Business Process Mapping

Project File



**Role Definition:**

Project Name: Business Process Mapping

Project Sponsor: Worldwide Terra Friendly (WTF) Enterprise Pty Ltd

Sponsor Representative: PJ Wilson

Representative Position: Chief Executive Officer

Project Team Name: Sun Engineering Design Ltd

Project Co-ordinator Name: Heang Sok

Project Members Name: Guanting Li

Jingyi He

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**Tittle Page**

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Course Name: GC 202001 9133ENG Project Management for Postgraduates

Report Title: Business Process Mapping Project

Project Team Name: Sun Engineering Design Ltd

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& student I.D’s: Gruanting Ly LIGM2001

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Course Co-ordinator: PJ Wilson

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**Title Page** 01

**Executive Summary** 07

**Project Concept Planning** 09

1. Overview 11
   1. Project Summary 11
      1. Purpose, Scope and Objectives 11
      2. Assumptions and Constraints 12
      3. Project Deliverables 12
         1. Software Deliverables 12
         2. Hardware Deliverables 12
         3. Documentation Deliverables 13
   2. Plan Evolution 13
   3. Project Charter 15
   4. Team Charter 17
      1. Context 17
      2. Mission and Objectives 17
      3. Rules of Behaviour 17
      4. Communications 18
      5. Project Team 18
2. Project Organisation & Stakeholder Management Strategy 19
   1. Stakeholder Identification 19
      1. Introduction 19
      2. Identify Stakeholders 19
      3. Key Stakeholders 20
      4. Stakeholder Analysis 20
   2. External Interfaces 22

**Project Management Planning** 23

1. Managerial Process Plans 25
   1. Management Objective and Priorities 25
   2. Start-up-Plan 25
      1. Staffing Plan 26
   3. Reporting Plan 26
   4. Project Management Plan 27
      1. Introduction 27
      2. Project Management Approach 27
      3. Project Scope 27
      4. Milestone List 27
      5. Schedule Baseline and Work Breakdown Structure 28
      6. Communications Management Plan 29
      7. Cost Management Plan 30
      8. Procurement Management Plan 30
      9. Schedule Management Plan 30
      10. Quality Management Plan 31
      11. Risk Management Plan 33
      12. Risk Register 33
      13. Staffing Management Plan 34
      14. Cost Baseline 35
   5. Engineering Plan 35
      1. Research 35
      2. Alternative Solutions 36
      3. Evaluation 36
      4. Monitoring 36
      5. Communication 36
   6. Knowledge Management Plan 37
   7. Quality Management Plan 37
   8. Issues/Conflict Resolution Plan 37
      1. Establishing Requirements to Avoid Conflict Later 37
      2. Minimising Conflicts Among Team Members 37
      3. Setting Standards for Conduct 38
      4. Handling Conflicts Effectively 38
   9. Monitoring Controlling Strategies 39
      1. Weekly Team Meetings 39
      2. Client Meetings 39
      3. Brainstorming Meeting 39
      4. Paired Tasks 40

**Project Planning** 41

1. Project Management 43
   1. Project Plan 43
      1. Project Management Methodology(s) Used 43
      2. Design / Specification / Performance Criteria 43
      3. WBS, Tasking and Scheduling 44
      4. Resource Allocation and Accounting 44
      5. Financial Allocation and Accounting 44
   2. Design File 45
   3. Acceptance Testing & Calculations 45
   4. Delivery 45
   5. Communications 45
   6. Progress Reporting 45

**Project Closure** 47

1. Quality Management 49
   1. Lessons Learned 49
      1. Introduction 49
      2. Lessons Learn Approach 49
      3. Lessons Learned From This Project 50
      4. Process Improvement Recommendations 50
   2. Post Project Review 51
      1. Project Summary 51
      2. Project Deliverables (Planned vs Actual) 51
      3. Project Costs 52
   3. Project Schedule 53
   4. Recommendations 53

**GUC Closure** 55

1. GUC 1007ENG Project Summary & Closure 57
   1. The Designing Method 57
      1. Research 57
      2. Generation of Alternative Solutions 58
      3. Evaluation of Alternatives Against the Criteria 58
      4. Monitoring, Reviewing and Checking the Outcomes 58
      5. Communicating Recommendations to the client 58
   2. Project Management 59
      1. Project Management Methodology(s) Used 59
      2. WBS, Tasking & Scheduling 59
      3. Resource Allocation, Accounting and Variance 60
      4. Financial Allocation, Accounting and Variance 60
      5. Risk Performance 60
   3. Reflection on Teamwork 61
      1. Peer Assessment 61
      2. Lessons Learned 61
   4. Conclusion 61
   5. Recommendations 62

**Reference List** 63

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**Executive Summary**

The Sun Engineering Design proposes to design and de-risk a Business Process Mapping at the request of the Project Sponsors for Asian Plus Kitchen, in Brisbane city, Queensland. The business process mapping will be visualized as a flowchart of a sequence of activities with interleaving decision points or as a process matrix of a sequence of activities with relevance rules based on data in the process. The benefits of this business process mapping project includes improved customer satisfaction and developed agility for reacting to rapid market change; it will also enhance and facilitate the ordering performance outcome.

To achieve this project in high standard, Sun Engineering Design team has used both Project Management Book of knowledge (PMBOK) and Project in Controlled Environment (Prince 2) [1][2]. This project also illustrates Project Concept Planning, Project Management Planning, and Project Planning. It also discusses about design file, milestone, project chart, and stakeholders.

The major findings and results on this Business Process Mapping Project includes economically accepted impact indicators such as global pandemic, as well as project scope and design requirement. Moreover, project co-ordinator has also documented the risk that associated with virus infection during the fieldwork.

In conclusion, The main purpose of this project is to design an effective and practical Business Process mapping, that value for money, for Asian Plus Kitchen by using the variety of methodologies (PMBOK and Prince 2) and tools. This product should be able to deliver high outcomes for client’s business activities.

It is recommended that Project Sponsor and other stakeholders should attend regular team meeting with all members of Sun Engineering Design in order to follow up and promote the qualities of the project. Sun Engineering Design members need to hold regular meeting with Project Sponsor to report and present the project progress overtime.

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**Project Concept Planning**

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**1.** **Overview**

This paper is Project Management Plan Develop for a famous Chinese restaurant called Asian Plus kitchen. The aim of this project is to map the Business Process in Asian Plus Kitchen in order to improve customer ordering efficiency and reduce the workload of front desk staff. This paper also outlines the method and framework for executing the project, and look into 5 main areas. These areas are Project Organization, Managerial Process Plans, Project Management, Quality Management, and Project Closure.

**1.1 Project Summary**

The product should be able to perform the following:

* Show a series of events that produce an end result.
* Provide effective visual communication of ideas, information and data which can be used as a basis for further process development.
* Comply with restaurant industry regulations: ISO 9001
* Shows what is involved in a process and can reveal areas where a process should be improved.

**1.1.1 Purpose, Scope and Objectives**

The objective of the project is to create a product that satisfies the following requirements:

* Map the business process in Asian Plus kitchen by using the variety of methods and tools.
* Develop process to identify problem and possible solution (Design and De-risk).
* Complete the project on the deadline given by Project Sponsor.
* Completing the project within the given budget.

According to analysis of requirement by Project Co-ordinator, the following figure has been developed:

Figure 1: Project Priority Matrix

|  |  |  |  |
| --- | --- | --- | --- |
|  | Time | Cost | Performance |
| Constrain |  |  | ● |
| Enhance | ● |  |  |
| Accept |  | ● |  |

As it is visible from the Figure1, time is important to sales in Asian Plus Kitchen, the project co-ordinator is instructed to take advantage of every opportunity to reduce completion time. By doing so, going over budget is acceptable, though not desirable. Therefore, the performance specifications for the process mapping, as well as reliability standards, cannot be compromised.

**1.1.2 Assumptions and Constraints**

Sun Engineering Design will operate under the following assumptions:

* The client has no human resources other than the Sun Engineering Design team to work towards building the product.
* The development team will learn and work together to meet the deliverables of the project.
* The customer will respond in a timely manner to all questions and requests for information.

The following constraints may impose limits on this project:

* Time availability for this project is constrained by other course requirements.
* Sun Engineering Design shall operate under the directives of the selected development process.
* Additional resources (financial or human) are not available for the project.

**1.1.3 Project Deliverables**

Sun Engineering Design will deliver all software, hardware and documentation for the project no later than 15 May 2020. In addition, a final report and presentation will be given to the Chief Executive Officer of Worldwide Terra Friendly (WTF) Enterprises Pty Ltd, PJ Wilson, at about that time. These deliverables are described below and are subject to change.

Only a single copy of each deliverable shall be provided. For material given to the customer, an electronic copy of the material on a USB flash drive shall be sufficient. For internal deliverables, a printed hardcopy shall be provided.

Customer deliverables shall be considered delivered when presented to the client. Internal deliverables shall be considered delivered when given to the management designee.

**1.1.3.1 Software Deliverables**

The following is a preliminary list of software deliverables that will be handed to the client upon completion of the project:

|  |  |
| --- | --- |
| Software Component | Delivery Date (No later than) |
| Concept Designs Plan | 01 April 2020 |
| Project Plans | 15 May 2020 |
| Design File | 15 May 2020 |

**1.1.3.2 Hardware Deliverables**

Not Applicable.

