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Country, Revenue, Customer Count, and Years of Business

Total Revenue

$3,531.95   264K

Total Revenue
2021: $49,568
2022: $580,087
2023: $729,423

Spain
$20,708.89
4
3

Poland
$3,531.95
1
2

Norway
$5,735.15
1
2

Italy
$18,025.15
3
3

Brazil
$116,546.98
9
3

France
$85,498.76
10
3

Finland
$19,778.45
2
3

Mexico
$24,073.45
5
3

USA
$263,566.98
13
3
Save-a-lot Markets

Germany
$245,084.63
11
3
QUICK-Stop

Venezuela
$60,814.89
4
3

Switzerland
$32,919.50
2
3

Austria
$139,496.
2
3

Ernst Handel

UK
$60,616.51
7
2

Denmark
$34,782.25
2
2

Belgium
$35,134.98
2
3

Ireland
$57,317.39
1
2

Sweden
$59,523.70
2
3

Canada
$55,334.10
3
2

Portugal
$12,468.65
2
2

Argentina
$8,119.10
3
2

Key:
Size - Count of Customers (1-13)
Order Key:
Country
Total Revenue
Count of Products
Count of Years
Top Customer (For the top three countrys by revenue)

High-Level Overview:
Description:
- Revenue **2021**: $49,568 **2022**: $580,087 **2023**: $729,423

- Top 3 Countries by <u>Revenue</u>: **USA** $263,567, **Germany** $245,085, and **Austria** $139,497
- The top 3 countries by <u>consumer count</u> are: **USA** 13, **Germany** 11, and **France** 10
- Top 3 Customers by revenue**: Save-a-lot Market, QUICK-Stop, and Ernst Handel**
- All countries have at **least** been purchasing for 2 years
   - Top Countries like the **USA**, **Germany**, **France**, and **Brazil** have been for 3 years
- All countries have a wide range of purchased products
    - Slight increase in product variety with increased customers/revenue

Our team decided to look into the categories:
1. Product Quantity vs. Unit Price
2. Order Quantity vs. Revenue
3. Product trends during peak months
4. Sales trends by product category
5. Product Value vs. Total Orders by Month
- Each includes other supplemental variables to allow a more in-depth understanding of where revenue is generated.
- Analysis will help determine how to **increase revenue** while **decreasing costs**

