Final Project – Data-Driven Organization Strategy Report

Use Case: Strategic Expansion into EU Markets for a UK-Based Online Retailer
Team Members:Emmanuel Kasigazi,Vinay Kumar Kota,Vivek Reddy, Ravisha Chinnapakai

---

Executive Summary

The client is a UK-based online retailer(G5) with 82% of its revenue derived from the domestic market and a 57% customer churn rate. Our project proposes a data-driven strategy to expand operations into three high-potential European markets: Netherlands, Ireland, and Germany. Using public transactional data and design thinking principles, we created a comprehensive business intelligence framework that incorporates market segmentation, predictive analytics, and customer journey mapping. The plan includes a dimensional data model, visualization dashboards, governance practices, and an implementation roadmap. The expected ROI is 400% over three years.

---

1. Strategy Framework

Vision

Become a predictive, customer-first retail organization with regional market depth.

Mission

Use transactional and behavioral data to drive loyalty, expand internationally, and optimize operations.

Business Model Canvas

- **Customer Segments**: B2B wholesale buyers, lifestyle consumers, sustainability-focused shoppers

- **Value Proposition**: British-designed products, localized websites, regional logistics

- **Channels**: Regional websites, EU marketplaces, mobile app

- **Customer Relationships**: Loyalty programs, responsive multilingual support, influencer engagement

- **Revenue Streams**: Direct-to-Consumer, wholesale/B2B, subscription and gifting

- **Key Resources**: Netherlands-based fulfillment hub, multilingual staff, analytics platform.

- **Key Activities**: Market research, platform localization, logistics partnerships

- **Key Partnerships**: Local logistics firms, marketing agencies, digital platforms

- **Cost Structure**: Fulfillment, warehousing, marketing, development, regulatory compliance

Competitive Landscape

- **Netherlands**: Bol.com, Coolblue – strong logistics and UI

- **Ireland**: Amazon UK, Littlewoods – market dominance but lacking local personalization

- **Germany**: Otto, Zalando – strong sustainability and returns focus

Balanced Scorecard

- **Financial**: +150% EU revenue in 18 months, 15% profit margin

- **Customer**: 85% CSAT, < 30% cart abandonment, 45% repeat purchases

- **Internal Process**: Delivery < 3 days, 98% order accuracy, < 10% return rate

- **Learning and Growth**: Launch local support teams, multilingual onboarding, training

Recommended OKRs

- **Netherlands**: Launch Dutch site and achieve €750K in revenue within 12 months

- **Ireland**: Grow customer base 120%, match UK customer spend

- **Germany**: Launch site with sustainability focus; gain 25,000 subscribers by Year 2

- **Pan-European**: Create EU-based distribution hub by Q4 2025; implement localized dashboards and payment methods

---

2. Design Methods

Personas

1. **Beatrix (Netherlands)** – B2B buyer; bulk purchasing, values fulfillment and pricing transparency

2. **Liam (Ireland)** – Gift shopper; lifestyle and seasonal buyer, influenced by design and social cues

Liam

Data Analyst

"Be Kind and You'll see the world"

Age : 40
Income : €150,000
Gender : Male
Location : Dublin, Ireland

Book | Music

"Stylish British Goods Quickly and Affordably."

Shopping Channels

Mobile Apps
Quick Websites
Social Media

Motivations
- Discover stylish and unique products.
- Reliable delivery, especially for gifts.
- Curated collections make shopping easy.

Personality
- Regularly buys home decor, small gifts, and seasonal items.
- Seeks free or low-cost shipping.
- Prefers curated and seasonal product collections.

Frustrations

Shipping costs from UK can be high. Slow delivery times for gift items. Limited Irish-language support.

- Values home decor and stylish gifts.
- Follows UK trends but prefers local shipping.
- Appreciates curated collections and gift options.

Skills

Mobile Shopping
★★★★★

Quick Decision- Making
★★★★☆

Favorite Brand

twitter | Apple | amazon | Instagram

3. **Klara (Germany)** – High-income, sustainability-conscious, seeks product quality and verified delivery standards

"Shop sustainable, high-quality British designs with eco-friendly packaging."

