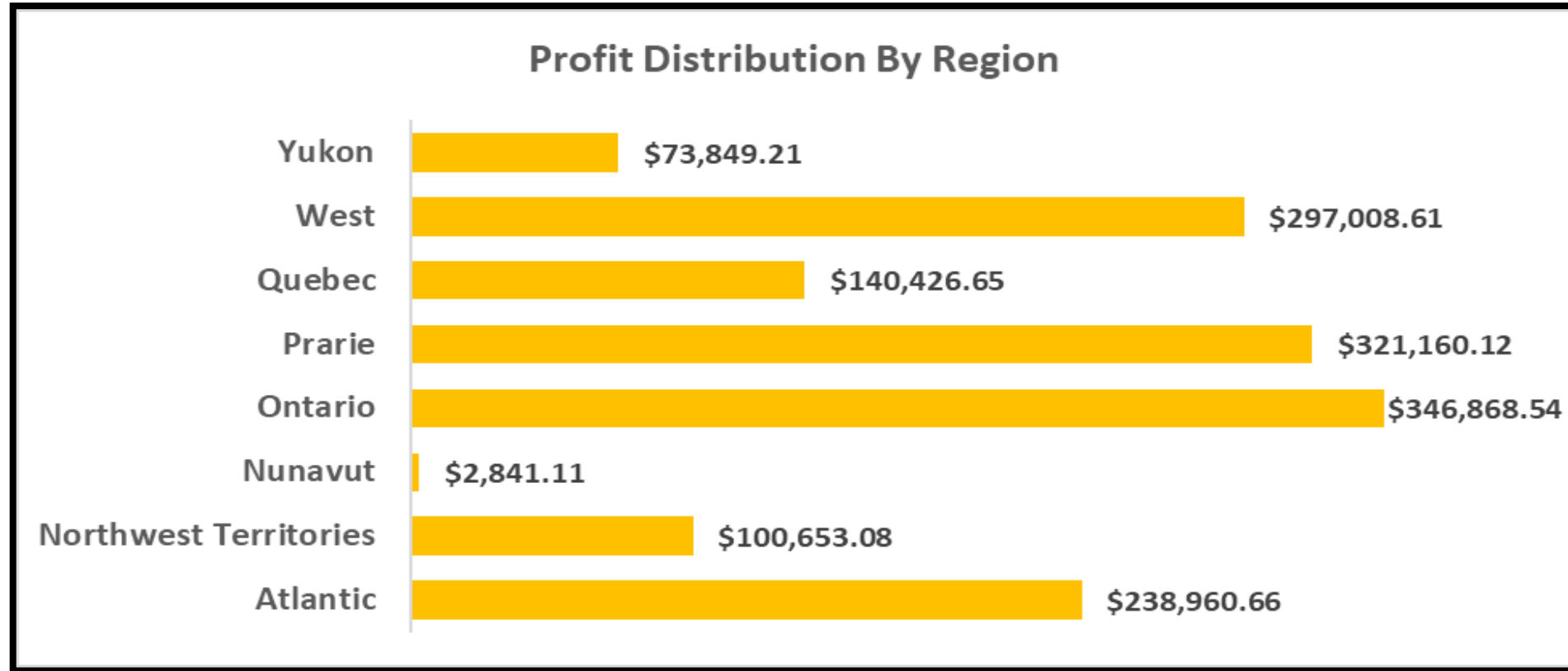
# Profit By Product Sub-Categories



**Top Performers:** Focus on expanding and promoting high-profit sub-categories like Telephones and Communication and Office Machines.

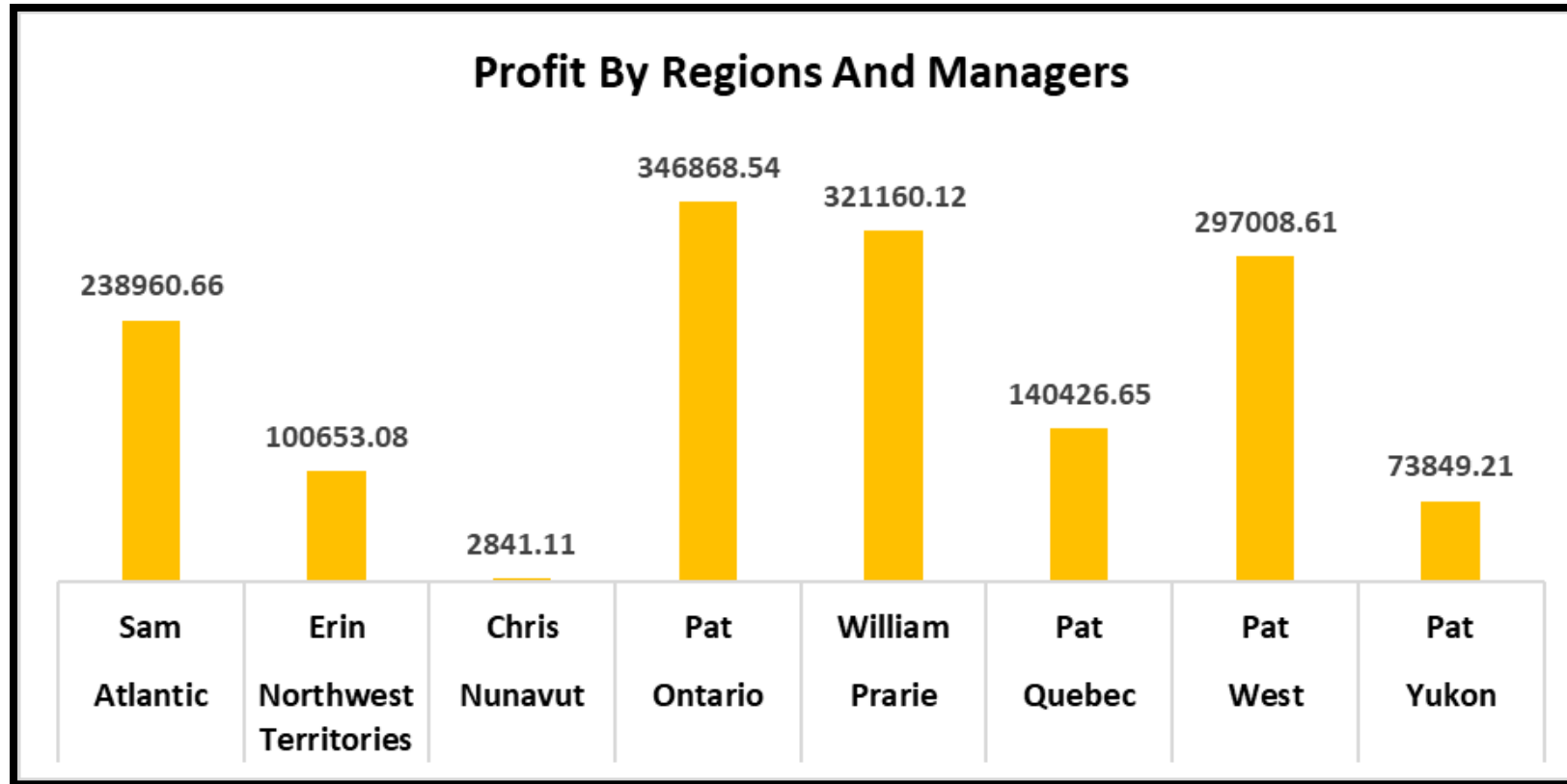
**Underperformers:** Address or reconsider the strategy for sub-categories with losses such as Tables and Scissors, Rulers, and Trimmers.