**Presentation Link:** https://youtu.be/rkOpZNmUkvU

Country, Revenue, and Product Count
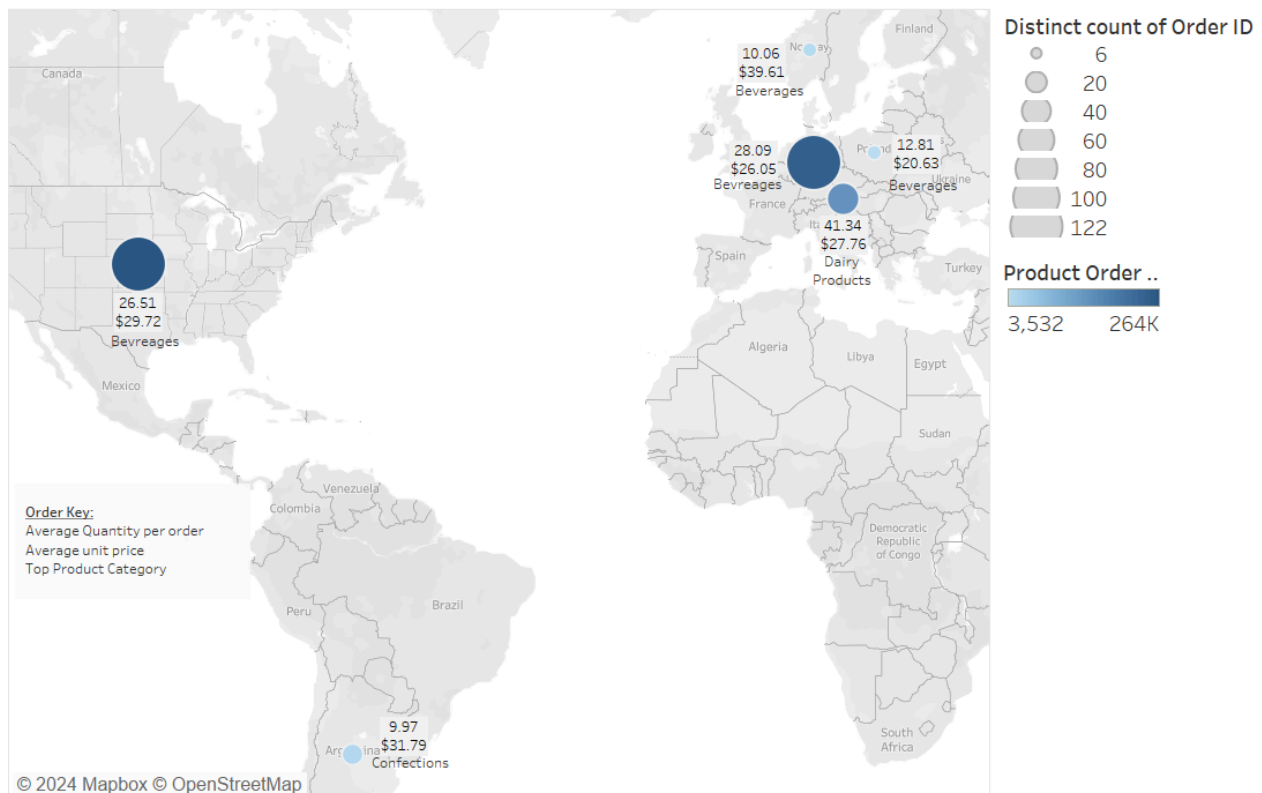
- Variables: Country, Revenue, Order Quantity, Average Quantity, Average Unit Price
- Most common top Product category by revenue is **beverages**

- Shows the relationship between Price and Quantity in both total and individual orders
  - Strong positive correlation between Revenue and Order quantity
  - **USA** and **Germany** leading with 122 Orders
- **Norway** has the least, with 6 orders, and the highest unit average of $39.61
- The highest average order quantity is **Austria** at 41, with an average unit price of $27.76
- Missing and non-current data prevent us from predicting trend lines