**1.1.3.3 Documentation Deliverables**

The following is a preliminary list of software deliverables that will be handed to the client upon completion of the project:

|  |  |
| --- | --- |
| Document | Delivery Date ( No later than) |
| Project Concept Planning | 20 March 2020 |
| Progress Report | Refer to Reporting Plan |
| Concept Designs | 01 April 2020 |
| Management Plan | 17 April 2020 |
| Tender and Design Defence | 08 May 2020 |
| Project File and Design File | 15 May 2020 |

**1.2 Plan Evolution**

This Project Management Plan is intended to be an evolving document. The Project Co-Ordinator is responsible for the revisions to this document, although responsibility for some of the sections may be delegated to other members of the team.

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**1.3 Project Charter**

This Charter formally authorizes Sun Engineering Design Ltd to produce a business processes mapping for Asian Plus Kitchen in Brisbane, Queensland. A project plan will be developed and submitted to the Project Sponsor for approval. The project plan will include: scope statement; schedule; cost estimate; budget; and provisions for scope, resource, schedule, communications, quality, risk, procurement, and stakeholder management as well as project control.

The purpose of the Business Process Mapping Project is to provide effective visual communication of ideas, information and data which can be used as a basis for further process improvements. This Project meets the client’s need for a relatively risk free, less time consuming and affordable material with high standard quality whilst meeting all legal requirement demands. The project deliverables shall include a brand new Business Process Mapping which comply with ISO 9001 accreditation. The objective of the Business Process Mapping Project is to offer a solution for an ordering process in order to reduce face to face ordering by develop methods and tools to design and de-risk the process mapping for business improvement. High level risk for this project include time , Coronavirus (Covid-19) infection, and unexpected regulations to cope up with the virus, for example city lockdowns. Success will be determined by both the ability to meet the clients’ performance criteria, through design and research, and cost.

The Project Co-ordinator, Heang Sok, is hereby authorized to interface with management as required, negotiate for resources, delegate responsibilities within the framework of the project, and to communicate with all contractors and management, as required, to ensure successful and timely completion of the project. The Project Co-ordinator is responsible for developing the project plan, monitoring the schedule, cost, and scope of the project during implementation, and maintaining control over the project by measuring performance and taking corrective action.

The project plan will be submitted and approved in accordance with the milestone schedule below. The client must approve any schedule changes which may impact milestones. A detailed schedule will be included in the project plan.

High Level Milestone Schedule:

|  |  |
| --- | --- |
| Milestone | Due Date |
| Project Concept Plan | 20 March 2020 |
| Design Concept Drawings | 01 April 2020 |
| Project Management Plan | 17 April 2020 |
| Tender and Design Defence | 08 May 2020 |
| Project File and Design File | 15 May 2020 |

The budget for the Business Process Mapping Project is $60,000. The funding sources is Worldwide Terra Friendly (WTF) Enterprises Pty Ltd.

**Sponsor Acceptance**

Approved by the Project Sponsor:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PJ Wilson

Chief Executive Officer

**1.4 Team Charter**

**1.4.1 Context**

The team has been formed to develop processes, methods and tools to design and de-risk, the mapping of business processes for ISO accreditation and business improvement.

WTF Enterprises have engaged Sun Engineering to map a business process for Asian Plus kitchen. In spite of the fact that WTF Enterprises have the industry connections to complete this field of service, they lack the men power and technical expertise to undertake the development work.

**1.4.2 Mission and Objectives**

The mission of this team is to develop a plan and ensure the effectiveness of the whole project to meet the requirement of the above restaurant.

1. Interview Project Sponsor and stakeholders to define project brief on 13 March 2020

2. Prepare and present Project Concept Plan to the Project Sponsor by 20 March 2020

3. Refine concept plan proposals, and present to the Project Sponsor on 27 March 2020

4. Prepare and present Concept Design Drawing to the Project Sponsor by 01 April 2020

5. Refine concepts and present to the Project Sponsor on 17 April 2020

6. Prepare and present Project Management Plan to the Project Sponsor by 17 April 2020

7. Refine management proposals, and present to the Project Sponsor on 24 April 2020

8. Prepare and present Tender documentation and Design Defence by 08 May 2020

9. Finalise and present Project File and Design File to the Project Sponsor by 15 May 2020

**1.4.3 Rules of Behaviour**

1. All team members will treat each other with respect at all times.

2. Constructive feedback is a valuable part of our success so we will not take offense and all team members will ensure all feedback is provided in a constructive manner.

3. Open communication among the team is always welcomed and valued.

4. We will recognise and celebrate all individual and team accomplishments.

5. All personal mobile phones will be turned off prior to beginning any of our meetings or discussions. 6. We will accept responsibility and be accountable for our actions.

7. We will give consideration to whomever is speaking and avoid sidebars or speaking over one another.

8. We will work collaboratively when possible and use a consensus approach when making team decisions.

**1.4.4 Communications**

1. All team members will treat each other with respect at all times.

2. Constructive feedback is a valuable part of our success so we will not take offense and all team members will ensure all feedback is provided in a constructive manner.

3. We will update our tasks and how they are progressing to project team leader.

4. Meeting minutes will be sent out within 24 hours of each meeting by project team leader.

5. The responsibility for meeting scribe will be shared by all team members on a rotating basis.

6. If a meeting must be cancelled or additional meetings are required, the Product Owner will send out notification as early as possible.

7. All team members are expected to be on time for all meetings.

**1.4.5 Project Team**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Role | Mobile | Intitial |
| Heang Sok | Project Co-Ordinator | 0432 496 118 | HS |
| Guanting Li | Developer | 0468 957 349 | GL |
| Jingyi He | Developer | 0419 900 022 | JH |

**Sponsor Acceptance**

Approved by the Project Sponsor:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PJ Wilson

Chief Executive Officer

**2. Project Organization & Stakeholder Management Strategy**

This section describes the external interfaces to the team, the internal team structure as well as the roles help by team members. The program organisation structure will be outlined utilising Organisation Charts provided in Appendix A, Project Organisation, and One-Page Project Manager (OPPM) provided in Appendix C, OPPM.

**2.1 Stakeholder Identification**

**2.1.1 Introduction**

The Stakeholder Management Strategy for Sun Engineering Design’s Business Process Mapping Project will be used to identify and classify project stakeholders; determine stakeholder power, interest, and influence; and analyse the management approach and communication methodology for project stakeholders. This will allow us to identify key influential stakeholders to solicit input for project planning and gain support as the project progresses. This will benefit the project by minimizing the likelihood of encountering competing objectives and maximizing the resources required to complete the project.

Early identification and communication with stakeholders is imperative to ensure the success of the Business Process Mapping Project by gaining support and input for the project. Some stakeholders may have interests which may be positively or negatively affected by this Project. By initiating early and frequent communication and stakeholder management, we can more effectively manage and balance these interests while accomplishing all project tasks.

**2.1.2 Identify Stakeholder**

The Business Process Mapping Project team will conduct a brainstorming session in order to identify stakeholders for the project. The session will focus on internal stakeholder within Sun Engineering Design as well as external stakeholders including suppliers, partner organisations, or any other individuals who reside outside of Sun Engineering Design who may be affected by the Business Process Mapping Project.

* Sun Engineering Design project team (Operation and Finance Personnel, Materials and Project Co-Ordinator)
* Worldwide Terra Friendly (WTF) Enterprises Pty Ltd ( Sponsors, Directors, Suppliers and Employees)
* Local Council, government and relevant authorities
* Local community members or groups
* Contractor, subcontractors and employees

The following criteria will be used to determine if an individual will be included as a stakeholder:

* Will the person or their organization be directly or indirectly affected by this project?
* Does the person or their organization hold a position from which they can influence the project?
* Does the person have an impact on the project’s resources (material, personnel, funding)?
* Does the person or their organization have any special skills or capabilities the project will require?
* Does the person potentially benefit from the project or are they in a position to resist this change?

Any individual who meets one or more of the above criteria will be identified as a stakeholder. Stakeholders from the same organization will be grouped in order to simplify communication and stakeholder management.

**2.1.3 Key Stakeholders**

As a follow on to Identify Stakeholders, the project team will identify key stakeholders who have the most influence on the project or who may be impacted the most by it. These key stakeholders are those who also require the most communication and management which will be determined as stakeholders are analysed. Once identified, the Project Co-ordinator will develop a plan to obtain their feedback on the level of participation they desire, frequency and type of communication, and any concerns or conflicting interests they have.

Based on the feedback gathered by the project co-ordinator, the determination may be made to involve key stakeholders on steering committees, focus groups, gate reviews, or other project meetings or milestones. Thorough communication with key stakeholders is necessary to ensure all concerns are identified and addressed and that resources for the project remain available.

**2.1.4 Stakeholder Analysis**

Once all Business Process Mapping Project stakeholders have been identified, the project team will categorize and analyse each stakeholder. The purpose of this analysis is to determine the stakeholders’ level of power or influence, plan the management approach for each stakeholder, and to determine the appropriate levels of communication and participation each stakeholder will have on the project.

