

Project Coversheet

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Project Title (Example – Week1, Week2, Week3, Week 4)	Week4

Instructions:

Students must download this cover sheet, use it as the first page of their project, and then save the entire document as a PDF before submission.

Project Guidelines and Rules

1. Formatting and Submission

- Format: Use a readable font (e.g., Arial/Times New Roman), size 12, 1.5 line spacing.
- Title: Include Week and Title (Example - Week 1: Travel Ease Case Study.)
- File Format: Submit as PDF or Word file
- Page Limit: 4–5 pages, including the title and references.

2. Answer Requirements

- Word Count: Each answer should be within 100–150 words; Maximum 800–1,200 words.
- Clarity: Write concise, structured answers with key points.
- Tone: Use formal, professional language.

3. Content Rules

- Answer all questions thoroughly, referencing case study concepts.

- Use examples where possible (e.g., risk assessment techniques).
- Break complex answers into bullet points or lists.

4. Plagiarism Policy

- Submit original work; no copy-pasting.
- Cite external material in a consistent format (e.g., APA, MLA).

5. Evaluation Criteria

- Understanding: Clear grasp of business analysis principles.
- Application: Effective use of concepts like cost-benefit analysis and Agile/Waterfall.
- Clarity: Logical, well-structured responses.
- Creativity: Innovative problem-solving and examples.
- Completeness: Answer all questions within the word limit.

6. Deadlines and Late Submissions

- Deadline: Submit on time; trainees who fail to submit the project will miss the “Certificate of Excellence”

7. Additional Resources

- Refer to lecture notes and recommended readings.
- Contact the instructor or peers for clarifications before the deadline.

TechHub Retail 2025 Strategic Business Intelligence Report

1. Introduction

TechHub Retail, a UK-based online electronics retailer, has experienced rapid growth over the past 18 months. The purpose of this dashboard is to provide the executive team with **data-driven insights** into growth opportunities across products and regions, analyze seasonal trends, and offer actionable recommendations for the upcoming fiscal year.

2. Multi-Dataset Integration Summary

To create a holistic view of the business, three primary datasets were integrated:

- **Sales Data:** 12,000+ transactions (Jan 2023 - June 2024).
- **Customer Data:** Profiles for 3,500+ unique customers, including demographics and loyalty tiers.
- **Product Catalog:** Information on 300+ products, including cost prices and suppliers.,

These datasets were linked using **customer_id** and **product_id** as primary keys. Key calculated fields were developed to enhance analysis, including **Profit Amount** (Revenue minus Costs), **Profit Margin %**, and **Customer Lifetime Value (CLV)**.

3. Dashboard Design Summary

The Power BI dashboard is designed for executive-level oversight with the following interactive components:

- **Executive KPIs:** Highlights **Total Revenue (£436.14K)**, **Average Order Value (£2.52K)**, and a **Total Customer count of 3,500**.

Total Revenue and Sales Volume by Region

The dashboard indicates that the **West Midlands region** generated the highest total revenue, amounting to **436.14K**, alongside strong sales volume. This suggests effective market penetration and sustained customer demand within this region.

The concentration of both high revenue and quantity sold implies that regional sales strategies and distribution mechanisms are performing effectively. These practices may serve as a benchmark for underperforming regions.

Average Profit Margin by Customer Type and Loyalty Tier

The average profit margin across the business was recorded at **11.20%**, with notable variation across customer types and loyalty tiers. Higher loyalty tiers generally demonstrated improved margin performance, indicating that long-term customer engagement contributes positively to profitability.

Conversely, lower loyalty tiers and certain customer types generated reduced margins, potentially due to higher discounting or acquisition-related costs. This highlights the importance of margin-focused pricing and targeted retention strategies.

Average Order Value by Product Category and Region

The average order value (AOV) was calculated at **2.52K**, with disparities observed across product categories and regions. Certain product categories consistently achieved higher AOVs, particularly within specific geographic regions.

This suggests that regional purchasing behaviour and product preferences significantly influence transaction size. These findings support the use of targeted promotions and product bundling strategies to increase basket value.

