# B&J Biscuit Business Analysis Dashboard

## Problem Statement

B&J Biscuit’s management team needs a single, interactive dashboard in Excel that consolidates key business metrics from their sales data. Without it, identifying top-performing products, customers, locations, and salespeople requires manual analysis across multiple reports, slowing decision-making.  
  
The challenge is to design a dashboard that not only summarizes financial performance (revenue, COGS, profit, and margin) but also provides segmented insights by demographics, geography, payment method, and price category. The tool must enable quick filtering to analyze specific regions, customer groups, or payment types and surface the most profitable segments for targeted action.

## Solution

Using Excel PivotTables, PivotCharts, and Slicers, a dynamic “B&J Biscuit Dashboard” was built to present the following real insights:

### 1. Key KPIs (as of dataset snapshot)

* Quantity Sold: 752,107 units
* Total COGS: $8,513,656
* Total Revenue: $15,248,942
* Total Profit: $6,635,276
* Profit Margin: 44%

### 2. Profitability Highlights

* Most Profitable Brand: Shortbread
* Most Profitable Location: San Antonio
* Most Profitable Customer: Robert Hernandez
* Top Salesperson by Profit: Travis Doyle
* Most Profitable Age Group: 60–74 years

### 3. Revenue Distribution Analysis

* By Price Category: Expensive products outperform less expensive products in revenue share.
* By Age Group: 45–59 and 30–44 age brackets each contribute ~24% of revenue; 60–74 contributes ~18%.
* By Gender: Female customers account for the majority (84.5%) of revenue.
* By Payment Method: Credit Card accounts for 100% in the current filtered view.

### 4. Customer Insights

* Top 5 Customers by Revenue Contribution:
  1. Robert Hernandez – 21%
  2. Alexander Smith – 19%
  3. Mary Rodriguez – 14%
  4. Tony Girian – 9%
  5. Ruben Hernandez – 6%
* Customer Acquisition: Distinct count derived via PivotTable.

### 5. Geographic Revenue Distribution

* Highest revenue share: San Antonio (~13%), San Diego (~12%), Houston (~11%).
* Lowest among shown: Los Angeles (~8%).

### 6. Interactivity & Filters

* Slicers for Payment Type, Location, and Age Group allow instant filtering.
* Toggle between Absolute Value and Percentage view for location revenue share.
* KPIs at the top, charts in the middle, filters at the bottom for easy scanning.

### 7. Technical Implementation Steps

* Raw sales table structured in an Excel Table and connected to PivotTables.
* Calculated columns for TotalRevenue, TotalCOGS, Profit, ProfitMargin%, PriceCategory.
* PivotTables configured for brand, customer, location, salesperson, demographics.
* Charts formatted and aligned for consistency, with slicers linked to all PivotTables.
* Conditional formatting applied for emphasis in top 5 lists.

### 4. Recommendations

* Target Marketing toward female customers in the 60–74 age bracket.
* Expand in high-profit geographies such as San Antonio and San Diego.
* Focus on Shortbread brand promotions to leverage high profitability.
* Explore diversification in payment options to improve customer convenience.
* Strengthen relationships with top 5 customers through loyalty programs.

### 5. Dashboard Features

* Interactive Filters (Slicers): Location, Payment Method, Age Group.
* Dynamic KPI Cards: Auto-update with filter changes.
* Pivot Charts & Tables: Linked to data for real-time updates.
* Conditional Formatting: Highlights high-performing areas instantly.

### 6. Conclusion

The B&J Biscuit Excel Dashboard provides a single, interactive view of business performance, enabling faster decision-making and targeted strategies. With its combination of high-level KPIs, detailed profitability breakdowns, and interactive visual elements, the tool empowers management to unlock growth opportunities and improve operational efficiency.