# Profit By Region



- **Top Regions:** Focus on expanding and investing in the high-profit regions: Ontario, Prairie, West, and Atlantic(e.g. Consider opening more retail locations in high-traffic areas or increasing stock in existing stores to meet demand)
- **Nunavut:** Investigate and address factors contributing to lower profits in Nunavut, potentially due to lower affluence or other regional challenges(e.g. Consider developing a product line that is more affordable for consumers in Nunavut)

# Profit By Regions and Managers



## High-Profit Regions:

Ontario, Prairie, and West are top performers.

## Key Managers:

Pat and William are major contributors to overall profits.

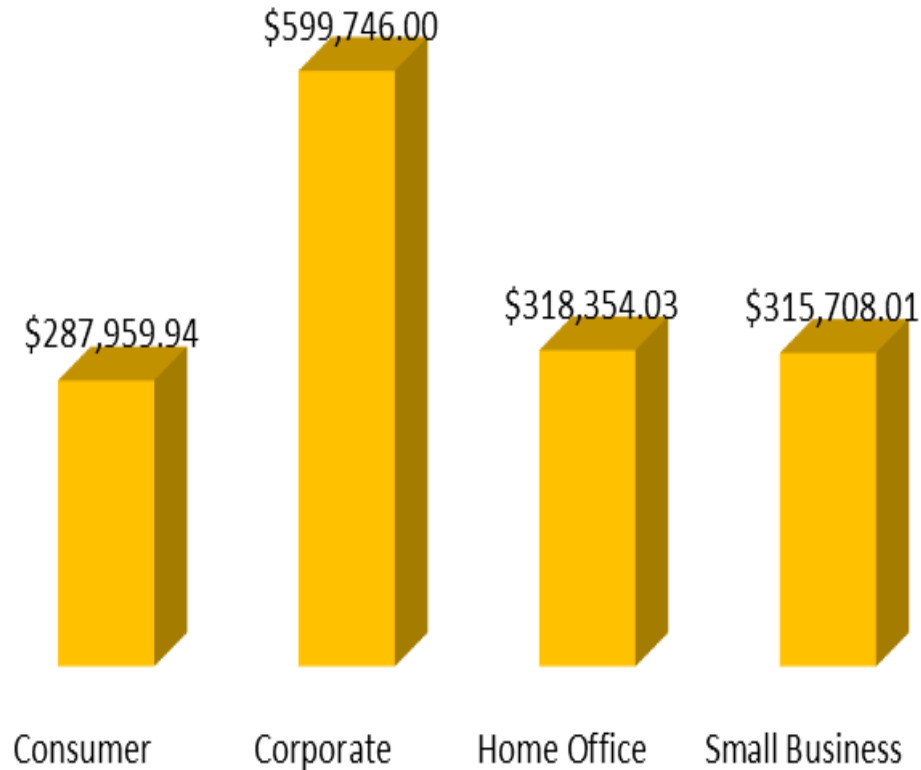
## Improvement Opportunity:

Focus on improving performance in regions with lower profits, especially Nunavut, and assess managerial strategies.