Monthly Revenue by Loyalty Tier

Monthly revenue analysis revealed a generally positive trend, with loyalty-tiered customers contributing a substantial proportion of recurring revenue. This pattern indicates effective customer retention and highlights the value of loyalty programmes in stabilising revenue streams over time.

Such trends also provide a basis for improved revenue forecasting and long-term planning.

Customer Acquisition Rate by Gender and Loyalty Tier

The customer acquisition rate was measured at **25.98%**, with observable variation across gender groups and loyalty tiers. A majority of newly acquired customers initially entered the business at lower loyalty tiers, suggesting early-stage engagement rather than immediate long-term commitment.

This finding indicates a need for enhanced onboarding processes and targeted incentives to accelerate customer progression into higher-value loyalty segments.

Revenue and Supplier Distribution by Region

Regions with a higher number of active suppliers demonstrated stronger revenue performance. This relationship suggests that supplier availability and diversity positively influence regional sales outcomes.

Strengthening supplier partnerships and expanding supplier presence in lower-performing regions may unlock additional revenue opportunities.

Total Revenue and Sum of quantity by region

436.14K

Goal: 386 (+112,890.22%)
West Midlands

Average Profit Margin % and Count of customer_type by loyalty_tier

11.20!

Goal: 1224 (-99.09%)

Average Order Value and Count of product_category by region

2.52K

Goal: 320 (+687.83%)

Sum of revenue and Count of loyalty_tier by Month

75.55K

Goal: 250 (+30,121.89%)

Customer Acquisition Rate % and Count of gender by loyalty_tier

25.98!

Goal: 1224 (-97.88%)

Total Revenue and Count of supplier by region

436.14K

Goal: 320 (+136,194.45%)

Total Customers by region

3500

436.14K

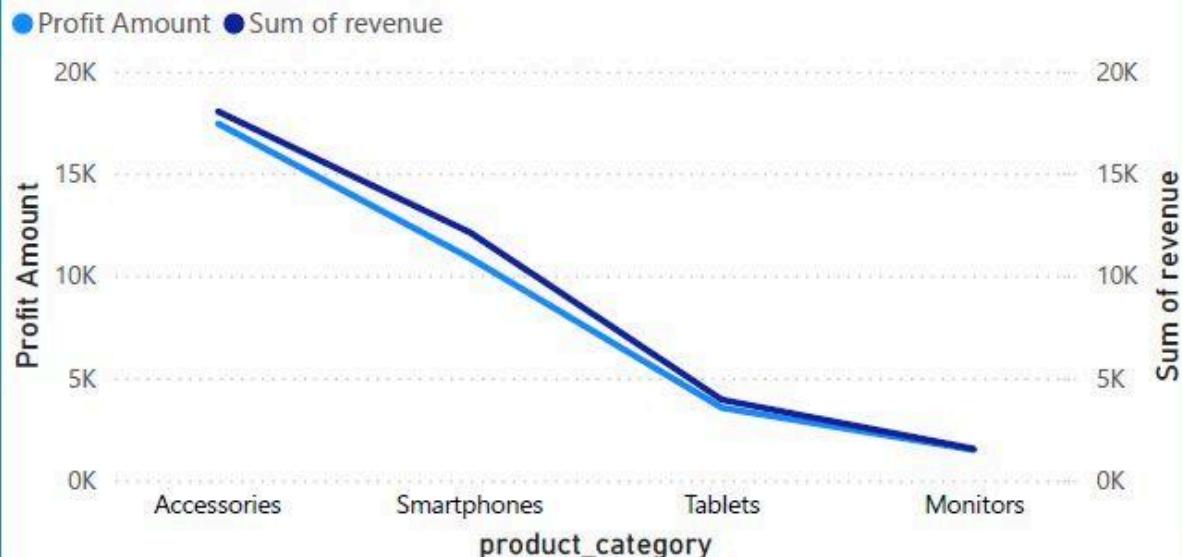
Total Revenue

• **Geographic Map:** A visualization of UK regions (London, North East, West Midlands, etc.)

to track regional revenue performance.,.

Profit and revenue analysis shows **Accessories and Smartphones** as the strongest product categories, contributing the highest profitability and sales value, while **Tablets and Monitors** underperform. Geographic revenue distribution indicates concentrated sales across major UK cities, highlighting regional demand disparities and opportunities for targeted market expansion.