PROFILE:

Gender: Female
Age: 32
Location : Munich, Germany
Income : € 50,000.00

Complications :
- Limited product information for eco-certification.
- Long shipping times from the UK.
- Unclear sustainability practices of products.

SKILLS:

Strategic Buying
★★★★★
Bargaining Skills
★★★★☆
Discount Hunting
★★★★★

Klara
Teacher

GOALS:
- Seeks sustainable, high-quality products.
- Prefers clear product information and certifications.
- Prioritizes local and eco-friendly packaging.

MOTIVATIONS:
- Support eco-friendly, high-quality brands.
- Transparent sourcing and sustainable packaging.
- Reliable and fast local delivery.

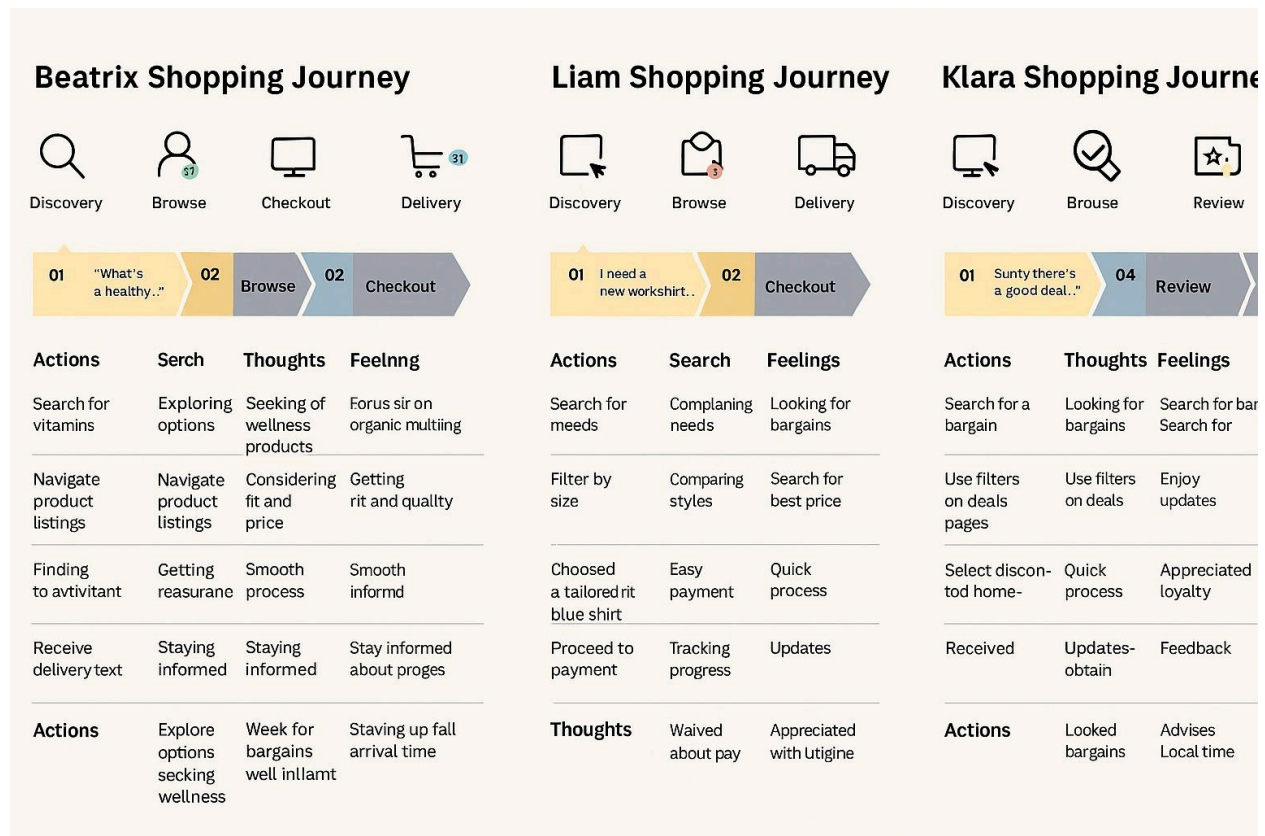## SHOPPING CHANNELS + BRANDS:

Prefers shopping through emails, SMS deals, and discount websites, and is influenced by brands like Groupon, Walmart, and Tesco discounts.

