

APPLE PRODUCT SALES ANALYSIS

KEY PERFORMANCE INDICATORS

Revenue KPIs

- 📊 Total Revenue: $\sum (Price \times Quantity)$ across all sales
- 📊 Revenue by Product Category: $\sum (Price \times Quantity)$ grouped by category
- 📊 Revenue by Product: $\sum (Price \times Quantity)$ for each product
- 📊 Revenue by Store: $\sum (Price \times Quantity)$ grouped by store location
- 📊 Revenue by Country: $\sum (Price \times Quantity)$ grouped by country
- 📊 Average Order Value (AOV): $\frac{TotalRevenue}{NumberOfTransactions}$
- 📊 Revenue Growth: $\frac{CurrentPeriodRevenue - PreviousPeriodRevenue}{PreviousPeriodRevenue} \times 100\%$

Sales Performance KPIs

- 📊 Total Units Sold: $\sum (Quantity)$ across all sales
- 📊 Units Sold by Category: $\sum (Quantity)$ grouped by product category
- 📊 Units Sold by Product: $\sum (Quantity)$ for each product
- 📊 Units Sold by Store: $\sum (Quantity)$ grouped by store location
- 📊 Average Units per Transaction: $\frac{TotalUnitsSold}{NumberOfTransactions}$
- 📊 Sales Conversion Rate: $\frac{NumberOfTransactions}{NumberOfStoreVisitors} \times 100\%$
- 📊 Best-Selling Period: Temporal analysis identifying peak sales periods

Product Performance KPIs

- 📊 Product Popularity Ranking: Products ranked by units sold
- 📊 Product Profitability: $\frac{Revenue - Cost}{Revenue} \times 100\%$ by product
- 📊 New Product Performance: Sales metrics for products launched within last 12 months
- 📊 Product Price Elasticity: $\frac{\%ChangeinQuantity}{\%ChangeinPrice}$
- 📊 Product Lifecycle Performance: Sales trends from launch through maturity
- 📊 Seasonal Product Performance: Identification of seasonal sales patterns

Store Performance KPIs

- 📊 Store Revenue Ranking: Stores ranked by total revenue
- 📊 Store Year-over-Year Growth: $\frac{CurrentYearRevenue - PreviousYearRevenue}{PreviousYearRevenue} \times 100\%$
- 📊 Average Transaction Value by Store: $\frac{StoreRevenue}{NumberOfStoreTransactions}$
- 📊 Store Efficiency: Revenue per square foot: $\frac{StoreRevenue}{StoreSquareFootage}$

- 🔍 **Store Product Mix:** Category distribution of sales by store
- 🔍 **Store Customer Retention:** Repeat customer rate by location

Warranty and Service KPIs

- 🔍 **Warranty Claim Rate:** $\frac{NumberofWarrantyClaims}{NumberofSales} \times 100\%$
- 🔍 **Warranty Claim Rate by Product:** $\frac{ProductWarrantyClaims}{ProductSales} \times 100\%$
- 🔍 **Warranty Claim Rate by Category:** $\frac{CategoryWarrantyClaims}{CategorySales} \times 100\%$
- 🔍 **Average Time to Claim:** $AVG(ClaimDate - SaleDate)$ in days
- 🔍 **Repair Status Distribution:** Percentage breakdown of claim resolutions
- 🔍 **Warranty Cost Ratio:** $\frac{WarrantyServiceCosts}{TotalRevenue} \times 100\%$
- 🔍 **Repeat Claim Rate:** Percentage of products with multiple claims

Customer Behavior KPIs

- 🔍 **Customer Lifetime Value:** $AveragePurchaseValue \times PurchaseFrequency \times CustomerLifespan$
- 🔍 **Purchase Frequency:** Average time between customer purchases
- 🔍 **Cross-Category Purchase Rate:** Percentage of customers buying across multiple categories
- 🔍 **Upgrade Cycle Length:** Average time between product upgrades by customers
- 🔍 **Post-Warranty Purchase Behavior:** Impact of warranty experience on future purchases

Market Analysis KPIs

- 🔍 **Market Penetration by Region:** $\frac{RegionalSales}{RegionalMarketPotential} \times 100\%$
- 🔍 **Category Market Share:** $\frac{AppleCategorySales}{TotalMarketCategorySales} \times 100\%$
- 🔍 **Price Point Analysis:** Sales distribution across price ranges
- 🔍 **Competitive Position:** Performance relative to competitors
- 🔍 **Geographic Expansion Opportunity:** Identification of underserved markets

Financial Performance KPIs

- 🔍 **Gross Profit Margin:** $\frac{Revenue - COGS}{Revenue} \times 100\%$
- 🔍 **Operating Expense Ratio:** $\frac{OperatingExpenses}{Revenue} \times 100\%$
- 🔍 **Inventory Turnover Rate:** $\frac{COGS}{AverageInventory}$
- 🔍 **Return on Investment (ROI):** $\frac{NetProfit}{Investment} \times 100\%$
- 🔍 **Cash Conversion Cycle:** $DIO + DSO - DPO$
- 🔍 **Break-Even Analysis:** Sales volume needed to cover costs
- 🔍 **Economic Value Added (EVA):** $NOPAT - (Capital \times WACC)$

Implementation Notes

These KPIs provide a comprehensive framework for analyzing Apple's business performance across sales, products, stores, warranty services, and customer behavior. They enable data-driven decision making for product development, pricing strategy, store operations, and customer service improvements.

For optimal implementation, these metrics should be:

- Tracked consistently over time
- Visualized through interactive dashboards
- Segmented by relevant dimensions (time, geography, product)
- Compared against established benchmarks and targets
- Reviewed regularly by cross-functional teams