# Profit By Segments



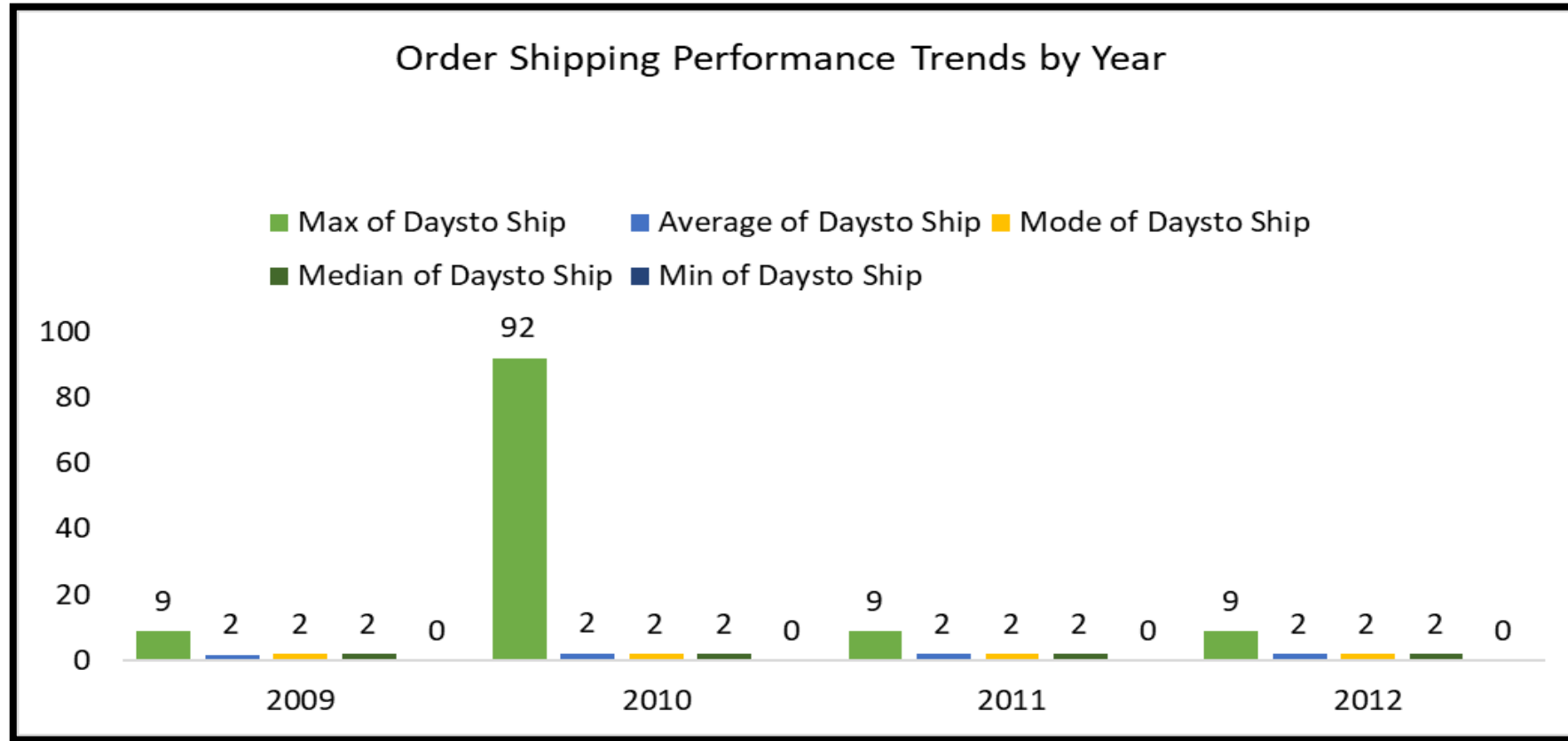
Profit Distribution By Customer Segment



- With a \$599,746.00 contribution to the overall earnings, the "Corporate" client category stands out as the most profitable.
- With \$318,354.03 and \$315,708.01 respectively, the "Home Office" and "Small Business" divisions both make a significant contribution to profitability.
- The "Consumer" section makes a \$287,959.94 positive contribution to profits. Despite being smaller than the "Corporate" section, it is nonetheless a sizable source of revenue.
- Given the "Corporate" segment's large contribution, businesses may think about customizing their tactics to further entice and service corporate clients, thereby boosting earnings.
- Although the small business and home office markets are already successful, there may be chances for expansion and increased profitability

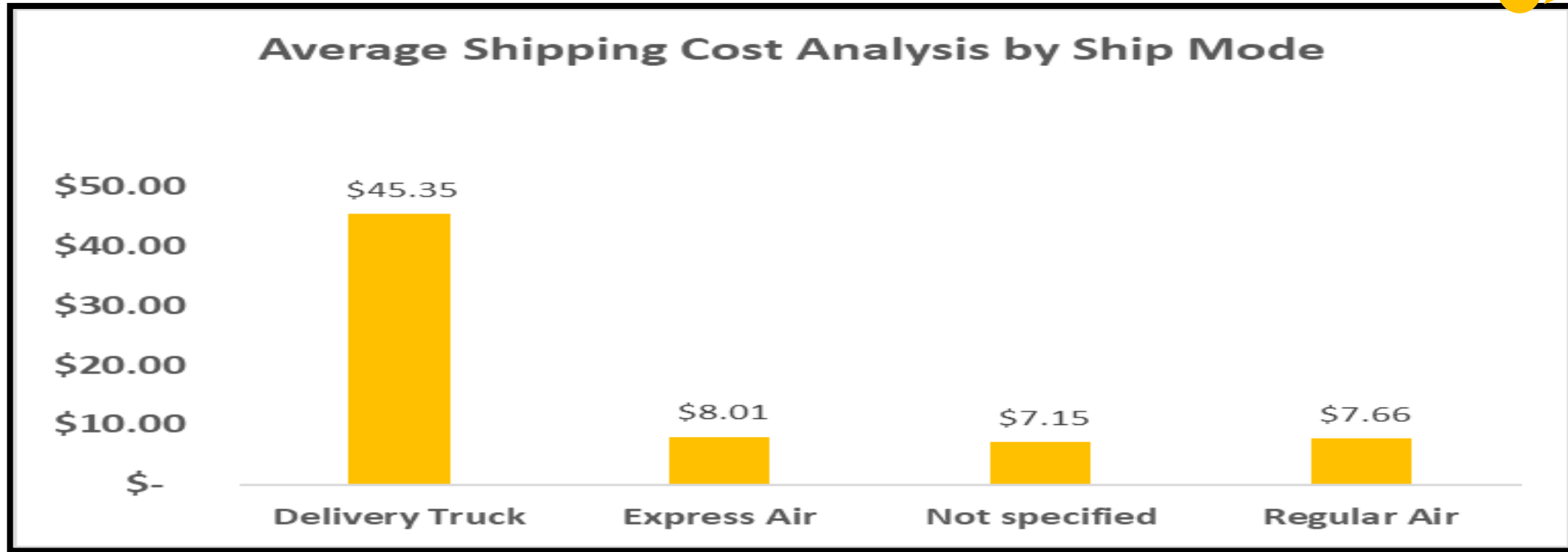


# Order Shipping Performance Trends By Year



- The analysis revealed that the average, mode, median, and minimum days to ship remained consistent throughout all the years.
- Notably, in the year 2010, there was a unique instance where a product required 94 days for shipment.
- Upon further investigation, it was discovered that a small pack of 12 white chawks required an unusually long 92 days to reach the customer from the order date.
- This particular delay in shipping was overseen by Manager 'Pat', responsible for operations in the Yukon region.