- Environmentally conscious; values eco-friendly products.
- Prefers quality over quantity.
- Researches products thoroughly before buying.

Journey Maps (More detailed one [here](#))

Beatrix Shopping Journey

Discovery · Browse · Checkout · Delivery

| 01 "What's a healthy.." | 02 Browse | 02 Checkout |

Actions	Serch	Thoughts	Feelnng
Search for vitamins	Exploring options	Seeking of wellness products	Forus sir on organic multiing
Navigate product listings	Navigate product listings	Considering fit and price	Getting rit and quallty
Finding to avtivitant	Getting reasurane	Smooth process	Smooth informd
Receive delivery text	Staying informed	Staying informed	Stay informed about proges
Actions	Explore options secking wellness	Week for bargains well inllamt	Staving up fall arrival time

Liam Shopping Journey

Discovery · Browse · Delivery

| 01 I need a new workshirt.. | 02 Checkout |

Actions	Search	Feelings
Search for meeds	Complaning needs	Looking for bargains
Filter by size	Comparing styles	Search for best price
Choosed a tailored rit blue shirt	Easy payment	Quick process
Proceed to payment	Tracking progress	Updates
Thoughts	Waived about pay	Appreciated with Utigine

Klara Shopping Journe

Discovery · Brouse · Review

| 01 Sunty there's a good deal.." | 04 Review |

Actions	Thoughts	Feelings
Search for a bargain	Looking for bargains	Search for bar Search for
Use filters on deals pages	Use filters on deals	Enjoy updates
Select discon-tod home-	Quick process	Appreciated loyalty
Received	Updates-obtain	Feedback
Actions	Looked bargains	Advises Local time

For each persona, current and optimized customer journeys were mapped:

- Issues: Long delivery windows, UK pricing, limited regional customization

- Solutions: Regional domains, local currency, targeted recommendations, multilingual UX

Process Flow Diagram
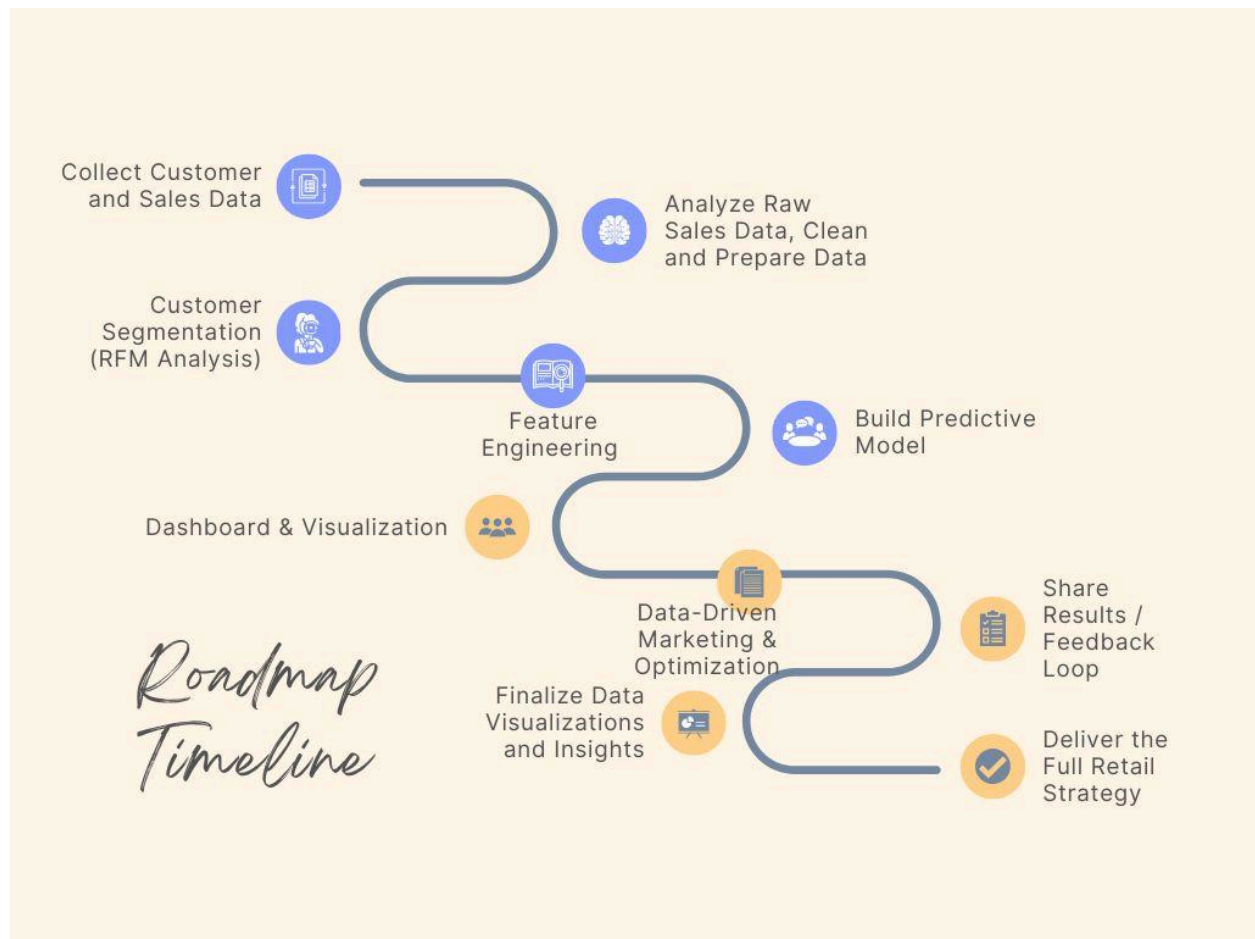
Illustrates how region-specific data feeds into centralized dashboards, analytics, and operations:

