

# Data-Driven Sales Excellence

An Analysis for Eniac's Long Term Discount Strategy in the market ...



- 1. Meeting Objectives
- 2. Insights Product Portfolio & Sales
- 3. Impact of Seasonality & Discounts
- 4. Conclusion & Recommendation Summary

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### **Background & Context**



Client: Eniac, an e-commerce technology company



Project Focus: Internal data (non-anonymized, unstructurel)

Key Stakeholder Conflict:



- Marketing Lead supports discounting for growth via customer acquisition & retention
- Investors are concerned about revenue loss and prefer a premium positioning



This analysis aims to inform the strategic direction on discounting

# **Meeting Objectives**



Present key insights from internal product and sales data.



Provide data-driven recommendations on the impact of discounts



Clarify implications for marketing, pricing strategy, and data operations

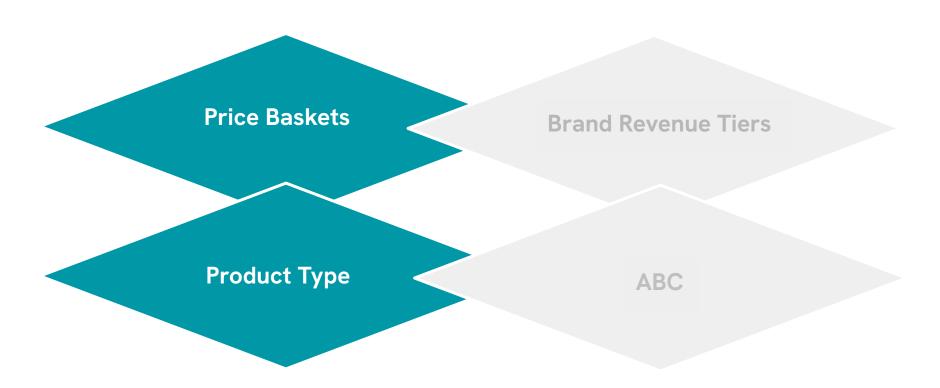


Align stakeholders on next steps for deeper analysis or decision-making

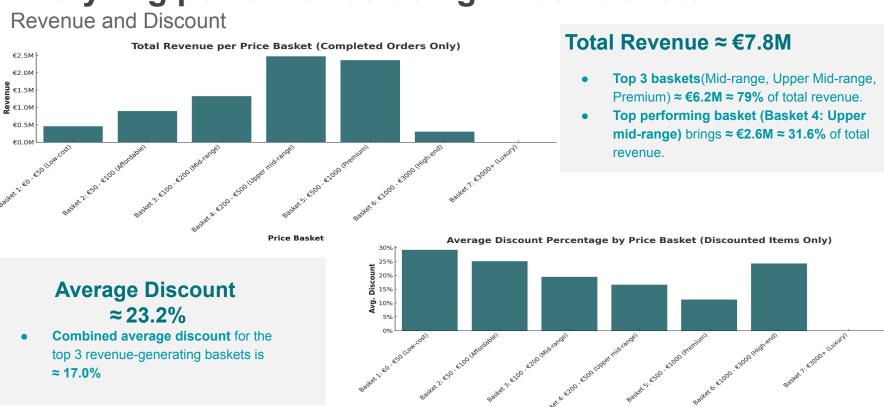
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# **Product Categorization for Strategic Insights**

Categorizing and Analyzing Performance Using..



# **Analyzing performance using Price Baskets**



**Price Basket** 

# **Analysing performance using Product Type**

Revenue and Discount



Top 10 Product
Types account for
<sup>2</sup>/<sub>3</sub> of the total
revenue

Average discount spans from 5% to 25% among different Product Types



### Which Categorization Works Best?

### Comparative Takeaways:

Metric	Price Basket	Product Type
Volume (unit sold)	Dominated by low-cost	Dominated by 10 product types
Revenue	Mid-to-premium wins	Top 10 types = $\frac{2}{3}$ of revenue
Discounts	Highest in low-cost	Ranges from <b>5% to 25%</b> , avg <b>15%</b>

### Recommendation:

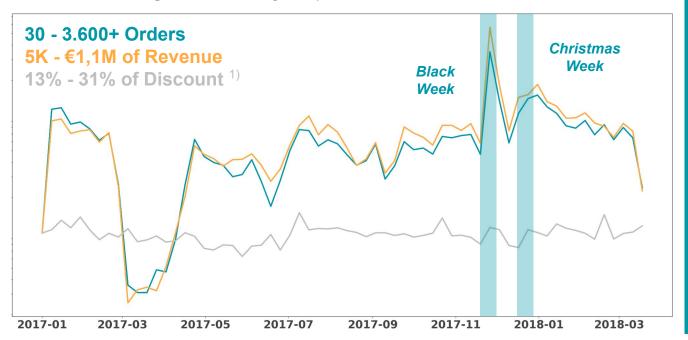
- Both methods reveal important layers:
  - Price basket helps understand consumer price sensitivity.
  - Product-type categorization uncovers performance patterns across product categories (e.g., laptops vs. chargers etc), helping identify category-specific trends and opportunities.
- Combine both for more targeted marketing, pricing, and inventory strategies.

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# Strong seasonality – no overall discount impact

Total revenue driven by external events (Black Week & Christmas) and not by discount.

Normalized and log scaled sales figures per week:



Historically, an increase in orders always resulted in an increase of the revenue

With no significant dependency on discounts 1).