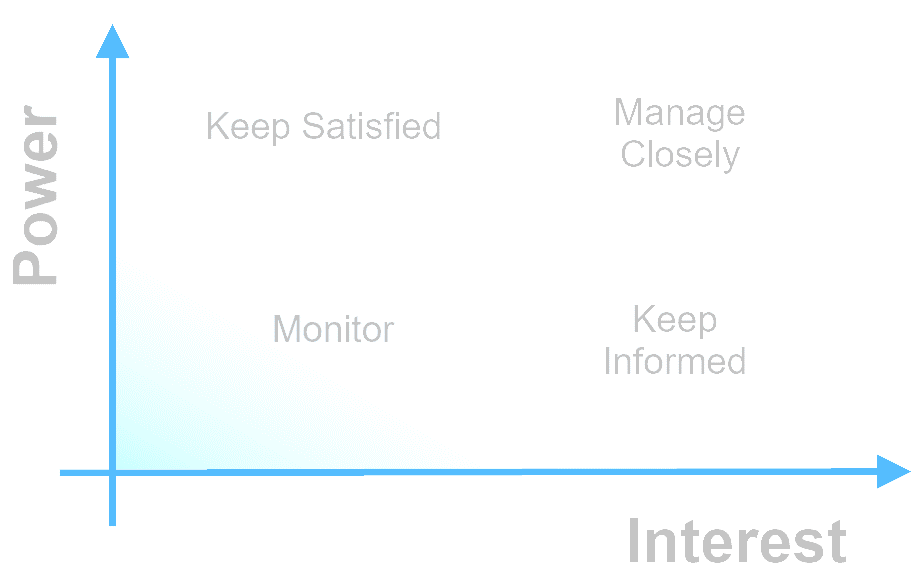
The project team will categorize stakeholders based on their organization or department. Once all stakeholders have been categorized, the project team will utilize a power/interest matrix to illustrate the potential impact each stakeholder may have on the project. Based on this analysis the project team will also complete a stakeholder analysis matrix which illustrates the concerns, level of involvement, and management strategy for each stakeholder.

The chart below will be used to establish stakeholders and their levels of power and interest for use on the power/interest chart as part of the stakeholder analysis.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Key | Organisation | Role | Name | Power (1-5) | Interest (1-5) |
| A | WTF Enterprises | Project Sponsor | P. Wilson | 2 | 5 |
| B | Sun Engineering Design | Project Co-Ordinator and Risk Manager | Heang Sok | 5 | 5 |
| C | Sun Engineering Design | Developer and Cost Manager | Guanting Li | 4 | 5 |
| D | Sun Engineering Design | Developer and Operations Manager | Jingyi He | 4 | 4 |
| E | Engineering | Engineering | - | 4 | 2 |
| F | Operations | Operations | - | 2 | 2 |
| G | Supplier | Supplier | - | 1 | 2 |
| H | Government and relevant authorities | Government and relevant authorities | - | 4 | 1 |

Below is the power/interest chart for the Business Process Mapping Project stakeholders. Each letter represents a stakeholder in accordance with the key in the chart above.

Figure 2: The Stakeholder Power/Interest Grid



● E

● F

● C & D

● G

● H

● B

● A

5

5

1

1

Based on the power and interest analysis in figure 2, stakeholders G and F will require minimal management effort as they reside in the lower left quadrant of the matrix. Stakeholder E and H, in the upper left quadrant, must be kept satisfied by ensuring concerns and questions are addressed adequately. Stakeholder A, in the lower right quadrant, must be kept informed through frequent communication on project status and progress. Stakeholders B, C and D, in the upper right quadrant, are key players and must be involved in all levels of project planning and change management. Additionally, stakeholders B, C and D should be participatory members in all project status meetings, gate reviews, and ad hoc meetings as required.

The stakeholder analysis matrix will be used to capture stakeholder concerns, level of involvement, and management strategy based on the stakeholder analysis and power/interest matrix above. The stakeholder analysis matrix will be reviewed and updated throughout the project’s duration in order to capture any new concerns or stakeholder management strategy efforts.

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder | Concerns | Quadrant | Strategy |
| A | Question regarding of the Business Process Mapping | Keep Informed | Allow technical staff to work with stakeholder to answer questions and address concerns and provide test results for validation |
| B | Product performance must meet or exceed current product. | Key Player | Solicit stakeholder as member of steering committee and obtain feedback on project planning. Frequent communication and addressing concerns are imperative |
| C | Budget and cost scheduling constrains of production before project transitions to operations | Key Player | Solicit frequent updates and develop plan for alternative supply source. |
| D | Resource and scheduling constrains for transitioned to operations | Key Player | Communicate test results and performance specifications and obtain feedback on customer requirements or any changes. Provide frequent status reports and updates. |
| E | Concerns regarding resources to assist project team with product design | Keep Satisfied | Communicate resource requirements early and ensure resources are released back to engineering when they’re no longer required |
| F | Ensuring proper handover of project to operations team | Minimal Effort | Communicate project specifications as required. |
| G | Ensuring proper handover of project to operations team and on time delivery of materials | Minimal Effort | Communicate project schedule, specifications and material requirements ahead of time |
| H | Ensuring handover of legislation document | Keep Satisfied | Communicate legislation document |

**2.2 External Interfaces**

The client representative for this project is PJ Wilson, On behalf of Worldwide Terra Friendly (WTF) Enterprises Pty Ltd. The Sun Engineering Design Ltd’s Project Co-ordinator is responsible for formal interaction between Sun Engineering Design Ltd’s engineers and the client representative. Necessary interaction can be done through anyone on the team, but all discussions with the customer should be documented clearly for records

**Project Management Planning**

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**3. Managerial Process Plans**

This section contains the management objectives and priorities, and process management plans.

**3.1 Management objectives and priorities**

Sun Engineering Design’s primary objective is to ensure the successful completion of the project. To be considered successful, the team must perform the following:

1. Use good engineering methods to develop the product.

* Apply the methods learned in class
* Experience a new way of doing things
* Practice reflective learning

2. Deliver a quality product that meets the requirements agreed upon in the PRS.

* Deliver a product that is stable
* Deliver a system that addresses the client's needs at the client's satisfaction.

3. Honour its commitments.

* Meet client and team deadlines
* Avoid unrealistic commitments.

4. Display professionalism

* Value the time of team members, mentors, and the client.
* Accept and support team decisions.
* Communicate openly and frequently.
* Take responsibility for the success of the project
* Be proactive.

5. Make efficient use of all available resources.

* Learn from each other
* Take advantage of GUC staff and peer expertise.
* Experiment with existing tools and processes.

**3.2 Start-up plan**

This section describes the materials and resources required to start the project. Because most of this information has been pre-defined, this section will not describe the rationale for many of these choices.

**3.2.1 Staffing plan**

Section 3.2 shows the staffing resources for the project. Each team member will be available for a set number of hours per week for the duration of the project. This time includes time spent with the mentors and time spent working of any project tasks, such as team and client meetings, document preparation and inspection, and tool development. A detailed duration estimate can be found in Appendix D, Duration Estimate.

|  |  |
| --- | --- |
| **Team Member** | **Hour per week** |
| Heang Sok | 10 |
| Guanting Li | 10 |
| Jingyi He | 10 |

**3.3 Reporting plan**

Internal reporting for Sun Engineering Design’s team members will be relatively informal. Each team member will provide a status report to the team during the weekly team meetings. The Team Lead will use this information to update the project plan.

External reporting will be more formal. Sun Engineering Design will give regular progress report to chief executive of Worldwide Terra Friendly (WTF) Enterprises, PJ Wilson, at the client meetings to indicate progress, and for general status issues. Additionally, each member will submit an IEEE format report based on conceptual designs provided to the Project Sponsor upon completion. Individual Concept Design Reports can be found in the Design File and Appendix T, Individual Concept Design.

|  |  |  |
| --- | --- | --- |
| **Client Progress Reporting** | **Team Member** | **Date** |
| 20% Progress Report | Heang Sok | 27 March 2020 |
| 50% Progress Report | Jingyi He | 17 April 2020 |
| 80% Progress Report | Guanting Li | 24 April 2020 |
| 100% Progress Report | Guanting Li | 15 May 2020 |

**3.4 Project management plan**

**3.4.1 Introduction**

Sun Engineering Design’s team plans to is to improve the business process of Asian Plus kitchen, and map all the steps of a process. This mapping of the business process will provide effective visual communication of ideas, information and data which can be used as a basis for further process improvements.

The Project Management Plan will provide a detailed description of the project scope, major internal and external milestones, as well as communications, costs, quality and risk management as well as the staffing plan for the project will also be provided in this section.

**3.4.2 Project Management Approach**

A team of Sun Engineering Design has been formed to complete this project. Heang Sok take a responsibility as a project co-ordinator and his team members are Guanting Li and Jingyi He. They both are accountable for developing the project and responsible for any tasks assigned by the project co-ordinator. All team members will follow the guidelines and management plan set out in this document. The client representative for this project is the Chief Executive Officer of Worldwide Terra Friendly (WTF) Enterprises Pty Ltd, PJ Wilson.Team meetings will be conducted weekly in accordance with the sponsor requests and availability.

Worldwide Terra Friendly (WTF) Enterprises will act as the client interface and provide funding for the project . Any critical adjustments to the project will be discussed with the Project Sponsor, PJ Wilson.

**3.4.3 Project Scope**

The project scope is to provide Worldwide Terra Friendly (WTF) Enterprises with a brand new Business Process Mapping that delivers an efficient, elegant and value for money solution. Sun Engineering Design has set a target to meet and exceed the client’s requirements for the project. The Project will follow the project plan outlined in section 4. On completion of the project, the project File and Design File will be provide to the project Sponsor as per the client’s request. This Project is only dealing with mapping the business process ; any requirement to purchase new equipments or services outside the contract and consultants are not included.