- Inputs: Regionally segmented transactions, user events.

- Outputs: Localized promotions, delivery optimization, customer support in native language

3. Analytics Use Cases

Use Case 1: Customer Churn Prediction

- **Goal**: Predict which customers are unlikely to return

- **Label**: Churn (defined as no order in 6 months)

- **Model**: Logistic Regression

- **Features**: Recency, Frequency, Monetary (RFM), Avg. Basket Size

- **Outcome**: Trigger personalized offers and segmented campaigns

Use Case 2: Market Penetration Forecasting

- **Goal**: Estimate growth opportunity in target countries

- **Model**: Random Forest Regressor

- **Features**: Market size, order value trends, platform traffic, promo spend

- **Outcome**: Forecast customer and revenue growth under various investment scenarios

Dataset

- **Source**: UCI Online Retail Dataset (541,909 rows)
  (https://archive.ics.uci.edu/dataset/352/online+retail)

- **Fields Used**: InvoiceNo, StockCode, Description, Quantity, InvoiceDate, UnitPrice, CustomerID, Country

- **Cleaning**: Removed null values, filtered cancellations, derived basket size and country segments

---

4. Dimensional Model

Fact Tables

- **fact_sales**: Revenue, Discount, Quantity, Currency, Tax Rate

- **fact_customer_activity**: Session count, frequency, last login, cart abandonment

- **fact_shipping_performance**: Order status, delivery time, feedback, return rate

Dimension Tables

- **dim_customer**: Demographic data, segment, churn label

- **dim_product**: Category, supplier, eco-tag, reorder rate

- **dim_geography**: Country, region, shipping class

- **dim_order**, **dim_promotion**, **dim_shipping_method**, **dim_date**

---

5. Governance Model

Data Dictionary & Tags

- Each column labeled by function: PII, KPI, Finance, Market Tier

- Includes compliance indicators (e.g., GDPR status)

Business Glossary (10 Key Terms)

- AOV – Avg Order Value

- CLTV – Customer Lifetime Value

- RFM Segment – Behavior scoring (Recency, Frequency, Monetary)

