BUSINESS INTELLIGENCE PROJECT BRIEF

Cloud Kitchen Operational Analytics System

Client Information

Business Name: Cloud Kitchen
Owner: Sam
Industry: Food Service (Takeaway & Delivery)
Business Model: Online orders, pickup & home delivery only (no dine-in)

---

1. Background

Cloud Kitchen is a newly launched takeaway and delivery restaurant specializing in pizzas, beverages, and desserts. The business operates entirely through online ordering and delivery channels.

As daily operations expand, the owner requires visibility into business performance to support operational and financial decisions. Currently, business activities generate data but lack a structured system to store, organize, and analyze it.

Without analytics, the business cannot reliably determine:

• When demand is highest
• Which products generate revenue
• Which ingredients drive cost
• When to restock supplies
• Whether staffing levels are efficient

To support sustainable growth, Cloud Kitchen requires a centralized data and reporting system.

---

2. System Context

A separate software vendor is responsible for developing the customer-facing ordering application.

This project focuses strictly on the **backend data and analytics layer**.

The system designed here will:

• Receive transactional data generated by the ordering system
• Store operational data in a structured relational database
• Transform raw data into analytical datasets
• Provide dashboards for operational decision making

The system will not handle customer interaction or order processing, but will serve as the business intelligence engine used by management.

---

3. Project Objective

The objective of this project is to design and implement a Business Intelligence solution that converts daily operational activity into actionable insights.

The solution must allow the business to:

• Monitor sales performance
• Detect demand patterns
• Track ingredient usage
• Prevent stock shortages
• Control labour expenses
• Support data-driven decisions

---

4. Scope of Work

The project will deliver three core components:

1. Operational Database

Design and implement a normalized relational database capable of storing business operational data.

2. Analytical Data Layer

Transform operational records into structured analytical views suitable for reporting and visualization.

3. Business Dashboards

Create dashboards to monitor key operational areas:

- Sales Performance
- Inventory Management

- Staff Performance

---

5. Data Requirements

The system must capture and process data across three operational domains.

A. Customer Orders & Sales Performance

The business needs to understand customer behaviour and revenue trends.

The system must record:

• Order date and time
• Items purchased
• Quantity sold
• Item category and size
• Payment method
• Delivery location
• Order value

The dashboard must answer:

• How many orders are received?
• What is total revenue?
• What is the average order value?
• Which products sell the most?
• When are peak order hours?
• What categories generate the most sales?

B. Inventory & Ingredient Usage

The business must maintain stock availability while controlling food cost.

The system must:

• Store ingredient details and purchase cost
• Track ingredient usage per menu item
• Monitor current stock levels
• Calculate ingredient consumption
• Estimate cost contribution per ingredient
• Identify low stock and reorder thresholds

The dashboard must answer:

• Which ingredients are used most?
• Which ingredients cost the most?
• What percentage of stock remains?
• Which ingredients require restocking?

C. Staff & Labour Cost Monitoring

The business needs visibility into workforce efficiency and payroll cost.

The system must:

• Record staff members and roles
• Track working shifts and hours
• Store hourly wage rates
• Calculate labour cost per shift
• Summarize cost per employee and role

The dashboard must answer:

• What is total labour cost?
• How many hours are worked?
• Which roles cost the most?
• Is labour cost driven by workload or wage rate?

---

6. Deliverables

The project will provide:

1. Relational database schema
2. Clean analytical data views
3. Interactive dashboards

Dashboards include:

• Orders & Sales Dashboard
• Inventory Dashboard
• Staff Performance Dashboard

---

7. Expected Outcome

After implementation, Cloud Kitchen will be able to:

• Identify peak demand periods
• Understand revenue drivers
• Monitor ingredient consumption
• Prevent stock shortages
• Track staffing efficiency
• Make informed operational decisions

The system establishes a scalable foundation for data-driven restaurant management.