# Shipping Cost Analysis

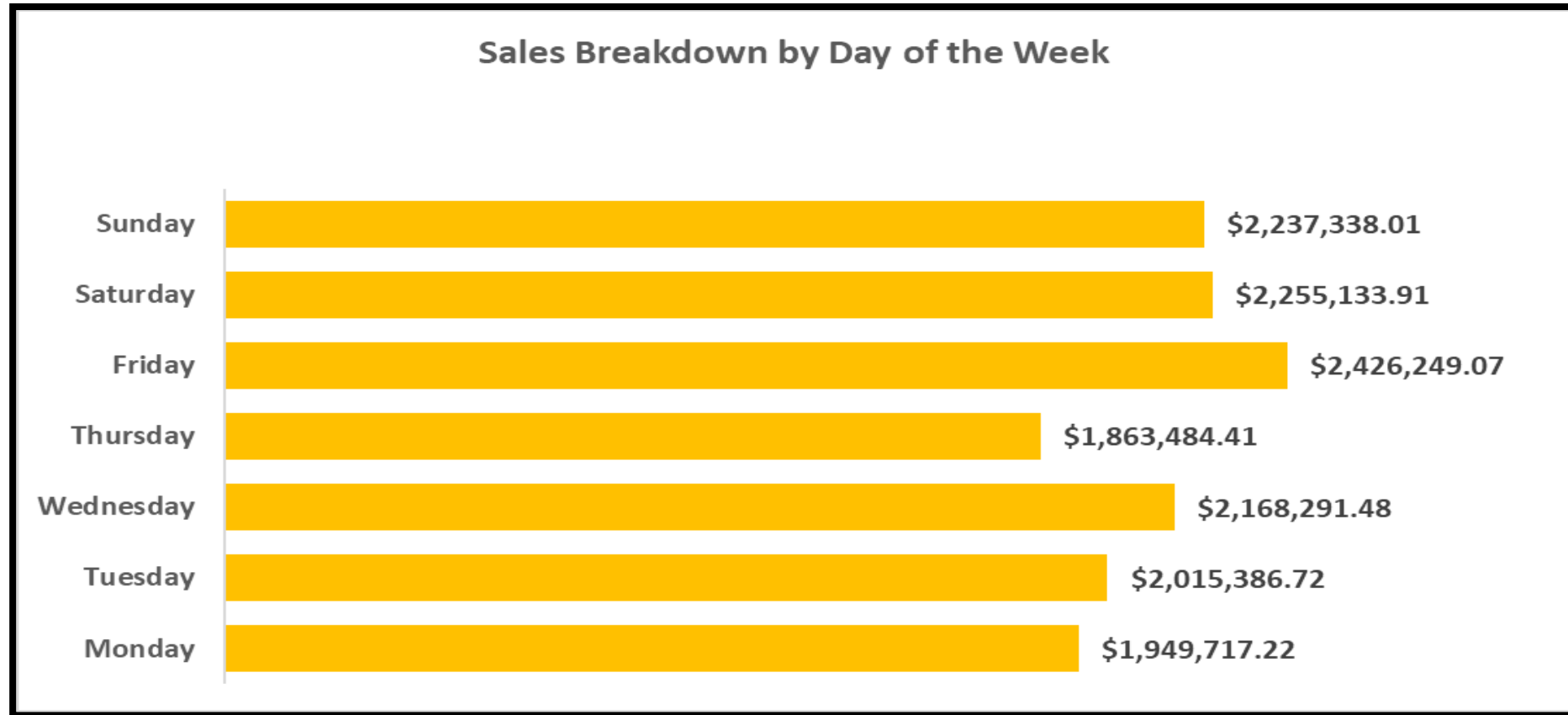


- Delivery Truck incurs the highest cost which could impact overall profitability.
- Express Air, Not Specified, and Regular Air are more cost-efficient.
- Consider strategies to reduce reliance on Delivery Trucks or negotiate better rates to lower costs.

## Strategy Recommendations:

- Promote Cost-Efficient Shipping: Encourage customers to choose cheaper shipping options
- Negotiation: Negotiate with shipping providers to lower the cost of Delivery Truck shipments.

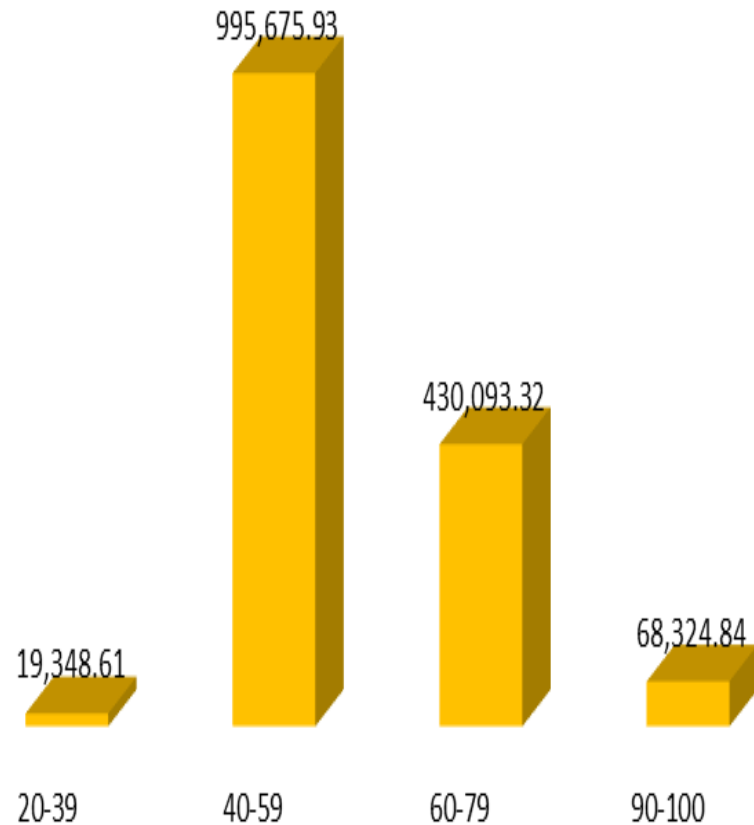
# Sales Trends by Day of Week



- Fridays have the highest sales, followed by Saturdays and Sundays, suggesting increased customer activity on weekends.
- Weekday sales are consistently lower, indicating that customers tend to shop more during their free time on weekends compared to weekdays.



## Profit Analysis By Age Band



- Dominant Age Group: The 40-59 age group contributes the most, with \$995,675.93
- Significant Contribution from Seniors: The 60-79 age group adds \$430,093.32
- Lower Contribution from Younger and Older Customers: The 20-39 group contributes \$19,348.61, and the 90-100 group adds \$68,324.84

### Recommendations:

- Target marketing and products to the 40-59 age group to maximise profits.
- Offer senior discounts and tailored products for the 60-79 age group.
- Use social media and trendy products to engage the 20-39 age group.



# Group 2: Core Business Problems





## Objective:

To analyse the key issues affecting sales returns and evaluate the performance of regional managers for potential promotion.

## Contents:

### 1. Sales Returns Analysis:

- Overview of revenue loss due to returns by year and category.
- Key insights into drivers of returns and their impact on profitability.

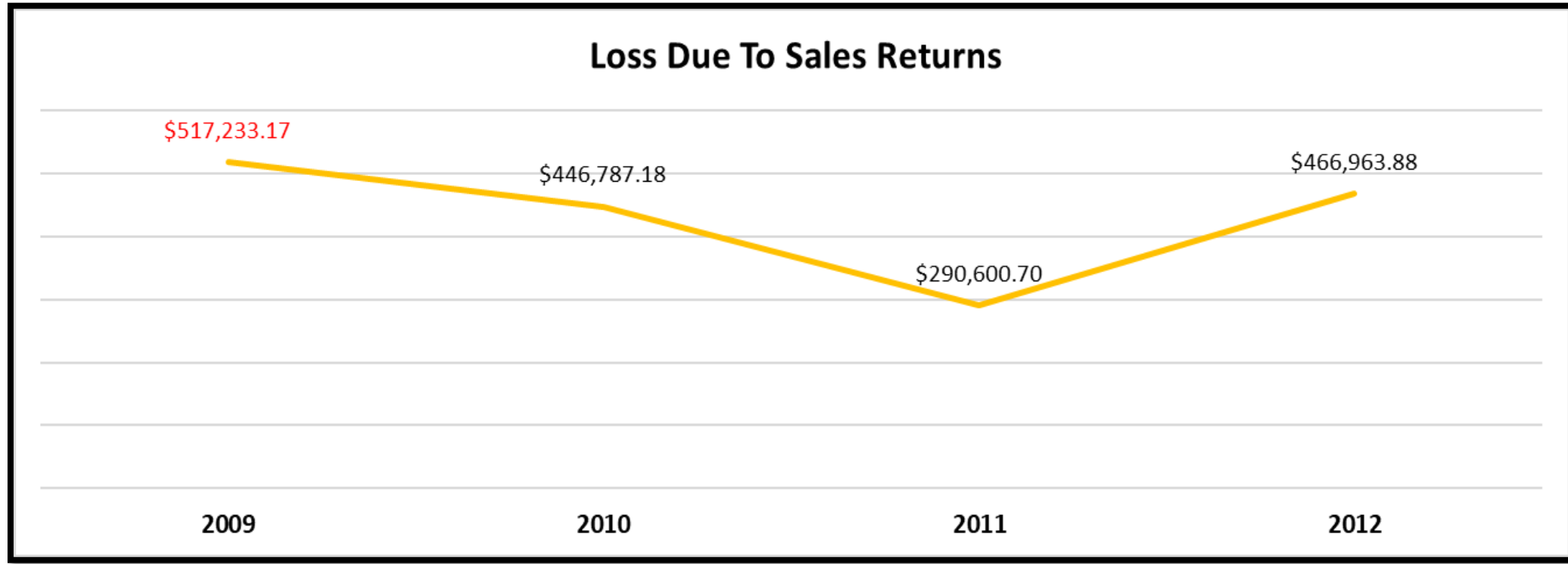
### 2. Manager Performance Evaluation:

- Analysis of regional manager performance.
- Recommendations for the best candidate for promotion.