- Churn – No purchase in 6+ months

- Segment – Group of customers with shared traits

- Penetration Rate – Customers acquired vs. potential market

- Basket Size – Units per transaction

- Fulfillment Index – Delivery time + accuracy

- Cart Abandonment – Unconverted checkouts

- Product-Market Fit Score – Alignment between product & local interest

Ethical Considerations

1. Avoiding regional targeting bias

2. Data protection via encryption and pseudonymization

3. Equity in reactivation offers across segments

4. Regular retraining to reduce model drift

5. Interpretable model outputs for business use

---

6. Recommendations & Roadmap

Recommendations

1. Launch Dutch site and fulfillment center to serve B2B and B2C

2. Localize support, payments, and content for Ireland and Germany

3. Use churn model to activate "Lost" and "At Risk" segments

4. Deploy dashboards for real-time EU performance monitoring

5. Implement region-specific loyalty programs

Implementation Roadmap

- **Q2 2025**: Site + logistics go-live in Netherlands

- **Q3 2025**: Ireland CX launch, loyalty campaigns begin

- **Q4 2025**: German site launches with quality + eco-messaging

- **Q1 2026**: Full rollout of loyalty program, localized dashboards, KPI tracking
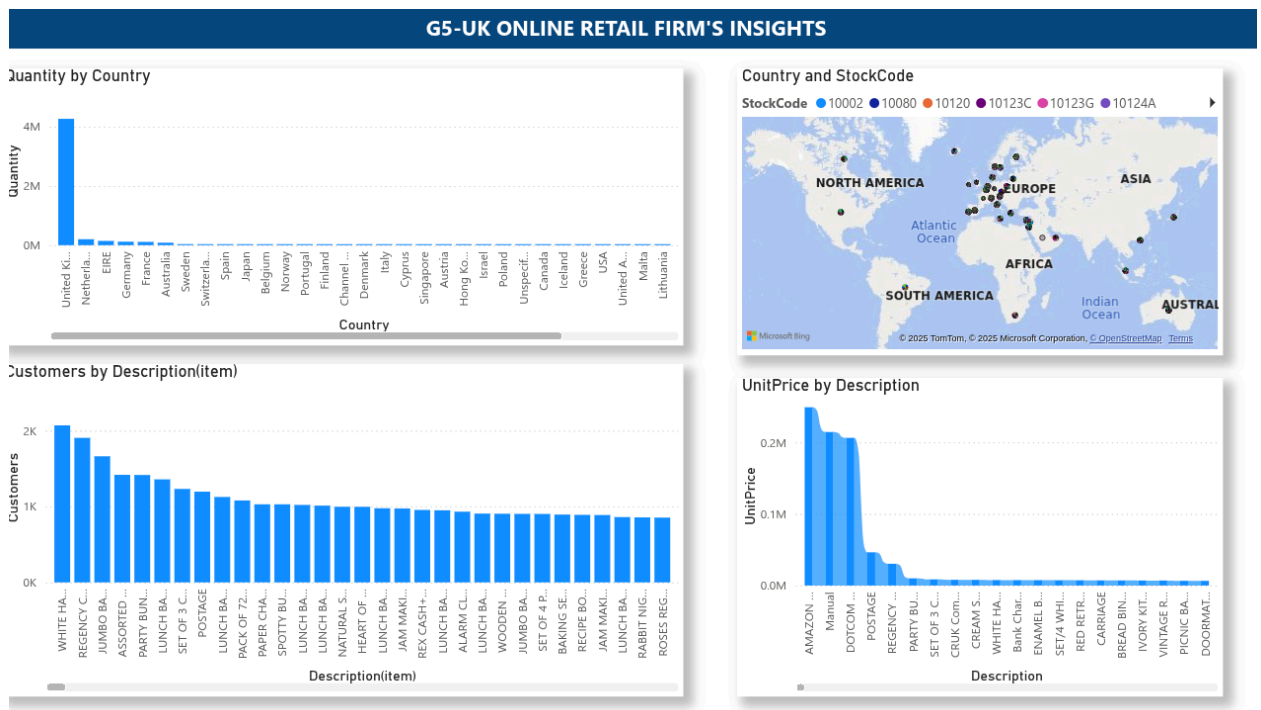
---

