**SHOPNEST STORE CAPSTONE**

**PROJECT REPORT**

**Introduction:**

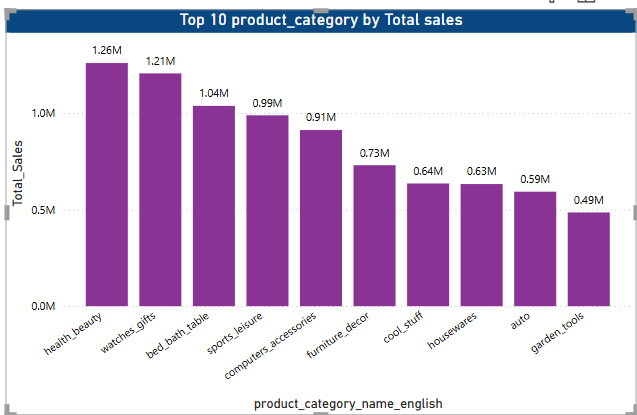
This report presents an analytical dashboard for ShopNest, a leading e-commerce marketplace in Portugal. The analysis is designed to provide valuable insights into key business metrics, including category performance, delayed orders, payment methods, customer ratings, sales trends, and revenue patterns.

**Objectives:**

* Identify top-performing product categories.
* Analyse order delays and trends over time.
* Understand customer payment preferences.
* Examine product ratings and customer feedback.
* Analyse state-wise sales distribution.
* Detect seasonal sales trends.
* Evaluate overall revenue growth.

**Dashboard Analysis and Key Insights**

1. **Top Categories by Total Price:**

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This bar chart shows the Top 10 Product Categories by Total Sales in ShopNest.

**Key Insights:**

* Health Beauty is the top-selling category, generating approximately 1.26M in total sales indicating strong consumer demand for personal care and wellness products.
* Watches Gifts (1.21M) and Bed Bath Table (1.04M) are also among the top selling categories, suggesting a high demand for premium and lifestyle products.
* Categories like Garden Tools and Auto have lower sales in the top 10 but still contribute significantly to revenue.
* The top-selling product category contributes a significant share to total sales.

**Potential Action Points:**

* Increase marketing efforts for high-performing categories like Health Beauty and Watches Gifts.
* Capitalize on Sports Leisure and Garden Tools sales trends during peak seasons.
* Improve inventory and discounts to boost sales

1. **Delayed Orders Analysis:**

**A graph of a bar chart

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**Key Insights:**

* Categories with the highest delayed orders are Bed Bath Table (811), Health Beauty (776), Sports Leisure (584), Furniture Decor (535), Computers\_Accessories (503).
* Categories with the least delayed order are Flowers, Party Supplies, Diapers and Hygiene (1-2 delayed orders each), Home\_Comfort\_2, Arts and Craftmanship (2 delayed orders each). These categories experience minimal delivery delays, possibly due to better stock management or lower order volumes.

**Potential Action Points:**

* Categories such as Health Beauty, Bed Bath Table, Computers Accessories, and Sports Leisure are top selling but also have high delays. Addressing delivery efficiency in these categories can improve customer satisfaction.
* Categories like Music, Party Supplies, and Flowers have minimal delays but also low sales. Expanding promotions and increasing visibility could improve sales.
* Categories with a high number of delayed orders should be analysed for possible stock or supply chain inefficiencies. Implementing better order tracking and delivery forecasting can reduce delays.

1. **Monthly Comparison of Delayed and On-Time Orders:**

**A graph of a number of different orders

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**Drillthrough Dashboard:**

**A screenshot of a computer

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**Key Insights:**

* Majority of orders are delivered on time, with significant volumes seen in May, July, August, and September (~9K+ orders each month).
* Delayed orders are relatively low in comparison, but March (1.6K delayed orders) and February (1.1K delayed orders) have higher delay counts.
* The delay rate is lower in mid-year months (May, June, July) and increases slightly towards the end of the year.
* 89.15% of orders are delivered On Time.
* Credit Card (73.93%) is the most used payment method, with a large share of delayed orders.
* Boleto (21.35%) accounts for a smaller proportion but still contributes to delays.
* São Paulo (SP), Rio de Janeiro (RJ), and Minas Gerais (MG) contribute the most to delayed orders.

**Potential Action Points:**

* Investigate causes of high delays in March and September.

* Address fulfilment or logistic issues in high-delay states (SP, RJ, MG).
* Optimize delivery operations to reduce the 8.87-day delay average.
* Explore whether payment methods (like boleto) contribute to longer processing times.
* Strengthen delivery capacity in March and February to avoid early-year bottlenecks.

1. **Payment Method Analysis:**

**A pie chart with different colored sections

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**Key Insights:**

* Most of orders are paid using credit cards (75.49%), indicating customer preference for flexibility or installment options.
* Boleto payments have significant share of 19.35%, take longer to process, which may contribute to delayed orders.
* Vouchers have low adoption, possibly due to limited promotional campaigns or restrictions on usage.
* Debit cards have an extremely low share, indicating that customers prefer credit-based transactions over direct debit payments.