2.
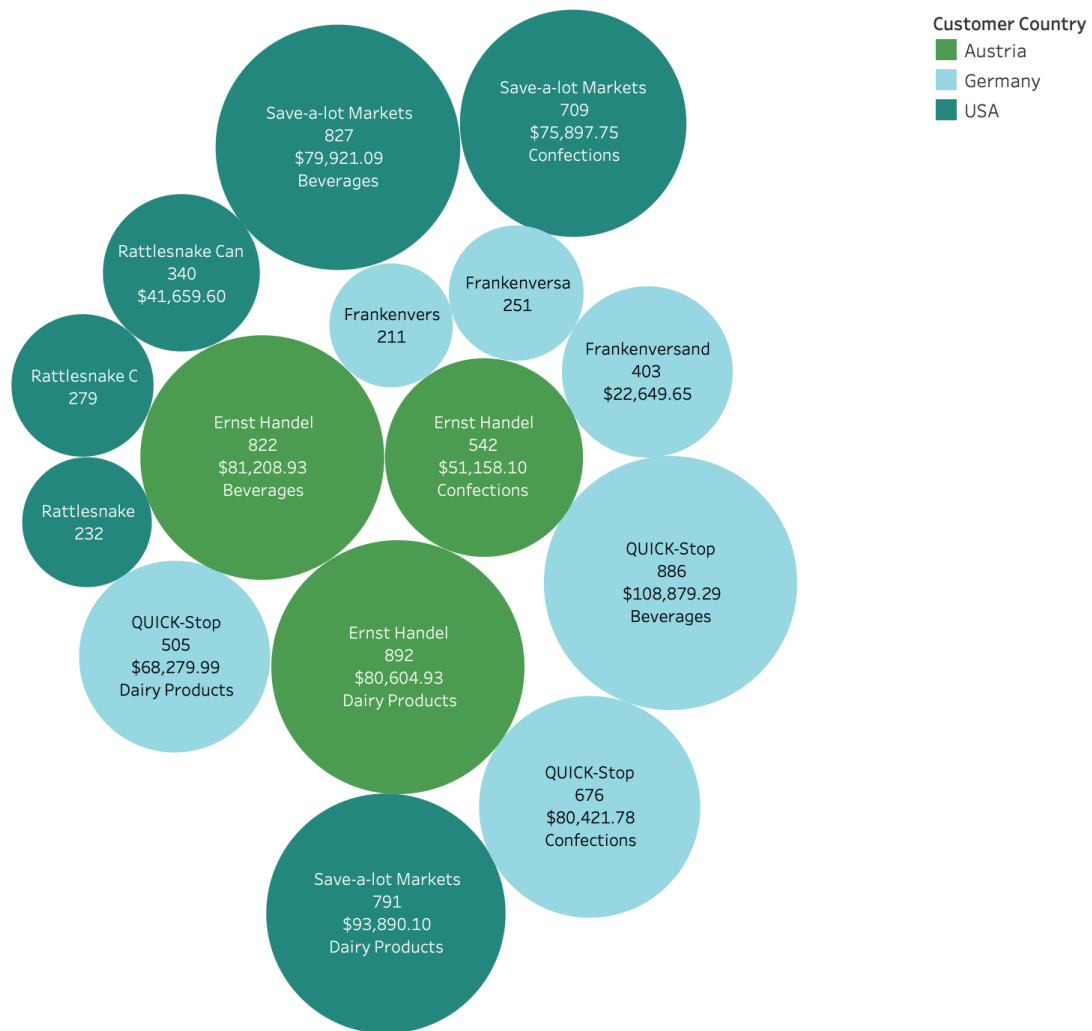
Customer Name, sum of Product Order Quantity, sum of Order Price Total and Product Category. Color shows details about Customer Country. Size shows sum of Product Order Quantity. The marks are labeled by Customer Name, sum of Product Order Quantity, sum of Order Price Total and Product Category. The view is filtered on Customer Country, Customer Name and Product Category. The Customer Country filter keeps Austria, Brazil, France, Germany and USA. The Customer Name filter keeps Ernst Handel, Frankenversand, QUICK-Stop, Rattlesnake Canyon Grocery and Save-a-lot Markets. The Product Category filter keeps Beverages, Confections and Dairy Products.

- Top 3 countries by order quantity are **Austria**, **Germany**, and the **USA**
- Top 3 customers by order quantity are **Save-a-lot Markets, Ernst Handel, and QUICK-Stop**
- Top 3 product categories by order quantity are **Dairy products, Beverages, and Confections**

- Highest order quantity for a product category is 892 and the lowest is 211
- **Frankenversand** generates a profit of $22,649 for **Dairy Products**
  - $19,010 less than **Rattlesnake Canyon Grocery** despite a higher order quantity
- Unknown factors affecting profit and order quantity difference in Germany and Austria customers

3.

Sum of Order Price Total for each Product Category broken down by Order Date Month vs. Order Date Year Year. Color shows details about Customer Country. The view is filtered on Customer Country, Product Category and Order Date Month. The Customer Country filter keeps Austria, Germany and USA. The Product Category filter keeps Beverages, Condiments, Confections, Dairy Products and Seafood. The Order Date Month filter keeps August, July and May.