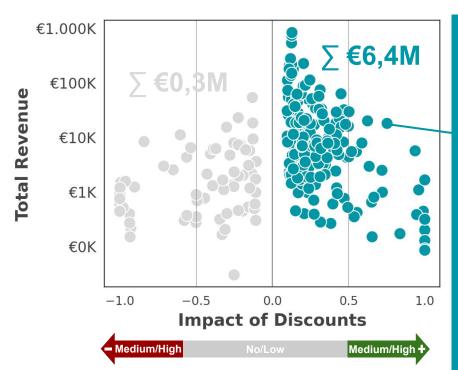
<sup>1)</sup> Discounts calculated as relative discounts (based on regular price and applied price in orderline) and averaged across all orderlines.

# Drill down into product categories reveals potential

Within product type and price bucket groups, discounts are driving high-volume sales

In-depth analysis of discounts 1) within dedicated groups based on:

1. Product Type
2. Price Basket and filtered for statistical significance 2).



Exempla

**Product Type:** 

**Price Basket:** 

Upper mid-range

**Average discount:** 

Increase

revenue

increase

discount for

Server

(€200 - €500)

€18K

4 %

Revenue:

Storage, Protection,

<sup>1)</sup> Discounts calculated as relative discounts (based on regular price and applied price in orderline).

<sup>&</sup>lt;sup>2)</sup> Pearson correlation calculated and P-Value threshold of < .05 applied for indicating statistical significance.

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# Boost sales with smart discounting and categorization

Monitoring impact of strategic discounts by category is enabled by a clean data-pipeline



### No negative impact from discounts on total revenue

- → In some cases, even a **positive effect** on **certain product groups**
- → Requires deeper analysis and smart discount limits



Strong influence of external events (e.g., Black Week, Christmas)

ightarrow Sales spikes should trigger proactive procurement & discount planning



**Categorize products** (by price and type)

→ Enables simplified reporting and real-time adjustment tracking



Optimize data pipeline

- ightarrow Ensures a clean, consistent database
- → Enables automated analysis (e.g. promotion events / discounts) and real-time KPI insights

# **Data Pipeline Audit**

### **Current Data Structure**



Product categories are not explicitly defined



Marketing data like locations absent



Basic product metadata

### Pain Points and Gaps



Manual grouping of products



Poor visibility into inventory trends and stockouts



Limited tracking of customer returns, reviews, and reasons

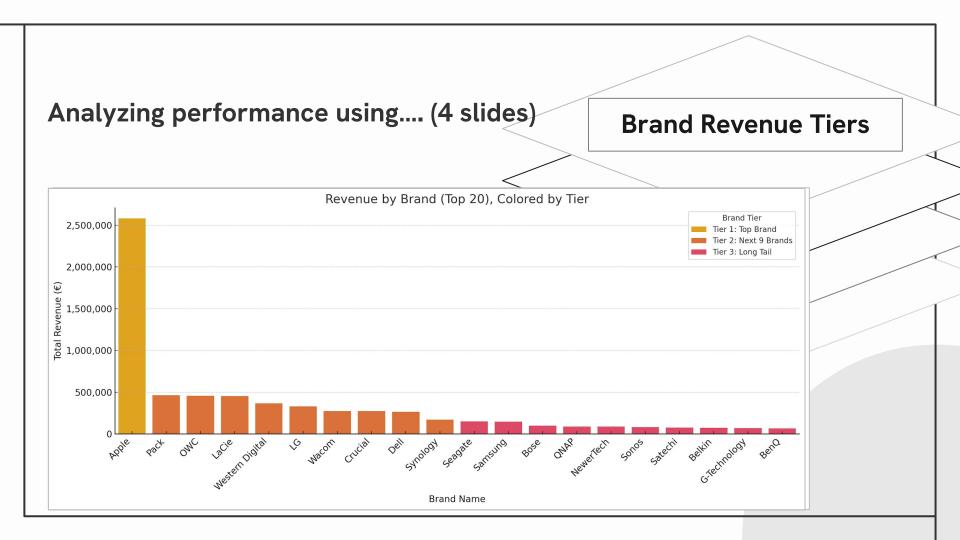
### Proposed Improvements

- 1 Track promo prices directly
- 2 Categorize products explicitly
- 3 Track promotions & discounts
- 4 Monitor inventory over time
- 5 Track returns & refunds (opt)
- 6 Enhance product metadata
- Create a centralized data dictionary

### **Appendix**

### SLIDES FLOW:

- 1. Establishing a baseline for revenue and discount with individual categories.
- 2. General analysis of discount and revenue.
- 3. Further analysis of discounts and revenue based on categories.
- 4. conclusion







### 1. Import the data

Load the orders, order lines, and products datasets.

### 2. Filter for completed orders only

Only include orders marked as "Completed" to focus on actual sales.

### 3. Categorize products by price

Each product is placed into a price "basket" based on its price range (e.g., Low-cost, Premium, Luxury, etc.).

#### 4. Merge data sources

Combine order lines with completed orders and product details to get all necessary information (product price, quantity, etc.).

#### 5. Calculate revenue per order line

Multiply unit price by quantity sold to get revenue for each line item.

#### 6. Summarize revenue by price basket

Group the data by price basket and sum up the total revenue per basket.

How price basket is created? Slide-07

### How Discount baskets are created? Slide-07

#### Identify discounted sales

Flag any order line where the selling price (unit price) is lower than the original product price.

#### 2. Calculate discount percentage

For those discounted items, calculate the discount as a percentage of the original price.

#### 3. Filter only discounted items

Focus only on rows where a discount was actually applied.

### 4. Group by price basket

Group the discounted items based on their price basket (e.g., Low-cost, Premium, etc.).

#### 5. Calculate average discount per basket

For each price basket, compute the average discount percentage across all discounted items.