**3.4.4 Milestone List**

The table below constrains all major external milestones required to successfully deliver the project on time. Any critical adjustments or delays to these milestones will be discussed and adjusted by Sun Engineering Design’s team and the Project Sponsor as necessary. Appendix E, Milestone List, Provides a detailed table of expected milestones for the project.

|  |  |  |
| --- | --- | --- |
| **Milestones** | **Description** | **Date** |
| Project File Initiation | Initiate folder & gather client brief & resources for the project file | 13 March 2020 |
| Project Concept Plan | Project Concept Planning completed for review | 20 March 2020 |
| Concept Design Plan | Three individual Concept Design for review. Research & requirements to be included | 01 April 2020 |
| Management Plan | Project Management Planning completed | 17 April 2020 |
| Tender & Design Defence | Tender design competition & design defence | 08 May 2020 |
| Project File Closure | Project Management File: Concept Planning, Design File, Management Planning & Tender | 15 May 2020 |

The table below contains all major internal milestones required to achieve the external milestones. Any critical adjustments or delays to these milestones will be discussed and adjusted by the Sun Engineering Design project team.

|  |  |  |
| --- | --- | --- |
| **Milestones** | **Description** | **Date** |
| Method & Tool Research | Search for method, tools & design resources for the design file. | 01 April 2020 |
| Conceptual Design | Three individual Concept Design for review. Research & requirements to be included | 01 April 2020 |
| Preliminary Design | One preliminary design need to be completed by this date for review. | 17 April 2020 |
| Final Design | Final design need to be completed by this date for review. | 08 May 2020 |

**3.4.5 Schedule Baseline and Work Breakdown Structure**

The Work Breakdown Structure (WBS) for the Business Process Mapping Project is comprised of work packages which were developed through close collaboration among project team members and key stakeholders as well as research from past projects. Work will be delegated to team members and provided in a One-Page Project Manager (OPPM), Appendix C. The OPPM provides a project schedule and breakdown of the project.

The WBS Dictionary defines all work packages for the Business Process Mapping Project. These definitions include all tasks, resources, and deliverables. Every work package in the WBS is defined in the WBS Dictionary and will aid in resource planning, task completion, and ensuring deliverables meet project requirements. The Project Schedule Baseline and Work Breakdown Structure are provided in Appendix B.

**3.4.6 Communication Management Plan**

This Communications Management Plan sets the communications framework for this project. It will serve as a guide for communications throughout project life-cycle and will be updated as communication requirements change. This plan identifies and defines the roles of Business Process Mapping Project team members as they pertain to communications. It also includes a communications matrix which maps the communication requirements of this project, and communication conduct for meetings and other forms of communication. A project team directory is also included to provide contact information for all stakeholders directly involved in the project.

The Project Team Co-ord will take the lead role in ensuring effective communications on this project. The communications requirements are documented in the Communications Matrix below. The Communications Matrix will be used as the guide for what information to communicate, who is to do the communicating, when to communicate it, and to whom to communicate. In addition, Appendix G Communications, provides a detailed breakdown of all notable communications for the project.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Communication Type** | **Description** | **Frequency, Format & Participants** | **Deliverable** | **Owner** |
| Weekly Project Team Meeting | Meeting to review progress | Weekly  In person  Project Team | Progress Report &Meeting Minutes | Project Co-ord |
| Fortnightly Project Progress Reporting | Email or meet to review progress | Fortnightly  Email or In person  Project sponsor, team & stakeholders | Progress Report | Project Co-ord |
| Monthly Project Review& Assessment | Present status to team and sponsor | Monthly  In Person  Project sponsor, team & stakeholders | Progress Report | Project Co-ord |
| Technical Project Design Review | Review of any technical designs or work associated with the project | As Needed  In Person  Project Team | Design File | Project Co-ord |
| Project Close Out Meet | Present project closeout | Project Closure  Email or In Person  Project sponsor, team & stakeholders | Project Closure Reporting | Project Co-ord |

Project team directory for all communication is:

|  |  |  |  |
| --- | --- | --- | --- |
| **Team Member** | **Title** | **Email** | **Contact** |
| Heang Sok | Project Co-ordinator, Finance & Risk Manager | 10003574@portal.griffithcollege.edu.au | 0432 496 118 |
| Guanting Li | Developer and Cost Manager | Ligm2001@portal.griffithcollege.edu.au | 0468 957 349 |
| Jingyi He | Developer and Operations Manager | Hejm1903@portal.griffithcollege.edu.au | 0419 900 022 |

**3.4.7 Cost Management Plan**

The Project Co-ordinator will assume the role of finance manager. The finance manager will be responsible for managing finances and time related to said finances. Timesheets will be provided to all team members to report project hours and costing. Refer to Appendix I, Financial Allocation & Accounting, for individual team members work hours for the life-cycle of the project. Reporting will be monitored and documented to the instruction and quality standard set by the project Co-ordinator and client. Regular progress reports will provide the project sponsor to update the client on current project costs and budgets. Sun Engineering Design will charged WTF at a rate $200 per hour per person to undertake the project management, planning and design for the Mount View project.

**3.4.8 Procurement Management Plan**

While this project requires minimal procurement, in the event procurement is required, the Project Co-ordinator will work with the project team to identify all items or services to be procured for the successful completion of the project. In the event a procurement becomes necessary, the Project Co-ordinator will be responsible for management any selected vendor or external resource.

**3.4.9 Schedule Management Plan**

Project schedules for the Business Process Mapping Project starting with the deliverables will be identified in the project’s Work Breakdown Structure (WBS). Activity definition will identify the specific work packages which must be performed to complete each deliverable. Activity sequencing will be used to determine the order of work packages and assign relationships between project activities. Activity duration estimating will be used to calculate the number of work periods required to complete work packages. Resource estimating will be used to assign resources to work packages in order to complete schedule development.

Once a preliminary schedule has been developed, it will be reviewed by the project team and any resources tentatively assigned to project tasks. The project team and resources must agree to the proposed work package assignments, durations, and schedule. Once this is achieved the project sponsor will review and approve the schedule and it will then be base lined.

The following will be designated as milestones for all project schedules:

* Completion of scope statement and WBS/WBS Dictionary
* Baselined project schedule
* Approval of final project budget
* Project kick-off
* Approval of roles and responsibilities
* Requirements definition approval
* Completion of data mapping/inventory
* Project implementation
* Acceptance of final deliverables

Roles and responsibilities for schedule development are as follows:

The project co-ordinator will be responsible for facilitating work package definition, sequencing, and estimating duration and resources with the project team. The project co-ord will also create the project schedule and validate the schedule with the project team, stakeholders, and the project sponsor. The project co-ordinator will obtain schedule approval from the project sponsor and baseline the schedule.

The project team is responsible for participating in work package definition, sequencing, duration, and resource estimating. The project team will also review and validate the proposed schedule and perform assigned activities once the schedule is approved.

The project sponsor will participate in reviews of the proposed schedule and approve the final schedule before it is base lined.

The project stakeholders will participate in reviews of the proposed schedule and assist in its validation.

**3.4.10 Quality Management Plan**

The project Quality Management Plan documents the necessary information required to effectively manage project quality from project planning to delivery. It defines a project’s quality policies, procedures, criteria for and areas of application, and roles, responsibilities and authorities. The Project Management Plan will follow the requirement of AS/NZS ISO 9000:2016 (quality management systems) [3].

The Quality Management Plan is created during the Planning Phase of the Project. Its intended audience is the project co-ordinator, project team, project sponsor and anyone whose support is needed to carry out the plan.

All members of Business Process Mapping Project team will play a role in quality management. It is imperative that the team ensures that work is completed at an adequate level of quality from individual work packages to the final project deliverable. The following are the quality roles and responsibilities for the Business Process Mapping Project.

The Project Sponsor is responsible for approving all quality standards for the Business Process Mapping Project. The Project Sponsor will review all project tasks and deliverables to ensure compliance with established and approved quality standards. Additionally, the Project Sponsor will sign off on the final acceptance of the project deliverables.

The project Co-ordinator is responsible for qualify management throughout the duration of the project. The Project Co-ordinator is responsible for implementing the Quality Management Plan and ensuring all tasks, processes, and documentation are compliant with the plan. The Project co-ordinator will work with the project team to establish acceptable quality standards. The Project co-ordinator is also responsible for communicating and tracking all quality standards to the project team and stakeholders.

The Project team are responsible for working with and assisting the Project Co-ordinator to establish, develop and implement the acceptance quality standards set in this Quality Management Plan. The project team will recommend tools and methodologies for tracking quality and standards to establish acceptable quality levels. They will also work to ensure that all quality standards are met and communicated any concerns regarding quality to the Project Co-ordinator. The project team will create and maintain Quality Control and Assurance throughout the project through the process detailed.

|  |  |  |  |
| --- | --- | --- | --- |
| **Quality Control & Assurance Process** | | | |
| **Process** | **Inputs** | **Tools & Techniques** | **Output** |
| **Quality Control** | Work Results  Quality Management Plan  Operational Definitions  Checklists | Inspection  Control Charts  Flowcharting | Quality Improvement  Acceptance Decisions  Rework  Completed Checklists  Process Adjustments |
| **Quality Assurance** | Quality Management Plan  Results of Quality Control  Measurements  Operational Definitions | Quality Planning Tools & Techniques  Quality Audits | Quality Improvement |

Quality control for the Business Process Mapping Project will utilise tools and methodologies for ensuring that all project deliverables comply with approved quality standards. To meet deliverable requirements and expectations, we must implement a formal process in which quality standards are measured and accepted. The project co-ordinator will ensure all quality standards and quality control activities are met throughout the project. The project team will assist the project co-ordinator in verifying that all quality standards are met for each deliverable. If any changes are proposed and approved by the Project Sponsor, the project co-ordinator is responsible for communicating the changes to the project team and updating all project plans and documentation.

