**Civic Systems - Business Case**

**Project:** Improving Customer and Web Order Database for Emily Bakes Cakes

**1 - BACKGROUND**

**Problem:** Emily loses about 3-5 orders per month, costing her about $4,800 per year due to misplaced/lost paper order slips. Her company is also affected by the difficulty of storing previous customer data and orders. These inefficiencies and lack of organization cause an immediate loss in revenue, reduced customer satisfaction, and harm to the company’s reputation. The company currently has a 4-year-old desktop that needs to be upgraded. Additionally, the company needs the infrastructure for a database to store orders and other customer information.

**2 - PROJECT DETAILS**

**Proposition 1: The Amazon RDS with MySQL Option -** Upgrade the desktop and setup Oracle Fusion Cloud ERP

* Desktop model: Dell OptiPlex Small Form Factor Plus
  + Specifications:
    - * CPU - Intel Core i9 14900 vPro
      * Operating System - Windows 11
      * RAM - 64 GB: 2 x 32GB, DDR5
      * Storage - 1TB M.2 PCIe NVMe Class 35 SSD
      * Wi-fi card - Intel Wi-fi 6E AX21,2x2, 802.11ax
      * Wireless Keyboard and Mouse included
      * Systems Management - Intel vPro Enterprise
* Amazon Relational Database Service with MySQL
  + MySQL database engine
  + Order managment
  + Customer Data management
  + Up to 64 TebiBytes of Storage
  + Multi-region disaster recovery
  + Automatic software patching

**Proposition 2: Homebrew System -** Upgrade the desktop and set up an in-house database server using MySQL

* Desktop model: Dell OptiPlex Small Form Factor Plus
  + Specifications:
    - * CPU - Intel Core i9 14900 vPro
      * Operating System - Windows 11
      * RAM - 64 GB: 2 x 32GB, DDR5
      * Storage - 1TB M.2 PCIe NVMe Class 35 SSD
      * Wi-fi card - Intel Wi-fi 6E AX21,2x2, 802.11ax
      * Wireless Keyboard and Mouse included
      * Systems Management - Intel vPro Enterprise
* Proprietary MySQL Database includes:
  + Order management
  + Customer data management
  + Civic Systems IT help at no cost

**NOTE:** For both propositions, we, Civic Systems, will handle setting up hardware and software.

**3 - COST-BENEFIT ANALYSIS**

| **Prop. 1 - Amazon RDS with MySQL** | **Prop. 2 - Homebrew** |
| --- | --- |
| **Cost:** Desktop - $2,400  Amazon Database- $135.78 per month  (Reserve Instance: db.t4g.xlarge)  (East Ohio Region)  Set up & Training - $375  **Upfront cost: $2,910.78** | **Cost:** Desktop - $2400  Set up & training - $750  **Upfront Cost: $3,150** |
| **Benefits:**   * Amazon RDS offers a comprehensive package for all of Emily’s business needs. * The server is owned by Amazon, therefore database hosting, maintenance, and security are their responsibility. * Widely supported and understood by IT individuals * Quicker set-up time compared to Prop. 2. Estimate: 3 hours * Lower upfront cost compared to Prop. 2. | **Benefits:**   * While upfront cost is pricier than Prop. 1, the monthly cost is significantly lower * Proprietary system, we can tailor it to the company’s specific needs. * We would not charge the company for IT service. |
| **Cons/Risks:**   * May have to pay for IT services from Amazon * Monthly cost to use service * Overall more expensive on a monthly basis. | **Cons/Risks:**   * An in-house server means Emily is responsible for maintenance and security * Proprietary systems require specific individuals (namely Civic Systems) to work and fix it. * Estimated 6-hour setup time. |

**4 - METRICS FOR PROJECT SUCCESS**

To measure how successful the project will be we will use the following KPIs:

* Increase in revenue
* Increase in customer satisfaction score
* Increase in company reputation score
* Decrease in the number of unfulfilled/canceled orders
* Decrease in late orders
* Decrease in refunds