7. Lessons Learned & Challenges

- Data inconsistency required extensive filtering and standardization

- Journey mapping clarified market-specific needs

- Collaboration helped merge cybersecurity and analytics insights

- Predictive modeling exposed real cost of churn and gaps in strategy
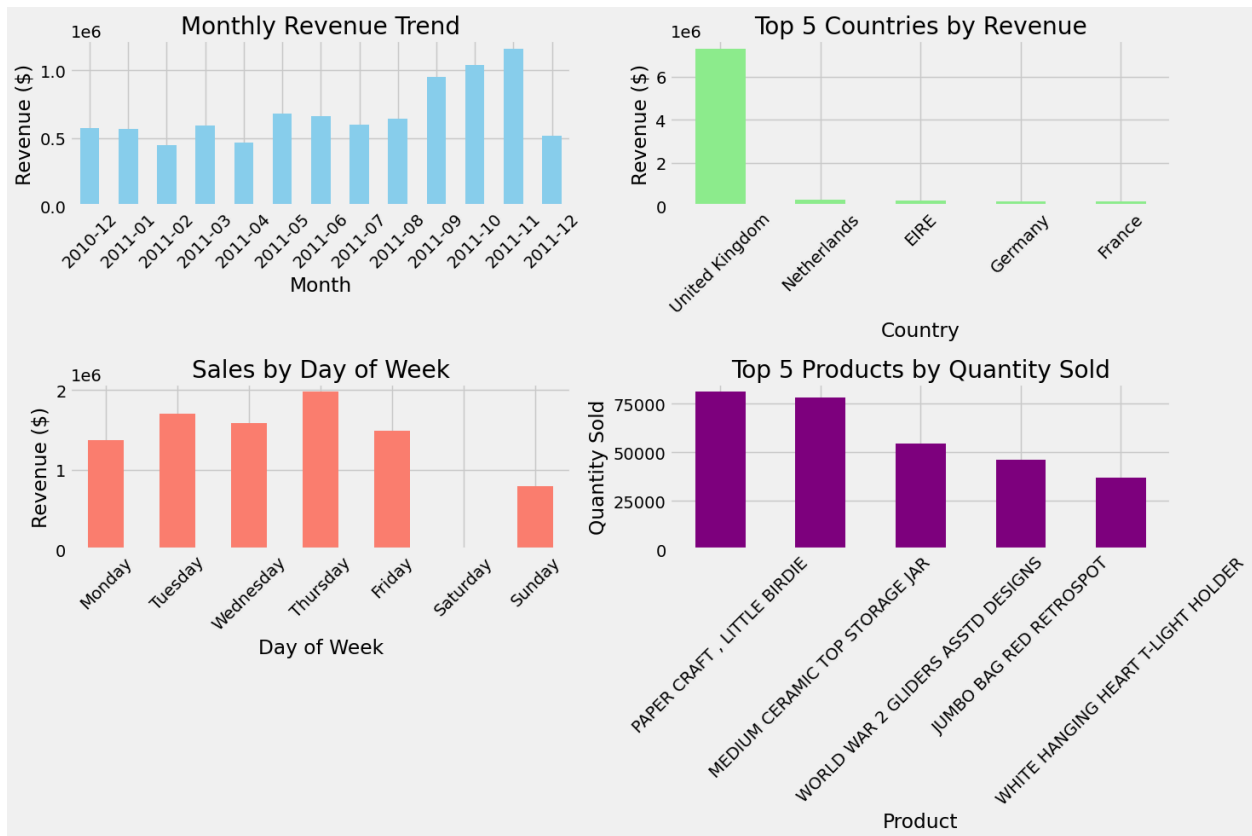
---