# Sales Returns Analysis



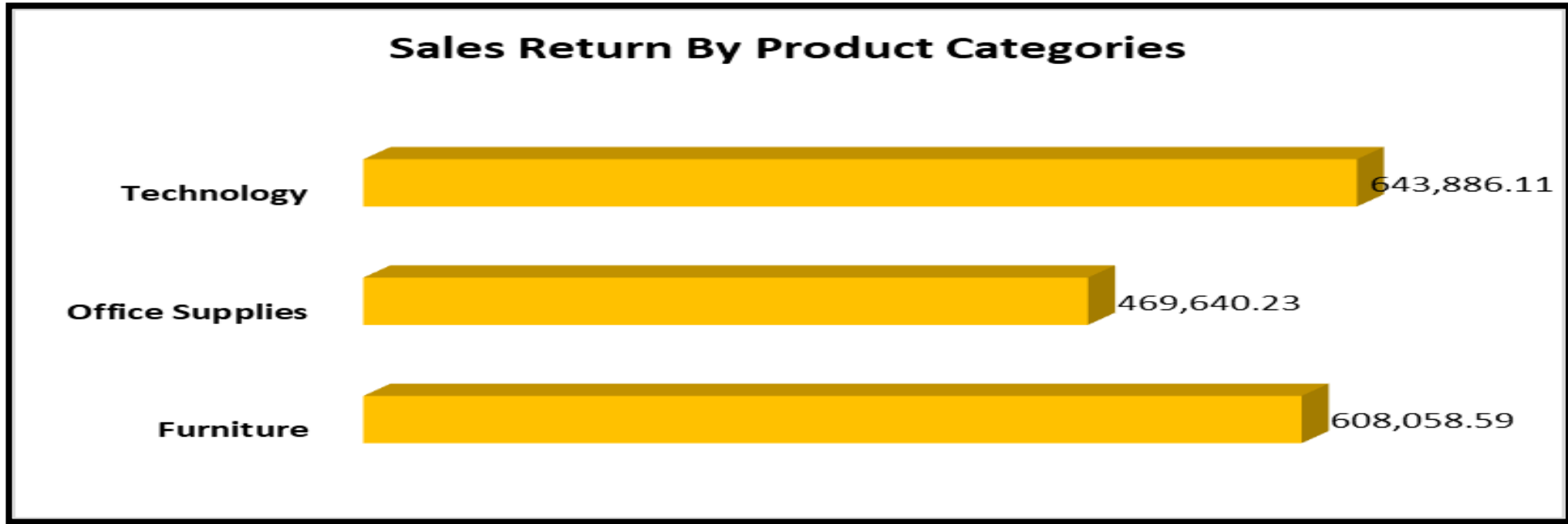
## Annual Revenue Loss Due to Sales Returns



- The data shows a fluctuating trend in revenue loss due to returns over the four years.
- The highest loss in 2009 might indicate initial issues with product quality, shipping, or customer expectations that were potentially addressed in subsequent years.
- The decline in 2011 suggests some improvement in handling returns, product quality, or customer service.
- The rise again in 2012 indicates that the improvements in 2011 might not have been sustainable or that new issues emerged.



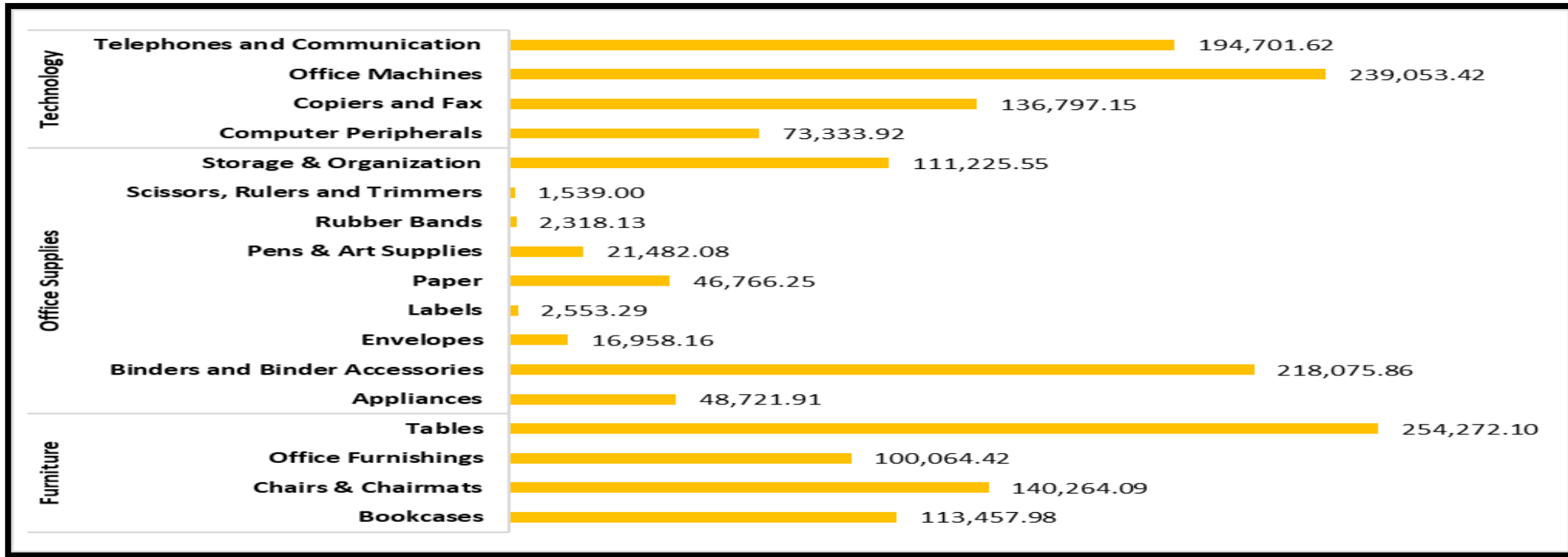
# Distribution of Sales Returns Across Product Categories



## Insights:

- Technology: High returns (\$643,886.11) despite being the most profitable category (\$886,313.52). Indicates a need for better return management.
- Office Supplies: Lower return loss (\$469,640.23) compared to its profit (\$518,021.43). Shows a good balance but potential for growth.
- Furniture: High return loss (\$608,058.59) and lower profit (\$117,433.03). Needs improvement in return handling.