- Seasonality peaks in summer throughout **May, July, and August**
- Top five product categories in most profitable season are **Beverages, Condiments, Confections, Dairy Products, and Seafood**
- **August** overall generates the most profit among Austria, Germany, and the USA
- Top product category in August 2023 is **Beverages**
  - generates approximately $65,000
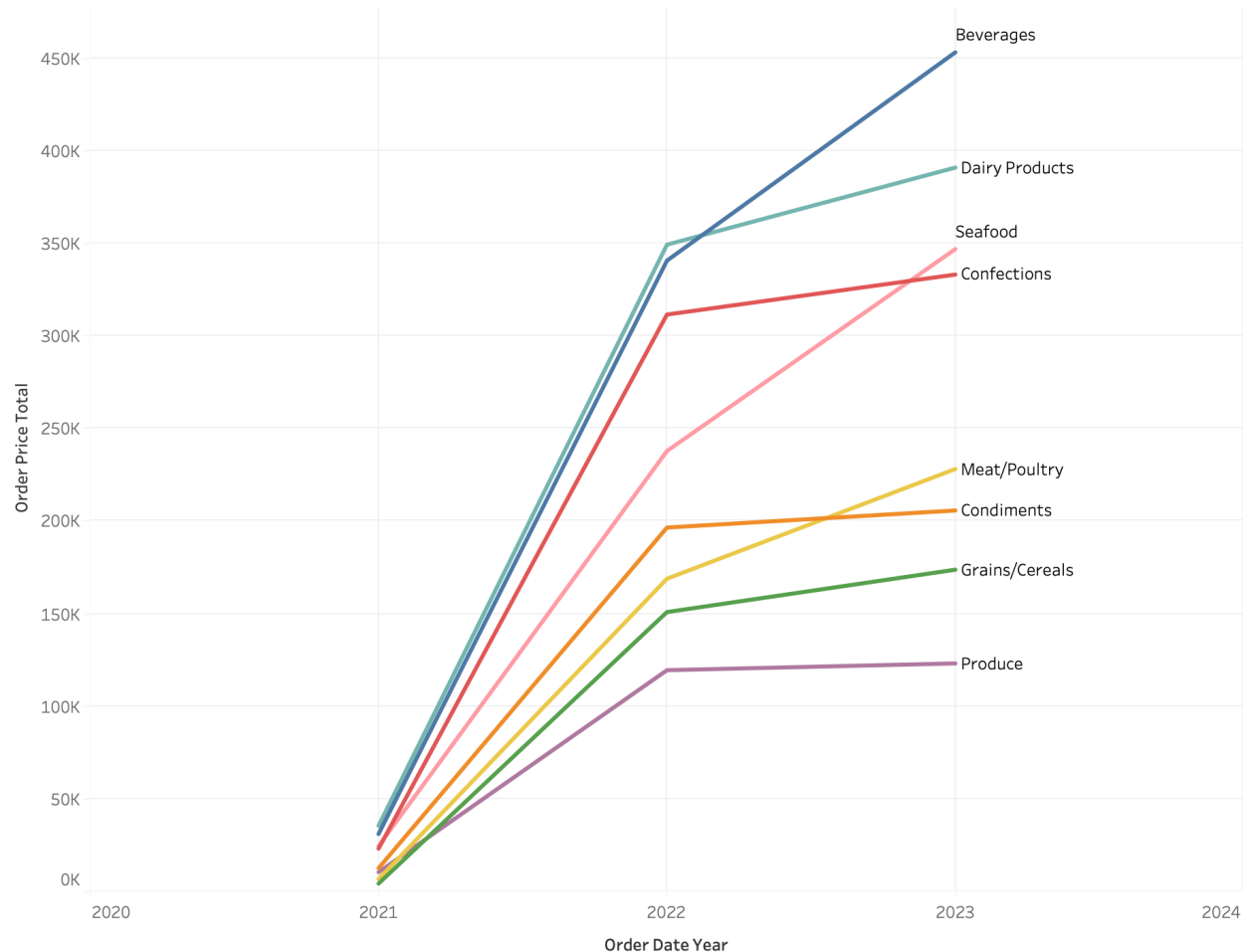- Bottom product category in August 2023 is **Seafood**

○   generates approximately $21,000
    ● **2023** overall generated the most profit during seasonality peak
Lack of information:
    ● Factor leading to variation in order quantities and profitability throughout the most
      profitable season is unknown (weather, economic conditions)

4.

Sales Trend by Product Category and Year

The trend of sum of Order Price Total for Order Date Year. Color shows details about Product Category. The marks are labeled by Product Category. The view is filtered on Product Category, which keeps 8 of 8 members.