8. Appendices

- [Cleaned dataset (CSV preview)](https://github.com/olimiemma/UK-based-Retail-goes-Data-Driven-to-expand-into-) Link:
  https://github.com/olimiemma/UK-based-Retail-goes-Data-Driven-to-expand-into-
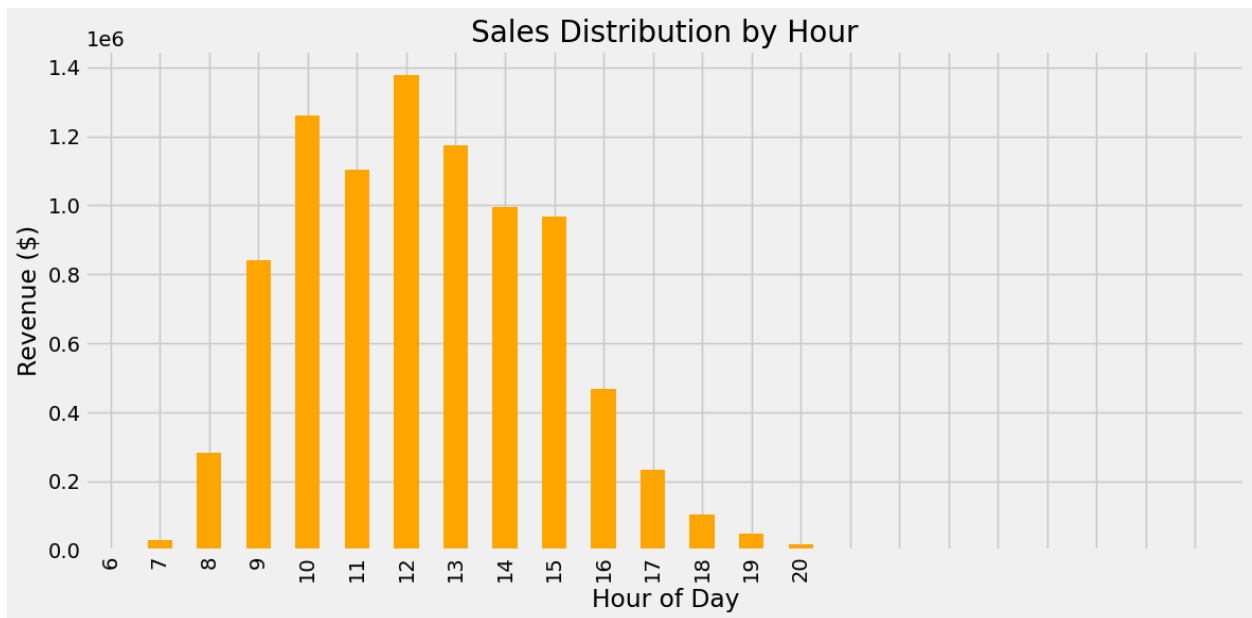
- **Dashboard**

Detailed dashboard:
https://app.powerbi.com/links/vuIVBahBpD?ctid=04c70eb4-8f26-4807-9934-e02e89266a
d0&pbi_source=linkShare

