



## Data Analytics and Business Modelling in Business Development

# Case Study 1 Title: Launching a New E-commerce Business – Start-Up Phase

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## 1. Case Study Overview

In this case study, you will work with a hypothetical start-up business in the early stages of its development. The business is a small e-commerce venture focusing on selling eco-friendly products. You will use descriptive and diagnostic analytics to review the business's current state, explore financial reports, and help the company make data-driven decisions to drive early growth.

This case study will help you understand how analytics and financial data interact in the start-up phase, emphasizing how data informs decision-making to create a strong foundation for growth.

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## 2. Business Briefing

**Business Name:** EcoGoods

**Industry:** E-commerce (Retail)

**Founded:** 1 year ago

**Product Line:** Eco-friendly household items (reusable bags, bamboo toothbrushes, compostable packaging, etc.)

**Current Size:** 4 employees (1 founder, 3 part-time staff for order fulfilment and customer service)

**Business Stage:** Start-up (transitioning to early growth)

**Target Market:** Environmentally conscious consumers aged 18-45, primarily based in the UK

**Sales Channels:** Website, online marketplace (e.g., Etsy, Amazon)

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## 3. Hypothetical Business Status

### Background:

EcoGoods launched one year ago with a small product line of eco-friendly household items. Initially, the business saw moderate success through word-of-mouth and social media marketing. The founder, Claire, wants to scale the business, but sales have been fluctuating, and the business is not yet profitable.

### Challenges:

- Lack of consistent marketing strategy.
- Inconsistent sales over the last quarter.
- Cash flow issues are causing operational strain.

- No clear understanding of customer demographics and preferences.
- Limited budget for scaling operations and marketing.

#### Opportunities:

- Growing interest in eco-friendly products.
- Positive customer feedback and repeat purchases from a small segment of loyal customers.
- Potential to expand the product line or enter new markets.

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## 4. Financial Report (Sample)

Financial Metrics	Current Quarter	Previous Quarter
Revenue	£20,000	£24,000
Cost of Goods Sold (COGS)	£9,000	£10,000
Gross Profit	£11,000	£14,000
Operating Expenses	£12,000	£11,500
Net Profit	-£1,000	£2,500
Cash Flow (Operating)	-£500	£1,000
Number of Orders	600	750
Average Order Value	£33.33	£32.00
Customer Acquisition Cost	£8.00	£6.50
Customer Lifetime Value	£60.00	£55.00

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## 5. Business Objectives

#### Short-Term Goals:

- Increase sales by 20% in the next quarter.
- Improve cash flow to support day-to-day operations.
- Expand the customer base with targeted marketing strategies.

#### Long-Term Goals:

- Scale the business by adding new eco-friendly products.
- Achieve profitability within the next 6 months.
- Build a loyal customer base and reduce customer acquisition costs.

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## 6. Key Challenges

You will use data analytics to address the following challenges:

- **Inconsistent Sales:** Analyse historical sales data to identify trends and determine why sales have been dropping.

- **Customer Acquisition:** Examine the effectiveness of current marketing strategies and diagnose which tactics are driving conversions.
  - **Cash Flow Issues:** Explore the company's cash flow and operational costs to suggest ways to reduce expenses or increase revenue.
  - **Customer Preferences:** Analyse customer demographics and behaviour to understand who the most valuable customers are and how to target them more effectively.
  - **Marketing Spend Efficiency:** Investigate how marketing budget is being spent and whether it is delivering a return on investment.
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## 7. Steps and Structure of the Case Study

### Part 1: Business Analysis Using Descriptive Analytics

- **Objective:** Review the historical sales, customer demographics, and financial performance of EcoGoods.
- **Activities:**
  - You will analyse revenue trends, profit margins, customer order behaviour, and operational costs.
  - Use Excel or a similar tool to visualize trends in sales, orders, and marketing spend.
  - Build charts showing key metrics (e.g., monthly sales, customer acquisition costs, average order value).

### Part 2: Diagnostic Analytics for Identifying Causes

- **Objective:** Understand the root causes behind fluctuating sales and cash flow issues.
- **Activities:**
  - Drill down into the data to explore why revenue dropped despite strong customer feedback.
  - Conduct correlation analysis to explore relationships between marketing spend, customer demographics, and sales performance.
  - Identify key areas of concern, such as high operational costs or ineffective marketing strategies.

### Part 3: Data-Driven Recommendations for Business Growth

- **Objective:** Based on the data analysis, recommend actions that EcoGoods can take to improve its financial health and prepare for growth.
- **Activities:**
  - You will propose strategies for increasing sales, such as refining the marketing approach, launching new products, or entering new markets.
  - Build a simple business growth plan using data-driven insights from the analysis.

- Consider risk and risk mitigation strategies when proposing business development ideas.

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## 8. Expected Learning Outcomes

At the end of the case study, you should:

- Be able to use descriptive analytics to summarize key business performance metrics.
- Apply diagnostic analytics to identify the causes behind fluctuating sales and profitability.
- Develop a set of actionable, data-driven recommendations to improve the business's financial outlook.
- Understand how analytics inform decision-making in the start-up stage of business development.

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## 9. Assessment Criteria

- **Data Analysis Quality:** How well did you interpret the data and identify trends?
- **Diagnostic Insights:** Were the root causes behind the business's issues identified correctly?
- **Recommendations:** Are the proposed recommendations based on sound data analysis? Are they actionable and realistic for a start-up business?
- **Risk Consideration:** Did you account for risks in your growth strategy? Did you propose risk mitigation measures?

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This case study provides practical, hands-on experience with using data analytics in the start-up phase of business development, equipping you with essential skills for early-stage business success.