    ● Yearly sales trends across product categories
            ○   highlight growth opportunities and underperformance.
    ● Supports SLT's focus on transformation and high-impact areas for cost-effective growth.
    ● **Beverages** lead with $450K in 2023, contributing 35% of total revenue.
    ● **Seafood** shows strong growth, reaching $350K in 2023.
    ● **Condiments** and **Dairy Products** have slower growth trends
    ● Total sales increased by 25% from 2021 to 2023.

- **Beverages** and **Seafood** are consistently top performers
- **Cereals** and **Produce** show flat growth

Lack of information:
- Customer or regional contributions to category performance.
- Profitability of each product category relative to sales growth.
- External factors (e.g., market demand, seasonality) affect category trends

5.

Clustered Average Product Value and Total Orders by Month
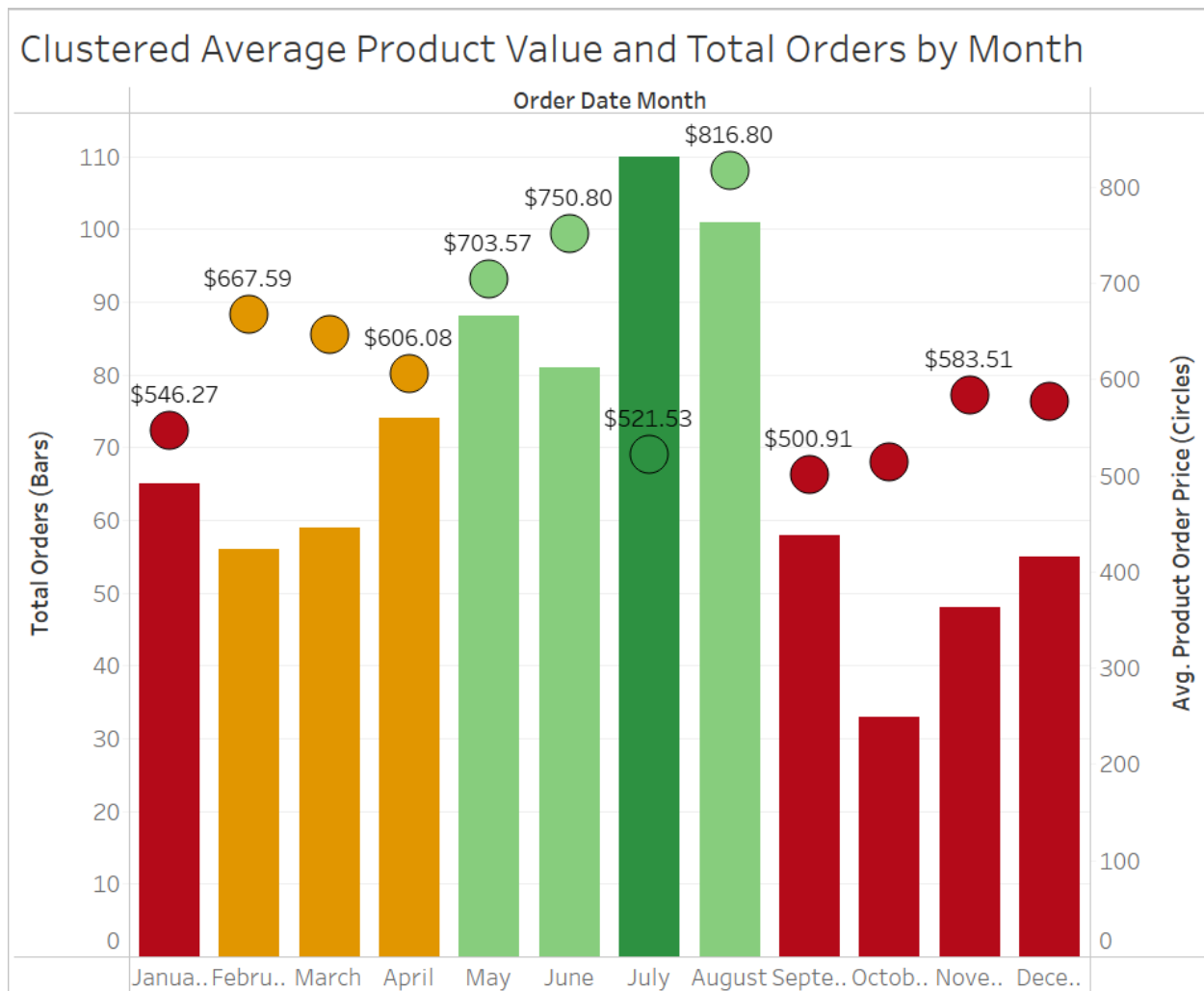
KEY:
CLUSTER 1: July (July) - **PEAK REVENUE**
CLUSTER 2: SUMMER - **HIGH REVENUE**