Quality assurance for the Business Process Mapping Project will ensure that all processes used in the completion of the project meet acceptable quality standards. These process standards are in place to maximise project efficiency and minimise waste. For each process used throughout the project, the project co-ordinator will track and measure quality against the approved standards with the assistance of the Quality Specialists and ensure all quality standards are met. If any changes are proposed and approved by the Project Sponsor, the project co-ordinator is responsible for communicating the changes to the project team and updating all project plans and documentation.

**3.4.11 Risk Management Plan**

The approach for managing risks for the Business Process Mapping Project includes a methodical process in accordance with AS ISO 31000:2018 (risk management) [4]. Project team identifies, scores, and ranks the various risks. In addition, project team do our best to identify and resolve risks early in the project to save time and budget. Additionally, the risks that are most likely to occur and have the greatest impact after they occur are first added to the project, to make the construction before the construction of protective measures, and there are also quick fixes when things go wrong. The team managers will provide status updates on their assigned risks in the meeting. The project team will follow the Risk Management process below. Also see Appendix JK (Risk Management Plan) for more detail,.

|  |  |
| --- | --- |
| **Risk Management Process** | |
| **Process** | **Description** |
| **Risk Identification** | Determine which risks are likely to affect the project and document the characteristics of each. |
| **Risk Quantification** | Evaluate the risks and risk interactions to assess the range of possible project outcomes. |
| **Risk Response Development** | Define enhancement steps for opportunities and responses to threats. |
| **Risk Response Control** | Respond to changes in risk over the course of the project. |

At the end of the project, the risk manager reports on all risks and the risk management process, and through the study of these existing risks to the future project risk pipeline in advance to prevent.

**3.4.12 Risk Register**

Sun Engineering Design will monitor and identify potential risks in the Management stages of the project, including, but not limited to :

* Computer or hardware failures
* Time & management skills
* Miscommunication
* Wrong location
* Design failure

In addition, risks relating the design, developing, testing , commissioning, and construction stages of the project will also be addressed.

* Construction risks and failures
* Network impact
* Government, council, or local authority requirements and restrictions.

The Risk Register for this project is provided in Appendix O, Risk Register.

**3.4.13 Staffing Management Plan**

All Business Process Mapping Project design and reporting work will be performed internally. The software installation will be outsourced to an outside company. In order to successfully complete the project, staffing requirement for the Business Process Mapping Project include the following:

**Project co-coordinator** (1 position) - Heang Sok - Responsible for co-ordination of the Business Process Management Mapping Project. The project Co-ordination is responsible for co-ordinating the planning, creating, and/or managing all work activities, variances, tracking, reporting, communication and performance evaluations.

**Gatekeeper** (1 position ) - Heang Sok - Responsible for the release of documentation for the Business Process Mapping Project. The Gatekeeper is responsible for compiling and releasing any documentation to the appropriate stakeholders as required.

**Risk Manager** (1 position ) – Heang Sok - Responsible for identifying and managing all risks associated with the project. The Risk manager is responsible for assessing, documenting, updating and reducing risk where possible. (Appendix JK, Risk Management Plan; Appendix O, Risk Register)

**Cost Manager** (1 position ) - Ganting Li - Responsible for identifying and managing all costs associated with the project. The Cost Manager is responsible for financing, documenting, updating and reducing costs where possible. The Cost Manager is also responsible for managing all budgets and attaining quotes throughout the life of the project.

**Operation Manager** (1 position ) - Jingyi He - Responsible for identifying and managing all operations associated with the project. Operations Managers are responsible for contracting and documenting operations where possible. Operations Managers are also responsible for operations change-overs throughout the life of the project.

**Developer** (x3 position) - Jingyi He, Heang Sok and Ganting Li - All Sun Engineering Design team members are responsible for the design and development tasks associated with the Business Process Mapping Project as well as ensuring functionality is compliant with quality standards. Responsible for working with the project Co-ordination to create work packages, manage risks, manage schedules, identify requirements, and create reports. The Developers will be co-ordinated by the Project Co-ord who will provide performance feedback.

**3.4.14 Cost Baseline**

The cost baseline for the Business Process Management Mapping Project includes all budgeted costs for the successful of the project.

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Phase** | **Estimated Budget** | **Timeframe** | **Comments** |
| Planning | $6,000 | 1 Weeks | Includes all work hours for all team members for gathering requirements and planning project |
| Documenting | $20,400 | 12 Weeks | Includes all work hours for documenting |
| Designing | $20,400 | 12 Weeks | Includes all work hours for all team members to work on conceptual, preliminary and final design |
| Design Defence | $6,000 | 1 Weeks | Includes all work hours for internal team meetings |
| Meeting | $7,200 | 12 Weeks | Includes all work hours for internal team meetings |
| Total | $60,000 | 12 Weeks | Includes all work hours from all team members to complete Project File & Design File |

**3.5 Engineering plan**

**3.5.1 Research**

Sun Engineering Design undertook research in order to clearly define the scope of works and client performance criteria. The research is mainly aimed at improving the efficiency of customer ordering in stores, because the efficiency of customer ordering determines the daily sales of the store. In addition, we also investigated the store design and the flow of people in order to determine the business process mapping. The following is a list of elements that needed to be research in order and provided the client with an elegant and exportable solution:Methodology:

* Observation and Note-taking
* Use Post-it Notes to design a basic process mapping on white board

Tool:

* Microsoft Visio Professional and WPS
* Process Map symbols
* Type of process Maps: Linear and Swim Lanes

**3.5.2 Alternative solutions**

Sun Engineering Design three individual alternative for the Business Process Mapping Project. These alternatives provided additional ideas for the final layout and proposal of the design. The project team used these alternative solution to set a standard for the work expected for the final solution.

**3.5.3 Evaluation**

The alternative solutions were evaluated against the client performance criteria set out in the client brief. Three individual concept design were generated by Sun Engineering Design with each design analysing and considering risks. A final design and develop automatic ordering machine was developed using selected parts of each conceptual design. Refer to the Design File for design evaluation, and rating and weighting of automatic ordering machine and solution selection.

**3.5.4 Monitoring**

Project members will monitor, review and inspect the project strictly in accordance with the time specified in the schedule (Appendix F). The project coordinator will ensure that the project runs smoothly according to the schedule, and report on the progress and effectiveness of the project at regular meetings. Regularly review project documents to ensure that updated information is always in the correct format. In addition to this, regular evaluation, review, and updating of budgets and costs are also critical.

**3.5.5 Communication**

Sun Engineering Design will communicate via online conference (Zoom) and email. Ensure everyone’s information is updated quickly and accurately. And the proposal will be communicated to the client by the project co-coordinator when the project is completed.

**3.6 Knowledge Management Plan**

The research will be recorded and catalogued. It will be compared with similar data or proven information. The team meeting will provide an opportunity to present new information and facilitate the inclusion of new approved data. The project coordinator will gather all the information for reflection, lessons learned, and team meetings.

**3.7 Quality Management Plan**

Sun Engineering Design’s team will implement a quality management system in accordance with the requirements of AS/NZS ISO 9001 (Quality Management Systems) [3]. The Quality Management Plan for the Business Process Mapping Project will establish the activities, process, and procedures for ensuring a quality product upon the conclusion of the project. The purpose of this plan is to:

* Ensure quality is planned and maintained
* Define how quality will be managed
* Define quality assurance activities
* Define quality control activities
* Define acceptable quality standards
* Provide professional files

**3.8 Issues / Conflict Resolution Plan**

Sun Engineering Design’s team members understands the differences that each individual may have in values, attitudes, needs, expectations, perceptions, resources, and personalities. Proper skills in dealing with conflict will assist the project coordinator and other team members to handle and effectively solve conflicts which will lead to a more productive organization as a whole.

**3.8.1 Establishing Requirements to Avoid Conflict Later**

Sun Engineering Design’s team will exchange information with Project Sponsor in order to prevent unexpected problem. A stakeholder analysis has been done to identify the requirements for the project. After making the project charter, the scope of the project was determined. These assumptions will be tested with each stakeholder. Doing this at the beginning of a project can prevent major conflicts later on.

**3.8.2 Minimising Conflicts Among Team Members**

To prevent conflict between project team members, a comprehensive work breakdown structure is generated that defines project tasks and allocates resources. Developers practices a positive and motivating work structure. The project co-ordinator has accommodated for individual team members needs and abilities by involving all team members in the decision making process. Task can be delegated and re-issued to another team members if required, allowing team members to have confidence in each other. Developers will follow standard work ethics to minimize unnecessary conflict among team members. In addition, the team members will abide by the following:

* Treat everyone fairly
* Maintaining a level of honesty, integrity and trust
* Create an environment that encourages participation

**3.8.3 Setting Standards for Conduct**

Sun Engineering Design has set out rules of behaviour and assigned roles and responsibilities to each of the team members together. These set out the expectations for the standards of conduct for the project team. By recognizing the roles people play, the project coordinator can help project teams resolve problems quickly and get back to project work. If everyone maintains a level of honesty, integrity and trust, completing project tasks becomes easier.

**3.8.4 Handling Conflicts Effectively**

The first step in conflict resolution involves getting the parties involved to agree to the nature of the problem. By defining the problem, the project coordinator can assess the amount of time and effort that needs to go into fixing it.