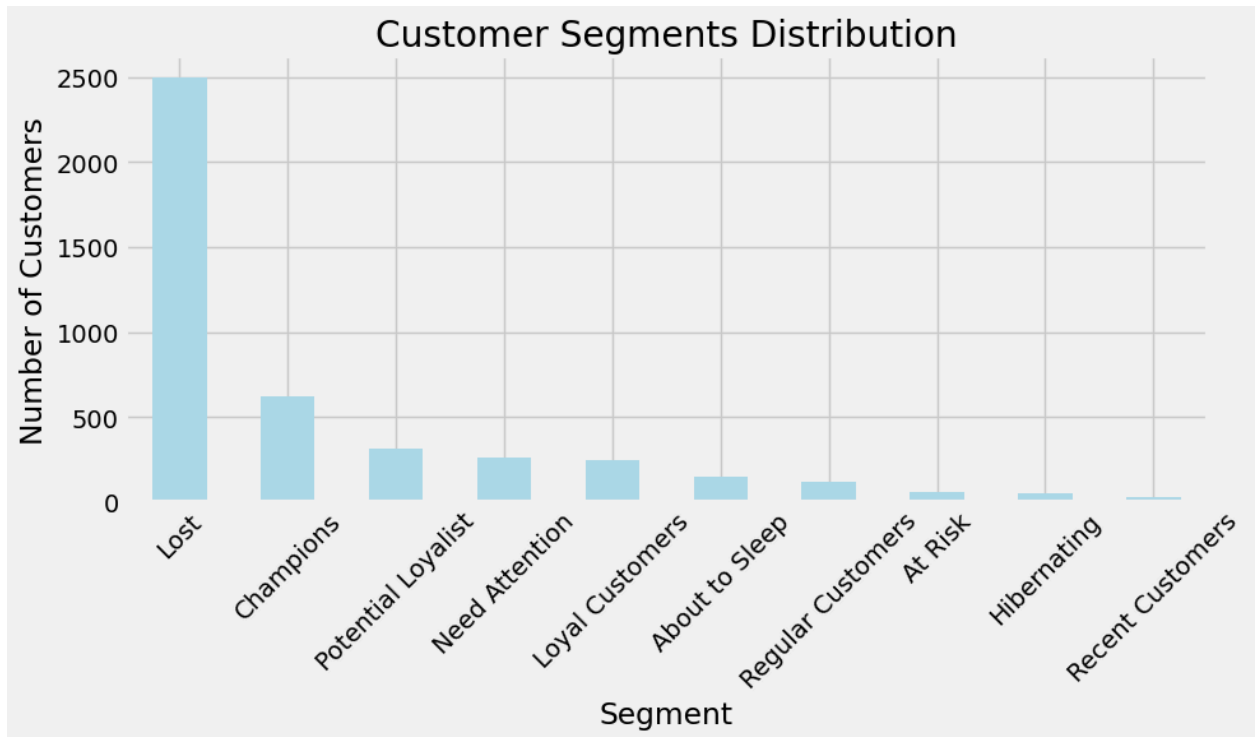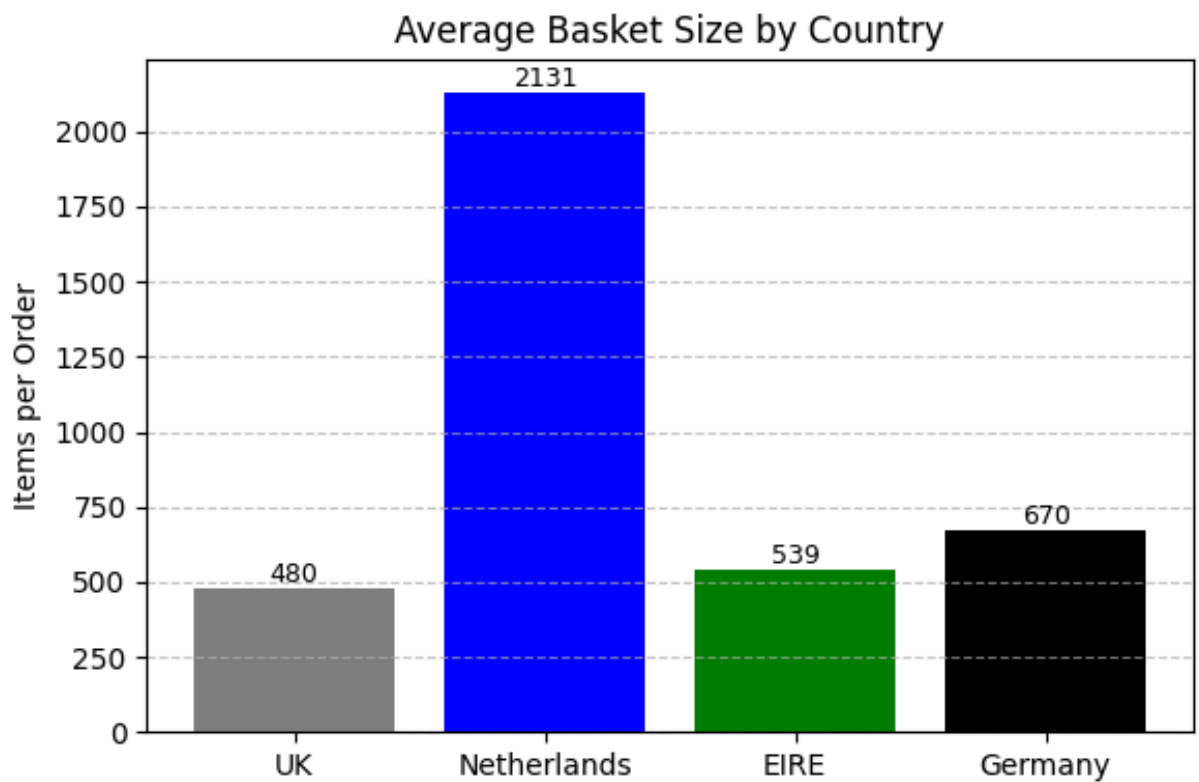- **Sales Overview, Geographic Analysis, Product Analysis:**

-

-

- **Customer Segmentation:**

-

- **Basket size**

-

- **Presentation file (.pptx)(attached with submission)**