CLUSTER 3: SPRING - **AVERAGE REVENUE**
CLUSTER 4: WINTER - **LOW REVENUE**
Findings:
- Average Order Value is lower in peak revenue period.
- Summer (May-August) is the top season, with an increase in total revenue and AOV.
- AOV is **down** 33% from peak to slow season.
- Total order volume is **up** 333% in July (Peak month) than October (Lowest month)
- Total order volume is **up** 195% in Summer (Top season) than in Winter (Bottom season).
- Peak order volume month is July, while seeing the 3rd lowest AOV.
- Best month for order volume and AOV is August.
- Worst month for order volume and AOV is October

Conclusion:
Findings:
1. Top 3 countries by revenue
   a. **USA** $263,567, **Germany** $245,085, and **Austria** $139,497
2. The top 3 countries by Consumer Count
   a. **USA** 13, **Germany** 11, and **France** 10
3. **Save-a-lot Markets** is the top customer and generates $481,076
4. Top five product categories in most profitable season
   a. Beverages, Condiments, Confections, Dairy Products, and Seafood.
5. **Beverages** lead with $450K in 2023, contributing 35% of total revenue
6. Total sales increased by 25% from 2021 to 2023.
7. AOV is **down** 33% from peak to slow season
8. Incomplete Data for past (2021) and present (2024 or most recent)

Plan of Action:
- Issue an RFP to gather missing data, perform deeper-level analysis, create new visualizations, perform descriptive and prescriptive analytics, and implement a new system to avoid these issues in the future.

<u>**Executive Summary**</u>:   **Budget**: $825,000
- We are hiring a consulting firm to analyze internal and external data with SOPs for iteration and train internal analysts.
- Standardize relationship value with customers and draft practices to hone in on high performers.
- Minimize inefficiencies with seasonality practices to improve operational excellence.
- Conduct ABC analysis to find low-return activities and achieve operational excellence.

Data Overview:
- Top customers are located in USA, Germany, and Austria
- Bottom customers are located in Argentina, Norway, and Poland.
- Top season is summer (May-August)
- Bottom season is winter (September - December)

Ideal Partnerships:
- External/Competitor Data From:
  - Costco
  - Kroger
  - Aldi
- Data Analysis Firms:
  - Insight Global
  - Clairvoyant
  - Affirma

<u>**RFP:**</u> Data Analysis Consultation and Training. Concentration in Seasonality and Consumerism	<u>**Project Start:**</u> 06/06/2025 <u>**Deliverables Due:**</u> **02/06/2026**	**Northwind Traders**

Project Overview:

Northwind Traders is an international whole-sale retail distribution company selling premium food and beverage products headquartered in the United States with consumer base in the Americas and Europe.

We aim to hire a consulting firm to analyze, visualize, and analyze data with training for internal resources. Deliverable will specifically focus on product seasonality and consumerism metrics in the span of 8 months and incorporating data from 2021-2024. Project budget is $825,000.

Project Goals:
- Construct internal resources by training and creating SOPs by the analysis firm. (Insight Global, Clairvoyant, or Affirma)
- Execute deep-level analysis of trends from both internal and external datasets.
- Develop plan to reduce freight unit costs via contractual negotiation.
  - Freight unit cost reduction $\geq 10\%$.
- Standardize relationship value to assess risk between different consumers/countries.