The five strategies Developers will follow to resolve internal and external conflict are:

|  |  |  |
| --- | --- | --- |
| **Strategy** | **Description** | **Situation** |
| Confronting/  Problem-solving | Confronting the conflict as a problem to be solved | When you have confidence in the other party’s ability to problem solve  When the relationship is important  When you need a win-win solution |
| Collaborating | Win-win through collaboration and meeting to resolve issue | When there is time and trust  When the objective is to learn  When you want to incorporate multiple views  When there is time to come to consensus |
| Compromising | When you are looking for some degree of satisfaction for both parties | When there is willingness to give and take  When both parties need to win  When you can’t win  When an equal relationship exists between the parties in conflict  When the stakes are moderate |
| Smoothing/  Accommodating | Emphasize areas of agreement | To reach an overarching goal  To maintain harmony and create goodwill  When any solution will be adequate  When you will lose anyway |
| Forcing | Win-pose; impose the resolution | When you are right  When the stakes are high  To gain power  If the relationship is not important  When time is of the essence |
| Withdrawal/  Avoiding | Retreat; cool off | When the stakes are low  To preserve neutrality or reputation  If the problem will go away on its own |

**3.9 Monitoring and Controlling Strategies**

Sun Engineering Design will actively track plans and processes it has established. Several communication methods will be implemented for effectively tracking of the project.

**3.9.1 Weekly Team Meeting**

Each week, the team co-ordinator will chair a team meeting to update members on the progress of the project and to discuss any new issues. Time permitting, there will also be an opportunity to brainstorm ideas and provide suggestions and comments. Each team meeting will commence with an update of the current action items so everyone will have an understanding of the status and progress of each item. The team meeting will then continue with agenda for the meeting. Finally, the team meeting will end with a review of the list of risks and new action items. If and when there is an open issue with the team, it will be discussed at the weekly team meeting and handled accordingly. Additional meetings may be requested by team members on a per-need basis. Also see Appendix M, Meeting Schedule, Agendas & Minutes.

**3.9.2 Client Meeting**

The project coordinator will facilitate client meetings in tutorial classes to provide an update of the status of the project to the client, and also to elicit requirements from the client. At this meeting, each team member will be able to request clarifications and ask questions regarding the project. The client meeting will state the objective for the meeting and list new action items. If, and when, there is an open issue with the client, it will be discussed st a client meeting. Depending on the level of the issue, the project coordinator may email the client directly.

**3.9.3 Brainstorming meetings**

On a per-needed basis, the developers of Sun Engineering Design will meet to brainstorm on some issue or discuss action items. This meeting is designed for team members to work together on portions of the project. This working meeting is informal and it is intended to be a learning time for each member of the team.

**3.9.4 Paired Tasks**

All documentation for the project file and design file will be documented and refined by Heang Sok, Guanting Li and Jingyi He. Throughout the project the project coordinator will delegate any large tasks to a pair of team members to ensure the consistent quality of work through the entire project. This method will offer a higher quality standard to the overall project.

**Project Planning**

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**4. Project Management**

This section provides a detailed description of the project plan, Project management methodologies used, WBS tasking and scheduling, resource and financial allocations and accounting, communications and progress reporting for the project.

**4.1 Project Plan**

The project plan is a formal, approved document used to guide both project execution and project control. The project plan documents any objectives to be achieved, by showing the major milestones, activities and resources required on the project as well as execution, management and control of the project.

The Primary uses of the project file are to document planning assumptions and decisions, facilitate communication among stakeholders, and document approved scope, cost, and schedule baselines related to the project.

A Project Concept Plan was established, communicated and agreed upon by all team members. The concept plan was presented to the Project Sponsor for review, comment and acceptance. The Project team then created the project management plan following input from the all team members, and key stakeholders.

Project Management Planning was executed through weekly team meetings, client progress reporting, and the use of project management strategies such as a Work Breakdown Structure (WBS) and Dictionary, One-Page Project Manager, and Gantt Chart.

**4.1.1 Project Management Methodologies Used**

The project management methodologies used throughout the project lifecycle were Project Management Book of knowledge (PMBOK) and PRojects IN Controlled Environments (PRINCE2) [1][2][5]. The PMBOK method consists of five process groups for the breakdown of projects. These are project initiation, planning, executing , controlling and closing. PRINCE2 on the other hand, follows seven principles, themes and procedures including project start up, directing, initiating, controlling, managing product delivery, managing stage boundaries, and closing. The PMBOK method was utilised throughout the Project File for the entire project. A mixture of the PMBOK method and the PRINCE2 method were employed through the project design stages and throughout the design file. This was to fully ensure there was no scope creep or issues during the design stages of the project. PMBOK and PRINCE2 can be conceived as complementary to one another. However, it should be noted that PRINCE2 is not a one-size that fits all methodology.

**4.1.2 Design / Specification / Performance Criteria**

Sun Engineering Design has been contacted to Worldwide Terra Friendly (WTF) to provide additional services, the ISO mapping of the business processes for Asian Plus Kitchen. Moreover, this Business Process Mapping Project must meet the design specifications and performance criteria respectively: 1. effective and efficient 2. elegant 3. value for money 4. installable by contractor 5. use off-the-shelf components where possible. (Also See Appendix L, Client Brief.)

**4.1.3 WBS, Tasking and Scheduling**

A work breakdown structure (WBS) is the most useful for project planning as it provides a deliverable orientated hierarchy of the different deconstructed project components and elements. The aim of this process is to ensure that the end product can be viewed by different stakeholders. The first step in project planning is the description of the different elements and identifying the different levels. Refer to Appendix B, Work Breakdown Structure and Dictionary.

On the other hand, this Business Process Mapping Project encompasses the development of a Project File and Design File. In addition to these, various deliverables and milestones were required for successful completion of the project. Refer to Appendix F, Gantt Chart, and Appendix C, One-Page Project Manager (OPPM), for project tasking and scheduling. A Simple breakdown of assigned tasks is outlined below.

**4.1.4 Resource Allocation and Accounting**

Resources allocated and used during the progress of the project are detailed in Appendix H, Resource Allocation and Accounting.

**4.1.5 Financial Allocation and Accounting**

Financial resources allocated and consumed during the progress of the project are detailed in Appendix I, Financial Allocation and Accounting.

**4.2 Design File**

Refer to Sun Engineering Design Project Design File. The Design File will provide the project sponsor with detailed information relating to the design and development of the Asian Plus Kitchen business process. This file contains any research, designs, calculation and specifications for the project.

**4.3 Acceptance Testing & Calculation**

Refer to Sun Engineering Design Project Design File.

**4.4 Delivery**

Refer to Sun Engineering Design Project Design File.

**4.5 Communications**

External communications were executed via Zoom or in person. Internal communications were less formal. Sun Engineering team members mutually agreed that any internal communications were to be made via Wechat, Zoom, and in person. Internal and external communications for the project are detailed in Appendix G, Communications.

**4.6 Progress Reporting**

Sun and Engineering Design presented regular progress reports to the Project Sponsor. The first team member to present was Heang Sok. Heang Discussed the major milestones, deliverables and expectations for the project. Jingyi He presented the tools, project budget and costs. An 80% progress report was provided by Guanting Li further detailing the management process for the project, final expected deliverables, cost and budget. Finally, a 100% progress project closure report was presented to the Project Sponsor upon completion and handover of the project. The final project report, presented again by Guanting Li, detailed the final delivery of the project and project closure. This included, lessons learned, final cost and budgets, an internal critique of the project team. All Progress Report Executive Summaries and PowerPoints as scheduled below can be found in Appendix N, Progress Reporting.

|  |  |  |
| --- | --- | --- |
| **Progress Reporting** | **Team Member** | **Date** |
| 20% Progress Report | Heang Sok | 27 March 2020 |
| 50% Progress Report | Jingyi He | 17 April 2020 |
| 80% Progress Report | Guanting Li | 24 April 2020 |
| 100% Progress Report | Guanting Li | 15 May 2020 |

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**Project Closure**

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**5. Quality Management**

**5.1 Lessons Learned**

Even the most successful projects have lessons from which we can learn. Whether you’re building the next wonder of the World, or upgrading an IT system there will be lessons you can learn from your project. An effective Project Co-ordinator documents and analyzes the lessons learned from his project and applies them to future projects throughout the organization.

**5.1.1 Introduction**

The purpose of the lessons learned document for the Business Process Mapping Project is to formally record some problems that occurred during the project development. This not only facilitates analysis and sums up experience, but also can be used as a case for the next project to provide some important information in order to better avoid some errors and improve the quality of project completion. In addition, this document will also explain in detail the progress of the project and the division of labour, which will allow the collaborators to clearly know the progress of the project, and can effectively provide feedback and opinions to specific people. This document will be formally communicated with the organization and will become a part of the organizational assets and archives.

**5.1.2 Lessons Learned Approach**

The lessons learned from the Business Process Mapping Project are compiled from project workbook entries throughout the project life cycle. Workbooks can be found in Appendix PQ, Workbooks. Sun Engineering Design’s team also summarized the risks that have and have not been discovered in the Project Risk Registration manual, and interview the project team members and other stakeholders as necessary. This document recorded enough details to provide some valuable reference information for future projects. The lessons learned in this document are classify by project knowledge area. These knowledge areas consist of:

* Risk Management
* Time Management
* Integration Management
* Quality Management
* Cost Management
* Scope Management
* Human Resource Management
* Communications Management

NOTE: some knowledge areas may not contain lessons learned if none were documented throughout the project lifecycle.