Profit Amount and Sum of revenue by product_category



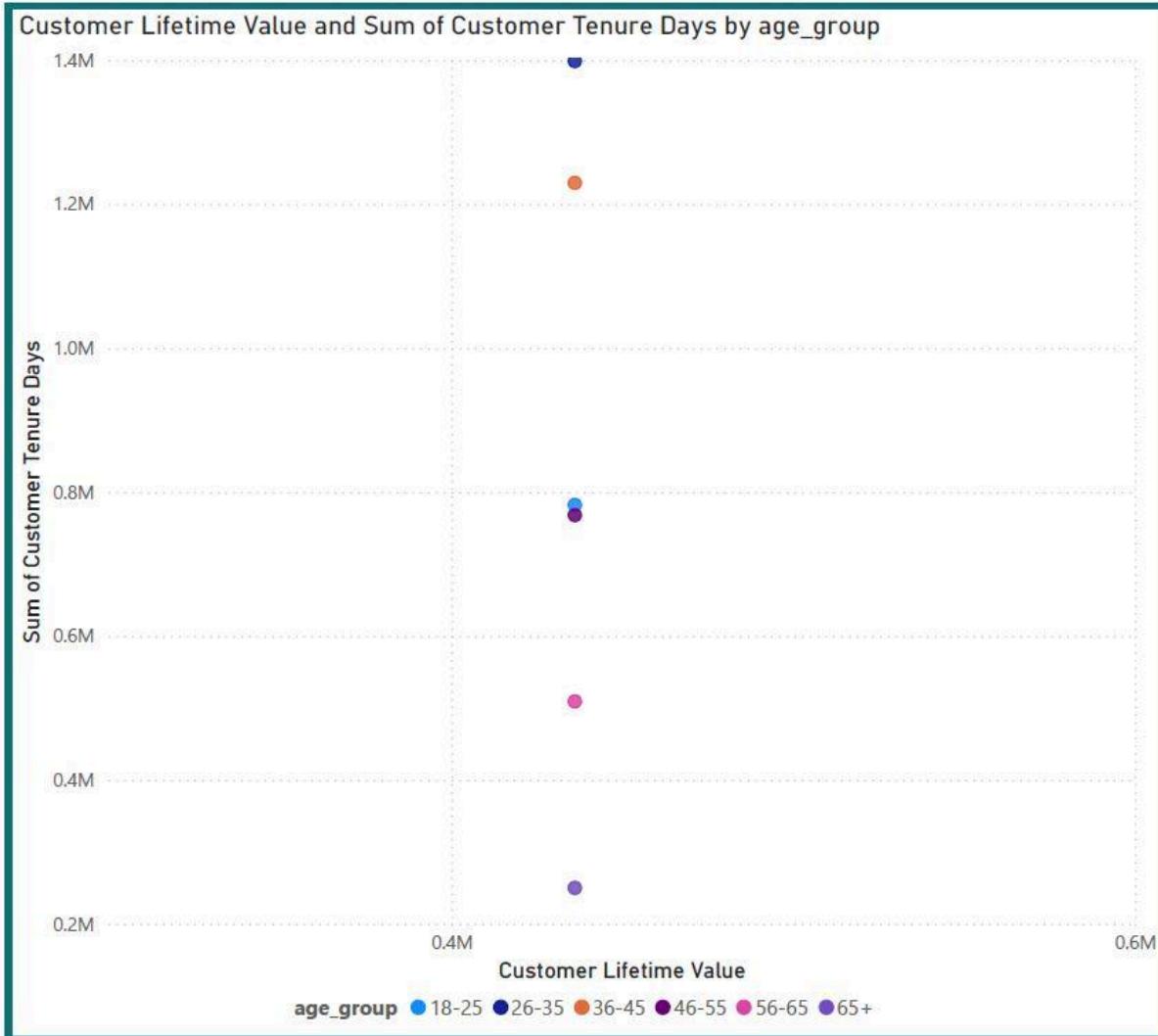
city and revenue



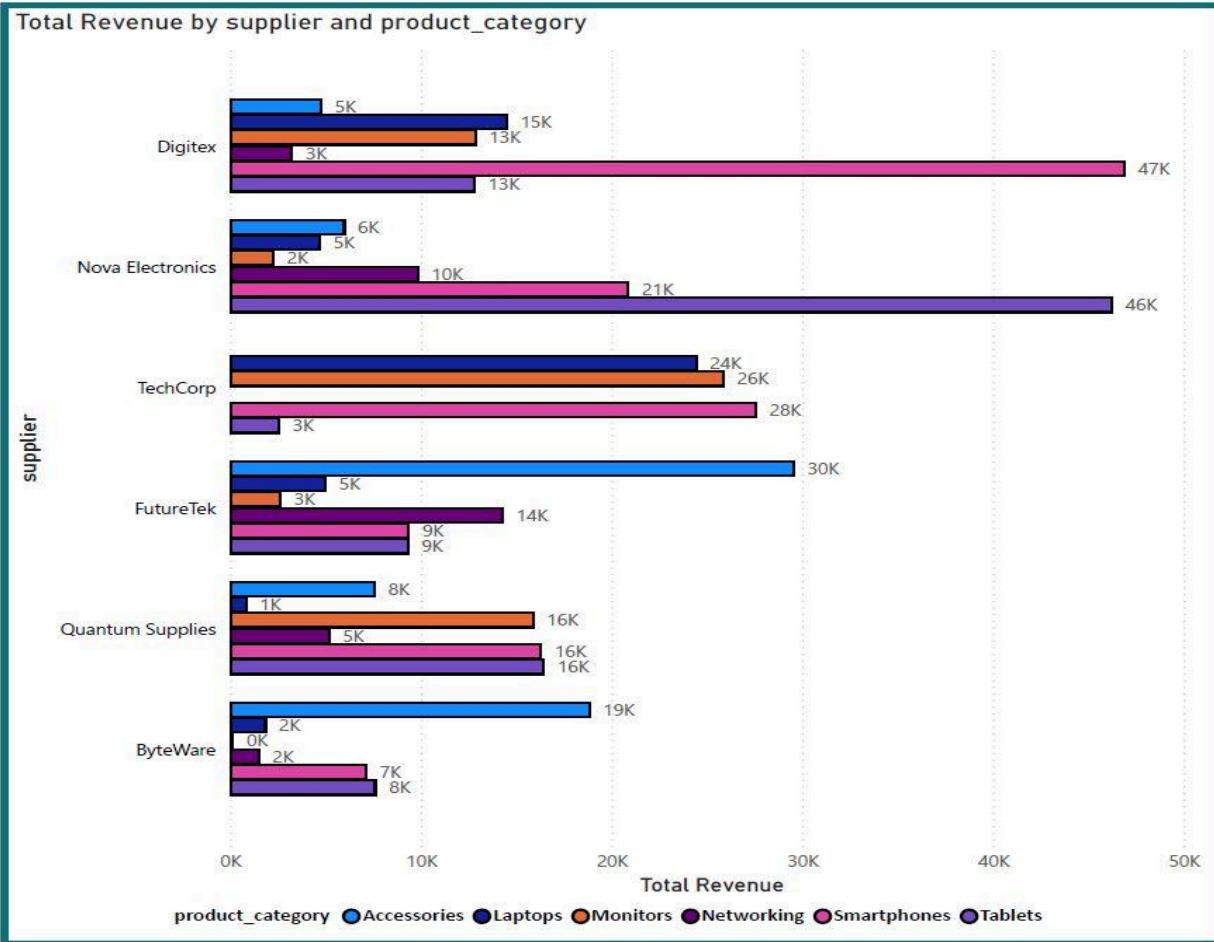
- **Customer Matrix:** A breakdown of Customer Lifetime Value and Tenure Days segmented by age group.

Customer Lifetime Value analysis shows **26–35 and 36–45 age groups** deliver the highest lifetime value and longest customer tenure, indicating strong retention and sustained spending.

Younger customers contribute moderate value, while older age groups show shorter tenure and lower lifetime value, highlighting opportunities for targeted retention strategies.



- **Product & Supplier Analysis:** A bar chart showing revenue distribution across suppliers like Digitex and TechCorp, categorized by product type.