# Distribution of Sales Returns Across Product Sub-categories



**Technology Sector:** Major Issues: Office Machines, Telephones & Communication, Copiers & Fax.

**Office Supplies:** Major Issues: Storage & Organization, Binders & Accessories.

**Furniture:** Major Issues: Tables, Chairs & Chairmats.

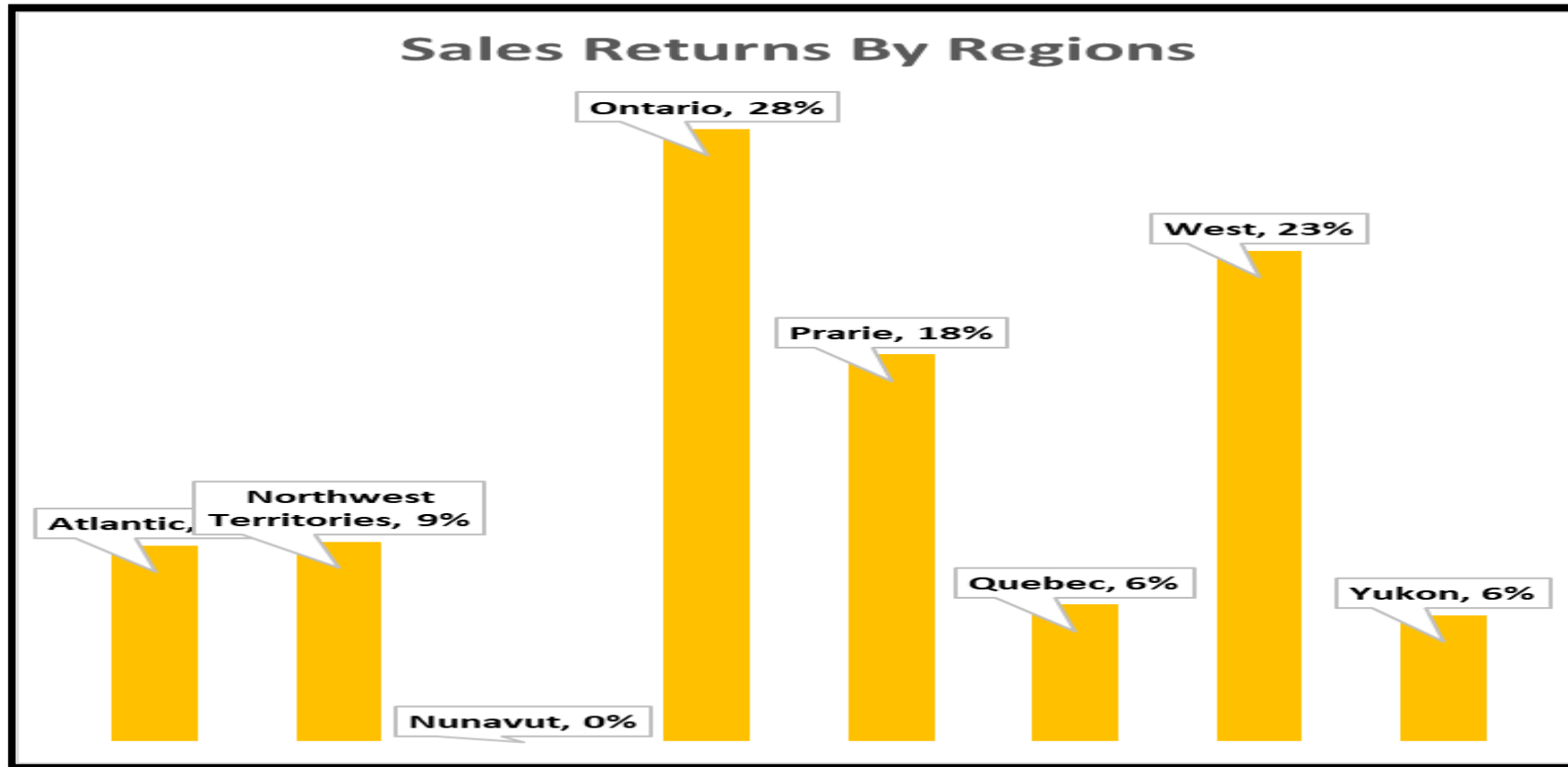
## Recommendations:

**Technology:** Address return issues in Office Machines, Telephones & Communication, and Copiers & Fax.

**Office Supplies:** Focus on reducing returns from Storage & Organization and Binders & Accessories.

**Furniture:** Improve quality and return policies for Tables, Chairs & Chairmats.

# Distribution of Sales Returns By Regions

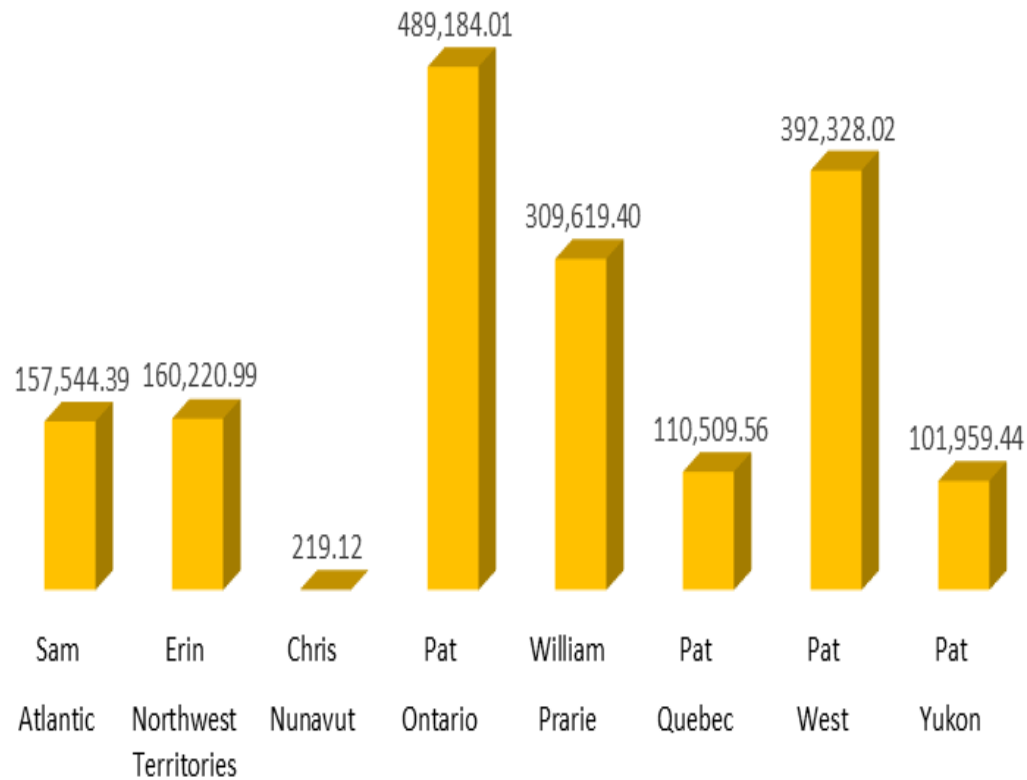


- **Focus on Ontario and West:** Develop targeted strategies to manage and reduce returns in these high-impact regions.
- **Improve Return Policies:** Evaluate and enhance return management practices in the Prairie and Northwest Territories to mitigate losses.
- **Monitor and Adjust:** For regions with lower return rates like Quebec, Yukon, and Nunavut, continue to monitor and maintain current practices.