**5.1.3 Lessons Learned From This Project**

The following chart lists the lessons learned for the Business Process Mapping Project. This lesson will discuss the four categories: Risk Management, Quality Management, Scope Management, and Human Resource Management, and will also indicate their Issue, Problem/Success, Impact, and Recommendation. (Also see Appendix R, Issue Management Log; Appendix S, Lesson Learned Log)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Issue** | **Problem/Success** | **Impact** | **Recommendation** |
| Risk Management | File format crash | When submitted the files to Project Sponsors in Word Document, the formats were collapsed. | Stakeholders find it inconvenient to read. | Only send files in PDF |
| Risk Management | Driver Crash | Loss of file | Put a toll on time frame | Back-up gradually on hard drive and cloud server. |
| Quality Management | Quality | A process for determining acceptable quality standards was planned into the project | This allowed the project team to work with the contractors to smoothly ensure all materials were of acceptable quality and avoided any re-work and delays associated with substandard material | Always plan quality standards and allowances into the project plan. This helps avoid delays and cost overruns. |
| Scope Management | Scope Creep | Stakeholders did not try adding to project lifecycle | The project did not encounter any unexpected scope creep | Ensure the project scope is wee defined before initiating the project |
| Human Resource Management | Teamwork | Technical Skills | Lack in technical skills would have negative impact on Time-frame and budget | Technical support from other team members is needed in this case |

**5.1.4 Process Improvement Recommendations**

Sun Engineering Design has done detailed document storage for the Business Process Mapping Project. All members have the right and freedom to access into the documents. In addition, if any problems are found or the recorded contents are inaccurate during the review, they should be revised and corrected in time. The project uses WPS cloud storage devices to prevent any loss of documents and research, and to ensure that there are no unnecessary modifications to the documents. However, this is just a record of the progress of a project, the analysis of the file, just to provide some information and reference for future projects. The company must let all project coordinators know that this process needs to be included in the planning of all future projects. So, at the beginning of the project, the Project Co-ordinator must brief the project team on the process for downloading, saving, and storing project documentation.

**5.2 Post Project Review**

It is a very good practice to review the project. This can not only draw lessons, but also allow a final review of the project. Of course, the purpose of reviewing the project is also to reflect the difference between the actual situation and the plan, and give a reference case for future projects

**5.2.1 Project Summary**

Sun Engineering Design recently completed the Business Process Mapping Project which has been applied to a Chinese restaurant called Asian Plus Kitchen. This also means that the Business Process Mapping Project has ended successfully.

The aim of this project is to map the Business Process in Asian Plus Kitchen in order to improve customer ordering efficiency and reduce the workload of front desk staff. Additionally, providing effective visual communication of ideas, information and data based on compliance with The Process Approach in ISO 9001:2015 [6].

The scope of this project included a phased approach for the design. Included a Site Observation, Conceptual Designs, Solutions Selection, Rating and Weighting, Final Design, Acceptance Testing, and a Tender Design and Defend for the Business Process Mapping Project. The requirement for the success of the project designed by Sun Engineering Design for Asian Plus Kitchen is to map a Business Process that work with Automatic Order Machine. Besides this, it should be passed all client performance requirements and testing criteria. Sun Engineering Design’s engineers have received customer affirmation to implement this New Business Process Mapping.

**5.2.2 Project Deliverable (Planned vs Actual)**

The Business Process Management Mapping Project has been completed successfully. Each stage of the project has detailed results delivery reports. This section focuses on the deliverable that are planned, and compares them with the actual deliverable.

|  |  |  |
| --- | --- | --- |
| **Planned Deliverable** | **Actual Deliverable** | **Summary** |
| Concept Plan | Complete concept planning | This deliverable was completed as planned |
| Progress Reports | Complete progress reporting as per client schedule | These deliverables were completed as planned |
| Project Plan & Concept Designs | Complete project plan and concept designs | These deliverables were completed as planned |
| Management Plan | Complete management plan | This deliverable was completed as planned |
| Concept Design Reports | Complete Concept design reports | This deliverable was completed as planned |
| Tender & Design Defence | Complete tender and design defence as per client schedule | This deliverable was completed as planned |
| Project File & Design File | Complete project file and design file | These deliverables were completed as planned |

In general, Sun Engineering Design completed the display of the results that need to be delivered in all projects, and received detailed and accurate feedback.

**5.2.3 Project Costs**

The budgeted cost for the Business Process Mapping Project was set at $60,000. This costs is based on an hourly rate of $200/hr for ten hours over ten weeks for each team member. This cost was broken out by project phase in following chart with actual costs compared to the planned/ budget cost.

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Phase** | **Estimated Cost** | **Actual Cost** | **Comments** |
| Planning | $6,000 | $5,400 | Planning Costs came in under budget |
| Documenting | $20,400 | $16,400 | Documenting Costs came in under budget |
| Designing | $20,400 | $17,000 | Design Costs came in under budget |
| Design Defence | $6,000 | $5,000 | Designing Defence Costs came in under budget |
| Meeting | $7,200 | $7,200 | Meeting Costs were on budget |
| **Total** | **$60,000** | **$51,000** | **Overall, the project came in under budget** |

Total actual costs of the Business Process Mapping Project amounted to $51,000. Sun Engineering Design completed all the plans on schedule and kept the funds within the budget. (Appendix I, Financial Allocation & Accounting)

The reason for planning was completed under budget. The reason for this was project planning stage did not require as much detail as the project team initially expected.

The completion time of the recording work is earlier than the planned at the beginning of the project. This is because the estimated recording time at the beginning of the project is too much and the actual time is less than expected, so the recording work can be completed in advance.

Product design is completed with high quality within the expected time. This is mainly because the automatic order machine system has been used amongst restaurants around Brisbane. Consequently, Sun Engineering Design’s engineers can refer to the existing automatic order machine system on the market, and then adjust and modify according to the actual conditions and conditions of the store. This greatly reduces the project time and also meets the product performance level required by the partner.

Design defend Came in slightly under budget for this project. Past project documentation was used in developing our budgets for these portions of the project.

Meeting costs were on the budget. By utilizing standard best practices, the project team were able to plan accurately and complete the work according to plan. This is also due to the special period when the company's meetings are all realized through Zoom. The online meeting format greatly reduces the meeting overhead cost.

**5.3 Project Schedule**

The Business Process Mapping Project schedule called for a two month project with initiation beginning on March 13, 2020 and project closeout ending on May 15, 2020. The below chart shows each phased of the project life cycle, the planned schedule dates, and the actual completion dates of each phase.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Milestone List** | | | | |
| **Project:**  Business Process Mapping | | | **Completed Date: 15 May 20** | |
| Milestone No. | Milestone | Schedule Completion | Actual Completion | Comments |
| 001 | Project File Initiation | 13 March 2020 | 13 March 2020 | Completed on time |
| 002 | Project Concept Planning | 20 March 2020 | 20 March 2020 | Completed on time |
| 003 | Progress Report 20% | 27 March 2020 | 27 March 2020 | Completed on time |
| 004 | Concept Designs | 01 April 2020 | 01 April 2020 | Completed on time |
| 005 | Project Management Plan | 17 April 2020 | 17 April 2020 | Completed on time |
| 006 | Progress Report 50% | 17 April 2020 | 17 April 2020 | Completed on time |
| 007 | Progress Report 80% | 24 April 2020 | 24 April 2020 | Completed on time |
| 008 | Tender & Design Defence | 08 May 2020 | 08 May 2020 | Completed on time |
| 009 | Progress Report 100% | 15 May 2020 | 15 May 2020 | Completed on time |
| 010 | Project File Closure | 15 May 2020 | 15 May 2020 | Completed on time |

The Business Process Mapping Project successfully completed each phase of the project on time which can be attributed to the attitude of each member to complete the works actively, and the effective communication of the team with the supports from the Project Sponsor.

**5.4 Recommendation**

The Business Process Mapping Project was an example of a carefully planned and successfully executed project for Sun Engineering Design. Nevertheless, it is not without its recommendations or lessons learned. (Also see Appendix S, Lesson Learned Log)

Recommendation #1:

* Efficiently complete the tasks carried out to ensure the quality of project completion

Recommendation #2:

* Ensure that the project development direction and all requirements of the client are clearly understood before the project starts

Recommendation #3:

* Care must be taken in the storage of project plans, and do not lose them. The best way is to store on multiple cloud programs.

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**GUC Closure**

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**6. GUC 9133ENG Project Summary & Closure**

After completing this project Sun Engineering Design’s team has gained a large amount of experience and knowledge of a real life-working environment. The project team has also gained a considerable amount of knowledge and experience from the teaching of the Griffith College 9133ENG Project Management for Postgraduates course. All this experience can be related the individual learning undertaken by the project team during the trimester. This section provides an outline of the processes taught within the Master Qualifying Program, as well as the experiential based learning conducted by the project team. Sun Engineering Design’s team appreciates the provisions of knowledge, information and experience that the Project Sponsor, PJ Wilson, has provided for the project and throughout the trimester 1, 2020. All the methods, structures, tools and guidance that the Project Sponsor provided was essential to successful completion of the project.

**6.1 The Engineering Method**

The Business Process Mapping Project methods used in this project followed a systematic problem-solving framework comprised of the following:

* Define the Problems
* Background Research
* Specifying Requirements
* Generation of Alternatives
* Brainstorming, Evaluating, Choosing and Developing Solution
* Internal Testing of Solution
* Based on results and data, make design changes, test again, and review new data. Continue brainstorming, evaluating and choosing new solution.
* Solution Meets Requirements or
* Solution Meets Requirements Partially or Not at All
* Communicating Results

**6.1.1 Research**

A research stage was started from observing and note-taking the Business Process of Asian Plus Kitchen restaurant which complies with the client’s specifications and requirements for the design. The project team came up with a Project Design Scope, to ensure no scope creep was encountered during the generation of alternative solutions. Conceptual designs included three individual design proposed by Heang Sok, Jingyi He and Guanting Li which have same purpose of transforming the restaurant to make it more automatic. Further research was required upon the selection of the final solution. Budget were calculated and the final layout for the proposed design provided the team with important design specification.