**Potential Action Points:**

* Promote credit card-based offers (discounts, EMI options) to further boost sales.
* Encourage faster payment methods (e.g., instant transfer, card payments) to reduce delays.
* Investigate voucher adoption barriers and enhance promotional offers to increase usage.

1. **Product Rating Analysis:**

**A graph showing the top 10 highest rated products

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**Key Insights:**

* CDs, DVDs, and Music has the highest average rating of 4.67, indicating strong customer satisfaction.
* Fashion (Infant Clothing) and Books (General Interest, Technical) and Food Beverages categories also have high ratings (above 4.4), reflecting quality and customer approval.
* Other well-rated categories include Construction Tools, Luggage Accessories, Imported Books, and Fashion Sport, all with ratings above 4.3.
* Insurance Services has the lowest average rating at 2.50, suggesting significant customer dissatisfaction.
* Furniture (Office & Bedroom), Fashion (Masculine & Feminine Clothing), Hygiene Products, and Audio Equipment are among the lower-rated categories, with ratings ranging from 3.6 to 3.8.
* The lowest-rated products still maintain an average rating above 2.5, showing that most products meet at least a basic level of customer satisfaction.

**Potential Action Points:**

* Categories such as Insurance Services, PC Gaming Equipment, and Kitchen Appliances need further analysis to understand customer dissatisfaction (e.g., quality issues, pricing, or delivery problems).
* Focus on enhancing product quality and customer service in low-rated categories to increase ratings and customer retention.
* Use top-rated categories (e.g., Music, Books, and Infant Clothing) in marketing campaigns to promote customer trust and drive sales.
* Conduct a deeper analysis on customer feedback in low-rated categories to identify specific pain points.

1. **State-wise Sales Analysis:**

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**Key Insights:**

* The majority of sales originate from Brazil, with the highest density of transactions occurring in the Southeast region (São Paulo, Rio de Janeiro, Minas Gerais).
* There are scattered sales in North America (United States and Canada), indicating some international customers purchasing from the platform.
* However, sales outside of Brazil appear minimal, suggesting low international market penetration.
* Since sales are mainly concentrated in Brazil, ShopNest could explore expanding to other regions in South America where e-commerce demand is growing.

**Potential Action Points:**

* Strengthen logistics in high-sales states (e.g., São Paulo, Rio de Janeiro) to optimize delivery times and reduce costs.
* Develop targeted marketing strategies to increase sales in less-represented Brazilian states and international markets.
* Analyse barriers to international expansion (e.g., shipping costs, taxes, payment methods) to enhance global reach.
* Identify reasons for high sales in top regions and replicate success strategies in lower-performing areas.

1. **Seasonal Sales Patterns:**

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**Key Insights:**

* Sales grew consistently from Q3 2016 to Q2 2018, reaching a peak of 2.86M in Q2 2018.
* The highest sales were recorded in Q2 2018 (2.86M), slightly exceeding Q1 2018 (2.78M).
* Sales dropped significantly in Q3 2018 to 1.75M, marking a decline of approximately 39% from the peak.

**Potential Action Points:**

* Investigate reasons for Q3 2018 decline (e.g., customer feedback, seasonal demand trends, operational issues).
* Analyse peak periods (Q1 & Q2 2018) to identify success factors and replicate them in later quarters.
* Develop strategies to sustain long-term growth, such as targeted promotions, loyalty programs, or expanding into new markets.
* Monitor future quarters to confirm if the decline is a temporary trend or part of a larger slowdown.

1. **Revenue Analysis:**

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**Key Insights:**

* The total revenue generated over the observed period is €16,008,872.12.
* There is a significant increase in revenue from 2016 (€59,362.34) to 2017 (€7,249,746.73) and further growth in 2018 (€8,699,763.05).
* In 2018 the revenue surpassed the 2017 value, but the increase was not as steep, indicating possible market saturation or seasonal effects.
* **In 2018** the revenue in first two quarters had strong performances, but Q3 saw decline.

**Potential Action Points:**

* Investigate why Q3 2018 saw a decline, investigate external market conditions, competitor activities, or internal business decisions.
* Consider strategies to stabilize quarterly revenue and avoid heavy reliance on certain periods.
* Analyse customer behaviour, promotions, and seasonal trends to forecast revenue fluctuations better.

**Overall Recommendations:**

* Optimize Logistics & Reduce Order Delays by improving inventory management, strengthen supply chain, offer faster delivery options.
* Revenue Growth & Market Expansion by investigating Q3 2018 revenue drop and optimize strategies used in peak months. Expand into international markets and underperforming states. Focus on consistent revenue growth rather than seasonal spikes.
* Enhance Customer Satisfaction & Retention by Improving customer experience for low-rated products (Insurance Services). Promote high-rated products (CDs, DVDs & Music) through marketing campaigns.
* Promote faster payment methods to reduce Boleto-related delays.
* Diversify category-specific discounts to boost sales in slower-moving product segments.
* Enhance partnerships with top-selling vendors and streamline procurement for high-demand items.