**IST722 Group Project Milestone#1 Document**

Team 1 - Xuehan Chen, Yue Wang, Yimin Xiao, Chiau Yin Yang

1. **Project charter**

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| **Project Name** | Fudgemart Data Warehousing & BI Program |
| **Project Description/ Mission** | This project will use the data in the Fudgemart database and create four data marts from various business processes for strategic decision support system and further business intelligence / analytics. |
| **Business Case** | Due to the normalized data form in the Fudgemart database, it's time-consuming for business users to generate necessary reports. Our goal is to solve this problem and help Fudgemart company to make better business decisions, and further outperform other competitors.  Here are the 4 business processes we focus on building data marts:   1. Product quality review 2. Automatic payroll system - employee anomaly detection 3. Shipment time monitoring management 4. Risk assessment |
| **Milestone** | Project start: 09/21/2019  Project completion: 12/04/2019 |
| **Deliverables** | • Business requirement documents  • Dimensional modeling worksheet  • Data quality report  • ETL scripts and documents  • UAT and SIT test plan and report |
| **Team Members** | Business lead: Chiau Yin Yang  Project Management: Xuehan Chen  Business Intelligence architect: Yue Wang  ETL architect: Chiau Yin Yang  Data architect: Yimin Xiao  Business analyst: Xuehan Chen |
| **Risk Assessment** | • Fudgemart company cannot provide adequate technical support  • Team members suddenly quit their job  • Users require more needs  • Need to use unknown technology  • The system cannot be implemented on time |

**Signature**

Project Manager: Head of Information Technology:

Date: Date:

1. **Project plan**
   1. Outline functional requirements and business processes
   2. Conduct high-level and detailed business modeling
   3. Implement data warehouse and ETL process in SQL
   4. Implement BI intelligence dashboards or tools in Excel or PowerBI
2. **Preliminary functional requirements based on your activity of profiling data in Fudgemart, Inc.’s databases**
   1. Business users must be able to review product information and order details to monitor shipment activities
   2. Human resource management must be able to access employee timesheet information to review payroll system
   3. Department managers must be able to access vendor information to assess quality
   4. Management users must be able to view order details and payment information to further devise transaction precaution measures
   5. Related management team must be able to access all dimensions in the database
3. **Overview which business processes you will model from those functional requirements and explain their business value**
   1. Product quality review: this is a process to periodically analyze how many products are provided by and purchased from each vendor for each department, and the general satisfaction rate given by customers. It can help to evaluate product and vendors more effectively, better negotiate with vendors, and further improve product quality. Ultimately, the goal is to increase customer satisfaction and achieve higher overall revenue and satisfaction.
   2. Automatic payroll system: this is a process to automatically calculate salaries payable for each employee so it can reduce human errors and alleviate the pressures of manual calculation on bi-weekly payroll. The process can help the management team oversee how many hours each employee works in one payroll cycle (usually half a month) and detect possible anomalies, to compare salaries across different job titles and departments, and to consider the reasonability of salary allocation structure.
   3. Shipment time monitoring management: this process analyzes how many days it takes to complete an order by automatically calculating the shipment days, and how many orders yet to be shipped, in transit or fulfilled. It aims to improve shipment process time and customer satisfaction. This process will use data from both Fudgemart and Fudgeflix.
   4. Risk analysis: this is a process to assess possible business loss from the orders that customers might fail to pay due to a variety of reasons. Our business process focus on calculating time difference between credit card expiration date and order date. The system will automatically decline orders that the credit card expiration days are within 5 business days, and only ship orders that are approved (expiration date is at least 5 business days away). Every week, management team will receive a report with the number of orders that are declined and attempted by which customers. The goal is to prevent financial fraud and detect suspicious activities to further avoid business loss.
4. **Primary roles of the team**
   1. Project manager - Xuehan Chen
   2. BI - Xuehan Chen
   3. ETL - Chiau Yin Yang
   4. Data modeling - Yue Wang