**6.1.2 Generation of Alternative Solution**

Sun Engineering Design’s team has defined of the project, undertoken background research and specified the requirements of the design, each of the project team members presented their own Design and reports for the generation of innovative solutions to both designing and teamwork-based goals and objectives for the project. This resulted in three individual conceptual designs which were then evaluated according to the design criteria set within the Design File. Also see Appendix T, Individual Concept Design.

**6.1.3 Evaluation of Alternatives Against the Criteria**

The project team used critical thinking skills to evaluate the solutions according to the project criteria. The Risk Register for the project, can be found in Appendix O, Risk Register, provided the team with additional criteria to be considered for the final conceptual design solution. The alternative designs were compared to the client performance specifications and requirements to ensure key stakeholders were satisfied with the final design selection. In addition, we also analysed the site to provide our team with an analysis of the topography of the restaurant and the layout of tables and chairs. This also become consideration in the evaluation of the conceptual designs against the set criteria.

**6.1.4 Monitoring, Reviewing and Checking the Outcomes**

Sun Engineering Design’s team practiced reflection-in-action and on-action to improve the quality of its performance and keep the project on track as per the project timeline. Regular monitoring, reviewing and checking of outcomes was conducted by the Project Co-ordinate. In addition, regular process reports and team meetings allowed the Project Co-ordinate to communicate findings to the Project Sponsor. This ensured the project team were working effectively and efficiently to provide the best possible outcome for the Project Sponsor.

**6.1.5 Communicating Recommendations to the Client**

The project team communicated any recommendations to the client throughout the process of the project through regular progress reporting as well as set milestones, including a tender design and defence. Communications for the project can be found in Appendix G, Communications. Any recommendations that shall be made to the client upon project completion can be found in Section 6.5 Recommendations.

**6.2 Project Management**

Project Management for the Business Process Mapping Project was conducted by the Project Co-ordinator, Heang, Sok. The Project Co-ordinator developed Project Scope, Project Planning and Scheduling as well as Communication for the project. In addition, the Project Co-ordinate set the quality standards expected for the project.

This Project File was initiated in the planning stage of the project by the Project Co-ordinator. The Project Co-ordinator has been responsible for all work related to the Planning, Documenting, Managing, Finalizing and Presenting of the Project File and related documents. The Project File was completed in various stages throughout the project. These stages required attention to detail and quality management and assurance standards to be met. The Project Design File was also developed and controlled by the Project Co-ordinator to ensure continuity through the project.

Weekly team meetings were organized by the Project Co-ordinator where all team members were required to attend. These team meetings were strategically planned to ensure the most benefit was received from the meetings. The meetings involved reviewing items that needed to be actioned, reviewing the progress and due dates of three items, and attending to and delegating any new action items.

**6.2.1 Project Management Methodology(s) Used**

Sun Engineers chose to utilize two project methodologies throughout the process of the project. These include the Project Managements Institute’s Project Management Book Of Knowledge (PMBOK, 2017) and PRojects IN Controlled Environments (PRINCE2) [1][2][5].

The project team implemented the processes outlined within the PMBOK for conducting the project concept planning, management planning and closure stages of the project. This approach was selected as the PMBOK sets the standards for Quality Management, Quality Control and Quality Assurance for many projects worldwide.

PRINCE2 was utilized during the design stages of the project. This was due to waterfall-like approach that this method entails. This methodology was used throughout the design process as it follows a systematic design approach. This process included starting up the design stage of the project, Initiating the design of the project, Directing the design and Controlling the design towards an acceptable outcome for the project, as well as managing the product delivery and stage boundaries to ensure the client’s performance criteria had been followed and met throughout the design. This was then followed by a design closure that included acceptance testing and recommendations to the client.

**6.2.2 WBS, Tasking & Scheduling**

All planned schedules, time-frames and milestones throughout the project were adhered to and met. The project team paid particular attention to these guidelines to ensure all deliverable were met and provided to the Project Sponsor in a timely manner. Sun Engineering Design utilized a Gantt Chart, OPPM and a work Breakdown Structure (WBS) to ensure smooth operation and project completion. For WBS, tasking and scheduling, refer to Appendix B, Work Breakdown Structure and Dictionary, Appendix C, One-Page Project manager (OPPM), and Appendix F, Gantt Chart.

**6.2.3 Resource Allocation, Accounting and Variance**

As documented in Appendix H, Resource Allocations and Accounting, and Appendix D, Duration Estimate, the expected resource requirements of each team members was planned and presented. In addition, the project team documented their weekly work hours which can be found in Appendix I, Financial Allocations and Accounting. These were compared the planned duration estimate for each of the team members. It was found that all the estimated duration estimate were much greater than actually necessary. However, there was no variance in the amount of work that each team member was allocated to.

**6.2.4 Financial Allocation, Accounting and Variance**

The initial budget plan for the project was AUD 60,000. Upon completion of the project, final costs amounted to AUD 51,000 as documented in Appendix I, Financial Allocation and Accounting. This concludes that the project was completed at approximately 8.5 hours per week for three team members over a period of 10 weeks, not at the budgeted rate of 10 hours per week.

**6.2.5 Risk Performance**

The Project Co-ordinator created a risk register, found in Appendix O, Risk Register, to analyse potential risks that the project team may encounter throughout the project. The risk register provided the project team with contingency plans or possible resolutions to any problems they may encounter. The risk register also allowed the project team to analyse their risk management performance throughout the project. Sun Engineering Design’s team encountered no major risks during the project management or design processes of the project. Any risks that were encountered has a system or contingency plan in place to prevent or lower the risk.

**6.3 Reflection on Teamwork**

This section demonstrates how the Sun Engineering Design’s team practices reflection to learn and improve team effectiveness through constructive feedback. Throughout the project, the Project Co-ordinator ensured that the project was running smoothly and as per the expected schedule through reflection-in-action and regular team meetings. This provided the project team an opportunity to reflect and improve the effectiveness of the project through constructive feedback within the project team. In addition, the Project Sponsor also requested that the team members undertake individual peer assessments in confidence to get an understanding of the workload undertaken by each team member throughout the course of the project.

**6.3.1 Peer Assessment**

Sun Engineering Design’s team drew upon theory to practice constructive feedback to ensure fair contribution to the project while helping each other improve teamwork skills and the team’s overall effectiveness. Effective team leadership was presented by the Project Co-ordinator through clear communications, organizational and time management skills and respect to other. In addition, the Project Co-ordinator ensured the entire project collaborated to successfully complete the project.

The key issue that occurred during the project was the lack of technical skill of individual team member. However, everyone in the team was willing to help each other in order to achieve the project with a high quality.

In addition, individual assessments were undertaken in confidence by each member of the project team when requested by the Project Sponsor. This was to ensure fair marking of work by the project sponsor upon completion of the project

**6.3.2 Lessons Learned**

The Sun Engineering Design’s team has distilled various key learning skills from the discussions and negotiations conducted during the peer assessment process within the project. One of the lessons learned by the project team is every team member needs to spend some time to understand the project scope and objective clearly first because it will prevent the team from working on the wrong direction.

It is also significant that all team members actively participate in project planning, management and design stages of the project. This is to ensure all members are aware of the expectation, deliverable and milestones for the project. In addition, Sun Engineering Design recommends the use of unbiased rating and weighting tables for the selection of the final design concept. This is to ensure all team members feel as if there is fair collaboration and trust within the team.

**6.4 Conclusion**

Sun Engineering Design were engaged to present the Project Sponsor with a detailed Project File and Design File detailing the different management stages throughout the project. These included Project Planning, Project Management, Project Design and Project Closure. Each of these stages involved various processes, methodologies, plans and tools that helped developed the processes implemented within this project. The project team effectively utilized these provisions to organize, develop and present reports as the project progressed.

To conclude, Sun Engineering Design successfully designed and de-risk an order solution for Asian Plus Kitchen in Brisbane and exported as per the client’s requests through the use and implementation of various project management strategies and techniques. The project team developed and evaluated alternative concepts and presented the Project Sponsor with a viable design that met and exceeded the client’s expectations.

**6.5 Recommendations**

It is recommended that Project Sponsor, Key stakeholders, and anyone who may conduct similar Business Process Mapping Projects for a restaurant to integrate the Automatic Ordering Machine system to the business process as Sun Engineering Design’s team did in project. Sun Engineering Design’s team also conducted reviews, critical analysis and reflection on the project execution process, goals and objectives as well as deliverable presented throughout the project.

Drawing upon lessons learned from the peer assessments, Sun Engineering Design’s team recommends the regular, monitoring, reviewing and reflection of teamwork. In addition, setting quality standards and expectation at the beginning of the project will prevent an overload of work on team members. Furthermore, the project team must agree on a safe and effective document storage method and/or system to prevent rework and loss of documentation. Therefore, WPS cloud storage is recommended.

Transferring a file through online approach is vital and worth to take it into consideration as the file’s format could collapse at the receiver side. The team learnt that it is suggested to save the file into PDF format before sending.

Regular team meetings are also crucial in ensuring project milestones and time-lines were being met. It also ensured organization within the project team, and provided an opportunity for all team members to provide valuable input. Sun Engineering Design team found that key to successful project completion was knowledge of individual team members, confidence and competence within the project team.