# Distribution of Sales Returns By Regions And Managers



Sales Returns by Regions and Managers



## High Revenue Loss Regions:

Ontario: \$489,184.01 (Managed by Pat)

Prairie: \$309,619.40 (Managed by William)

West: \$392,328.02 (Managed by Pat)

## Managers with High Returns:

Pat: Oversees Ontario, West, and Yukon, contributing significantly to overall revenue loss.

William: Manages the Prairie region with high revenue loss.

## Regions with Minimal Losses:

Nunavut: \$219.12 (Managed by Chris)

Atlantic: \$157,544.39 (Managed by Sam)

## Recommendations:

For Pat: Investigate and address return issues in Ontario, West, and Yukon.

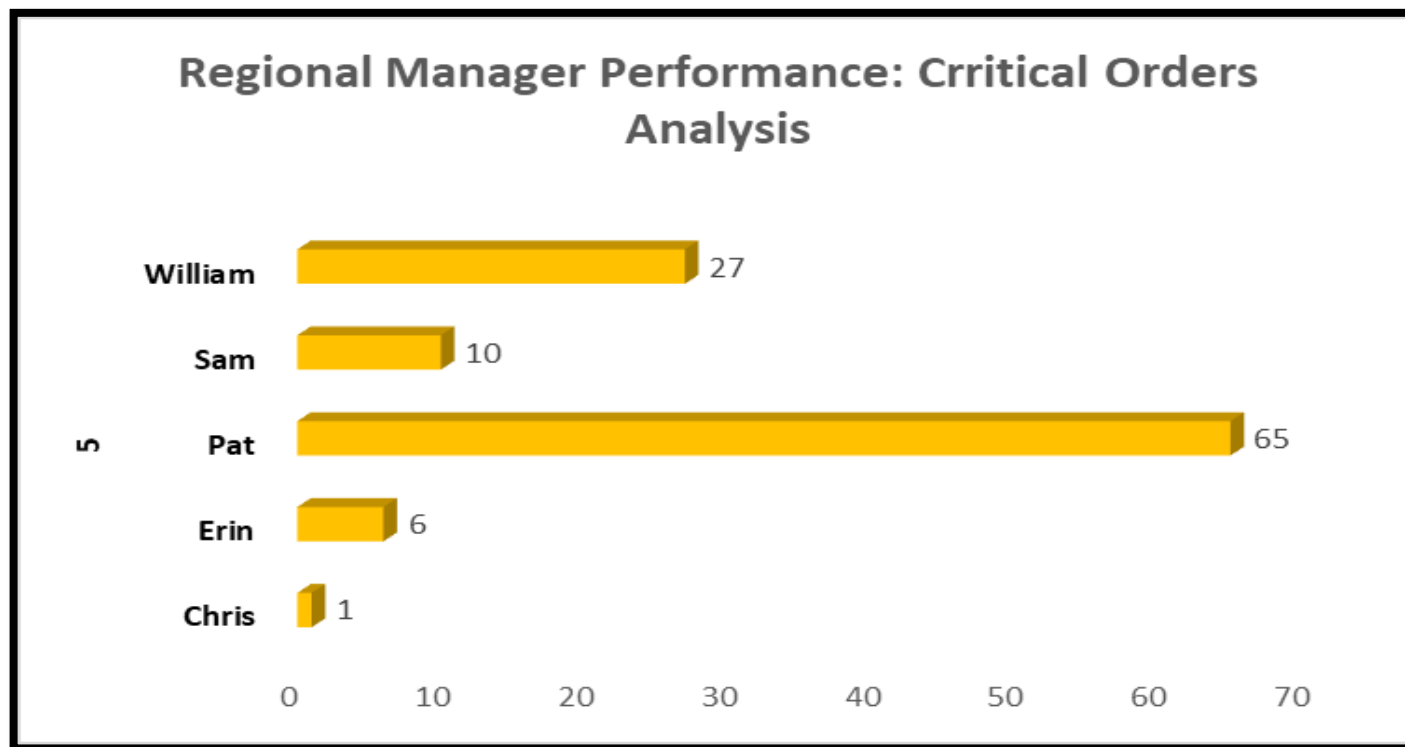
For William: Review and mitigate return causes in the Prairie region.

For Chris: Continue current practices and apply their effective strategies to higher-loss regions.

# Critical Order Shipping Delays by Managers



Bar chart showing the number of delayed critical orders for each manager.

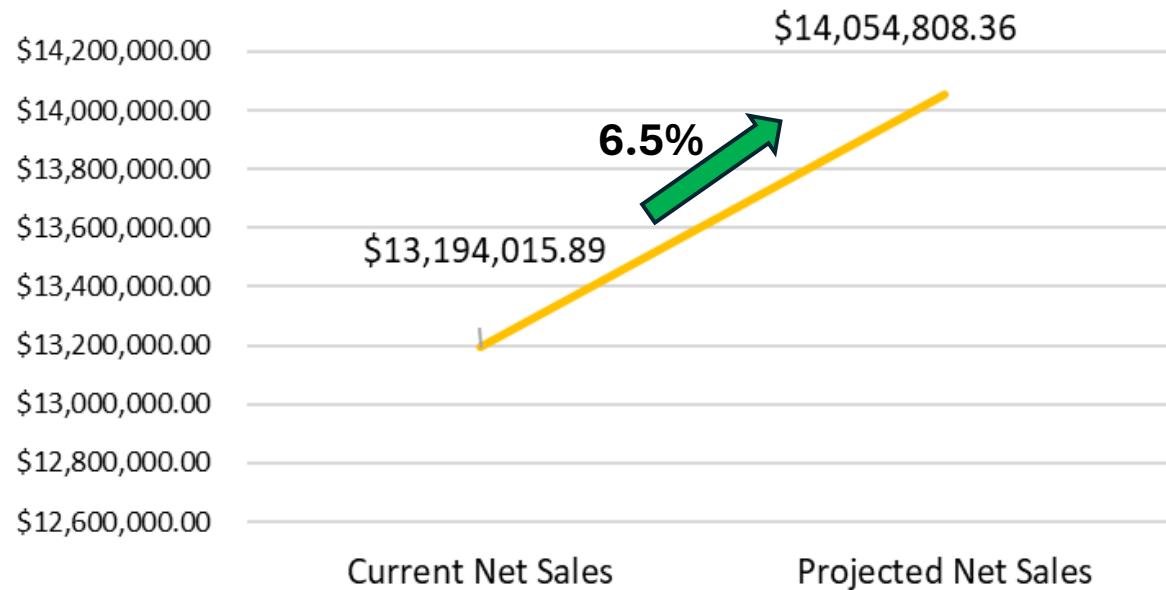


- In total, 109 critical orders experienced delays exceeding the average days to ship.
- Notably, the Regional Manager 'Pat' is responsible for overseeing 65 of these critical orders, which constitutes approximately 60% of the total critical orders with extended delivery times.