- Interactive Filters:** Users can drill down by Month, Product Category, Region, and Loyalty Tier (Bronze, Silver, Gold)..

product_category

 Accessories
 Laptops
 Monitors
 Networking
 Smartphones
 Tablets

Region

 London
 North East
 North West
 Scotland
 South East
 South West
 Wales
 West Midlands

Month

 January
 February
 March
 April
 May
 June
 July
 August
 September
 October
 November
 December

loyalty_tier

 Bronze
 Gold
 Silver

4. Key Insights & Findings

- **Financial Health:** The business maintained an **Average Profit Margin of 11.20%** and achieved a **Customer Acquisition Rate of 25.98%.**
- **Product Performance:** **Smartphones** and **Tablets** are significant drivers of both revenue and profit amount.
- **Regional Trends:** The **West Midlands** and **London** show distinct revenue patterns, with city-level data providing granular performance metrics.,
- **Supplier Impact:** Suppliers such as **Digitex** and **TechCorp** contribute heavily to the Accessories and Laptops categories.

5. Business Questions Answered

1. **High-Margin Focus:** Tablets and Smartphones show strong profit margin potential compared to lower-margin categories like Networking.
2. **Demographic Impact:** CLV varies significantly across age groups, with the **18-25 and 26-35 segments** showing high engagement levels.
3. **Seasonality:** Revenue fluctuations are tracked monthly, allowing the team to identify peaks (e.g., January and December) for inventory planning.,
4. **Strategic Suppliers:** **Digitex** is a leading supplier in terms of total revenue contribution, particularly in the Accessories and Tablets categories.

6. Strategic Recommendations for 2025

- **Optimize Product Mix:** Shift marketing focus toward **high-margin Smartphones and Tablets** to improve the overall average profit margin from 11.20%,.
- **Targeted Loyalty Campaigns:** Use the **CLV vs. Tenure** data to create personalized retention programs for "Silver" and "Bronze" tier customers in high-growth regions like the West Midlands.,
- **Supplier Renegotiation:** Review contracts with top-tier suppliers like **Digitex** and **TechCorp** to improve margins on high-volume items.

To address underperformance in regions such as the **North East, Wales, or Scotland**, consider the following data-driven strategies:

1. Optimize Regional Product Mix

The sources indicate that **Tablets and Smartphones** are the primary drivers of both revenue and profit amount across the business.

- **Strategy:** In lower-performing regions, TechHub Retail should prioritize inventory and marketing spend on these high-margin categories rather than lower-margin categories like Networking.
- **Action:** Ensure that popular products from top-performing suppliers like **Digitex** and **TechCorp** are prominently featured in regional digital advertising campaigns.

2. Targeted Demographic Marketing

Analysis of the Customer Segmentation Matrix shows that the **18-25 and 26-35 age groups** have the highest **Customer Lifetime Value (CLV)** and engagement levels.

- **Strategy:** Perform a demographic analysis of the lower-performing regions. If these areas have a high population of younger consumers, launch targeted social media campaigns through the most effective **customer acquisition channels**.
- **Action:** Use the dashboard's "Age Group" and "Loyalty Tier" filters to identify if low-performing regions are failing to convert these high-value younger demographics.

3. Localized Loyalty Incentives

The dashboard tracks the **Customer Acquisition Rate** and performance by **Loyalty Tier** (Bronze, Silver, Gold).

- **Strategy:** Introduce region-specific incentives to move "Bronze" tier customers to "Silver" or "Gold" status. High-performing regions like the **West Midlands** can serve as a benchmark for what successful loyalty engagement looks like.
- **Action:** Offer localized promotions (e.g., "Free shipping to the North East for Gold members") to increase retention and average order value, which currently sits at **£2.52K** across the business.

4. Seasonal and Trend Alignment

The project brief highlights the importance of analyzing **seasonal patterns**.

- **Strategy:** Use the "Sum of revenue by Month" visual to see if lower-performing regions follow the same seasonal peaks (such as the January/December peaks) as the high-performing ones.
- **Action:** If a region is lagging during a typically high-performing month, it may indicate a failure in local logistics or a mismatch in regional product demand during that season.