- Conduct ABC analysis to achieve operational excellence.
  - Target: Eliminate 20% current/forecasted low return ventures.
- Develop a visualized actionable plan to combat seasonality volatility
  - Actionable plan must feature internal/external data support.
- Adjust systems capacity for top regions during largest seasonal sales periods
- Identify and analyze top methodology used for meeting seasonality demand
- Analyze trends on order fulfillment times within peak seasons of both datasets (internal/external)
  - Target: $\geq 15\%$ increase in fulfillment rate during peak season.
- Develop strategies for evaluating client profitability relationships
  - Target: $\geq 20\%$ increase in average client profitability

Scope of Work:
- Span: June 6, 2025 - February 6, 2026
- Budget: $825,000
- Training Metrics: Increased benchmarked proficiency amongst all internal data analysts.
- Phase 1: Data Collection & Analysis (20% Payout)
  - Internal Data: Analyze sales data (2021-2024).
  - External Data: Collect comparable metrics from retailers (Costco, Kroger, Aldi) for 2021- Most Current
  - Trend Analysis: Identify profitability trends across top 3 and bottom 3 customers.
  - Client-Relationship Segmentation: Define high/low-value clients based on revenue and demand.
    - Standardize relationship value from -1 to 1.
- Phase 2: Variable Relationship Research (30% Payout)
  - Create descriptive 3-4 variable visualizations for customer profitability and operating expenditures.
  - Cross-tabulate expenses vs. contributions to identify inefficiencies utilizing ABC cost analysis.
  - Cluster client data into categories: uncouple, maintain, and consolidate for analysis. Explain relationship.
  - Cluster product data into categories: high/low performers and independent/dependent products. Explain relationship.
- Phase 3: Deliverables and Presentation (50% Payout + Bonus Potential)
  - Deliver 3 actionable plans for consolidating high and moderate performers.
  - A PDF presentation spanning 20 pages summarizing findings and actionable plans for profitability and improving cost efficiencies.
  - Deliver ≥ 3 actionable plans for system improvements to increase order completion efficiency during seasonality periods.
  - Complete 40 page SOP.

Current Roadblocks and Barriers to Success
The ideal firm:
- Can standardize and analyze globally formatted data

- Navigates nations' legalities for discussing implementations.
- Proficiently communicate and articulate action plan steps.
- Outputs a deliverable without informational confines and firm biases.
- Navigates Azure API and Microsoft Suite proficiently.
- Collaborates effectively both online and in-person
- Delivers structured and time-sensible SOP framework.
- Provides robust budget documentation for periodic auditing.
- Utilizes veracity and uniform data in deliverables.

Evaluation Metrics and Criteria
- Desired firm has:
  - 5 years or 15 comparable projects with international supply chain firm data analysis.
  - 3 comparable supply chain firm work references.
  - Minimum project completion rate of 90%.
  - Minimum actionable success rate of 80%.
  - Cost efficiency of ±10% for previous comparable projects to industry benchmarks.
  - ≥3 year corporate portfolio experience in consumer trends.
  - ≥3 year corporate portfolio experience in product seasonality.
- Accurately explain and teach methodology and concepts to internal analysts
  - Each internal analyst scores ≥85% on post-training assessment.
- Descriptive and Prescriptive analytics create suggestions and possible next steps.
  - ≥3 actionable insights per visualization segment report.
- Data analysis and visualizations must use internal benchmark software (Microsoft Suite and Tableau)

Submission Requirements
- Training: 320 hours (10/week; 2/day - Time: TBD)
- SOPs: 40 pages
  - 10 - Data interpretation
  - 10 - Tableau integration
  - 10 - Variable relationships > Seasonality
  - 10 - Variable relationships > Consumer Relations/Operations
- Visualizations: 20 Tableau Sheets
  - 10 internal, 10 external data
- Presentation: 40 minutes on the due date.

Project Due By: 02/06/2026		**Budget**: $825,000
Contact: Sophia Flickinger **Email:** smflicki@asu.edu	File Type: **pdf**	**Work Channel**: Cloud