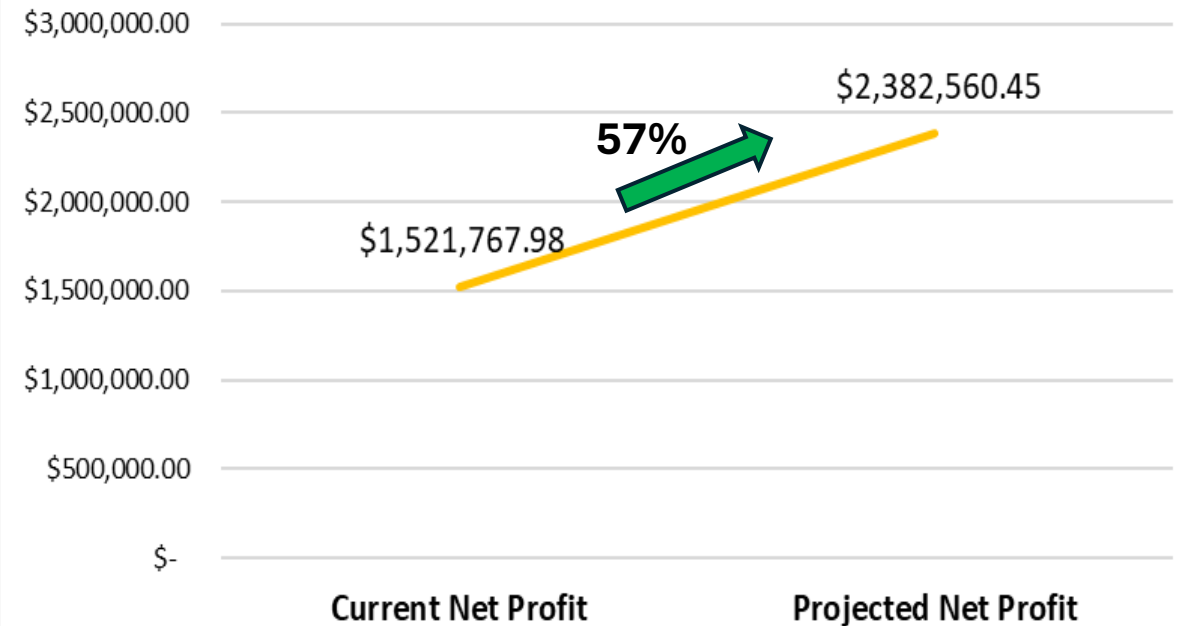
## Impact of 50% Reduction in Sales Returns on Sales and Profits

Calculating the projected sales and profits helps to understand the potential financial benefits of reducing sales returns. By identifying and addressing the root causes of returns, the business can enhance its revenue and profitability over the next six months.

**Effect on Sales Due To 50% Decrease in Sales Returns**



**Effect On Profit Due To Decrease In Sales Returns**



### Conclusion:

Reducing sales returns by 50% would result in a 6.5% increase in sales revenue. Additionally, this reduction would lead to a 56.56% boost in profit.



# Recommendation

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# Recommendations



## 1. Address High Sales Returns

- Focus Areas: Technology (Office Machines, Telephones & Communication, Copiers & Fax), Office Supplies (Storage & Organization, Binders & Accessories), Furniture (Tables, Chairs & Chairmats).
- Regions: Prioritise Ontario, West, and Yukon.



## 2. Gather Customer Feedback

Actions: Conduct surveys, review complaints for recurring issues, and identify root causes of returns.



## 3. Implement Quality Improvements

Measures: Enhance product quality, improve packaging, and train sales teams on product accuracy and customer expectations.



## 4. Monitor and Adjust

Tracking: Evaluate return rates and customer satisfaction; adjust strategies as needed.



# Which Regional Manager Deserves Promotion Based on Performance?

**1. Performance Metrics Overview:** The evaluation of regional managers will focus on two primary metrics: **Sales returns and Profitability** within their respective regions.

**Atlantic Region: Manager: Sam**

Sales Returns: Low

Profitability: Good

**Nunavut Region: Manager: Chris**

Sales Returns: Lowest

Profitability: Lowest

**West, Quebec, Ontario Region: Manager: Pat**

Sales Returns: Highest

Profitability: High

**2. Areas for Investigation:** To make an informed promotion decision, the company must investigate the reasons behind the sales returns in Pat's region:

**Product Defects:** Investigate if product quality issues are contributing to high return rates, which may reflect a broader company quality control issue rather than solely Pat's management.

**Customer Service Issues:** Evaluate whether Pat's team is effectively managing customer inquiries and setting appropriate expectations, which could impact return rates.

## Which Regional Manager Deserves Promotion Based on Performance?(Contd)



### Immediate Actions:

- Conduct an Investigation: Gather feedback from customers in Pat's region to understand the reasons for the returns.
- Assess Product Quality: Collaborate with the product team to review the quality of products being sold in Pat's region.
- Evaluate Pat's Management: Consider whether there are specific training or support needs for Pat to improve performance.

### Promotion Decision:

- **Hold Off on Promotion:** If it appears that Pat may be at fault or if there are substantial issues in his region that need addressing, recommend waiting to promote anyone until the investigation is complete.
- **Promote Sam:** If the findings indicate that Pat's region has significant issues that are under his control, and if Sam's region shows strong performance with low returns, recommend promoting Sam to Head of Sales based on his track record.



## **Primary Focus:**

### **1. Reducing Sales Returns**

Addressing the sales return issue is critical for improving profitability and customer satisfaction.

### **2. Immediate Action Plan:**

Implement the recommended measures to enhance product quality, improve packaging, educate customers, and strengthen customer service.

### **3. Manager Performance:**

Managers should be assessed on their ability to deliver strong sales while keeping return rates low. A balanced approach between profitability and return management is essential for long-term success.

### **4. Insights from Financial Analysis:**

Focus on high-performing product categories and target profitable customer segments. Leverage sales trend data to further optimize growth opportunities.

### **5. Company's Strategic Focus:**

The company's immediate priority should be reducing returns across regions and categories, using financial insights to drive decisions that boost both profitability and customer satisfaction.

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