PROJECT DOCUMENTATION

**LESSONS LEARNED LOG**

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# 1 Lessons Learned Log History

## 1.1 Document Location

This document is only valid on the day it was printed.

The source of the document will be found on the project's PC in location

## 1.2 Revision History

**Date of this revision:**

**Date of Next revision:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Revision date** | **Previous revision date** | **Summary of Changes** | **Changes marked** |
|  |  | First issue |  |

## 1.3 Approvals

This document requires the following approvals.

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# Lessons Learned Log

## 3 Purpose

Chandrika Agri Center is currently an emerging manufacturer & provider of fertilizer in Sri Lanka, which is a stern pillar in building the economic infrastructure of any country. Currently as it stands, in 2019, the company consists of several segmented processes handled by about 25 employees and a corporate team for the administrative task performances.

With the budding of the company and upscaling being prominent at the time of concern, the management sector pertinent to performing administrative functions was in need of a control system in place to avoid complications and efficiency compromises that are potentially viable for any emerging company. Furthermore digitization of the company and plant process information was forecasted to yield better profitability compared to the competition.

The team led by the Project Manager, directed by the Project Executive has stepped up to provide a software solution that would enable Chandrika Agri Center to operate within company premises to manage internal issues that directly correlate to the production, overall efficiency and profitability. Currently the project is at the stage of closing and final system is ready to be deployed.

This document will contain details of the final deliverable; CAC Management System, with reference to all the important lessons learned during the stages of developing and managing the project in a detailed analysis.

## 4 Management/Quality Process Assessment

In terms of project management and quality assurance of the outcomes, we can analyse how the deliverables produced within the scope of CAC Management System, compared to the initial plans staged during project acceptance.

When assessing the project growth, we can partition the entire project into the categories mentioned below which covers the most important aspects.

* Project Planning
* Development
* Documentation
* Communication

When considering project planning, initially under the direction of the project executive, a team of 5 members was established with a variety of roles that would prove useful in simultaneously covering required tasks of any project at a given stage. In terms of identifying roles and responsibilities of the team, assigning the perfect personnel for each role and later on continuing on that firm foundation of duties, the team’s performance and time management can only be graded as exceptional.

During the phase of requirement gathering and analysis, there was a potential risk of a communication gap between technicalities and the agricultural expertise of the company employees and the project team. To make sure the team delivered what was necessary and started the initiation on the correct foundation, the quality assurance along with the project manager and the other members established comprehensive acceptance criteria referring to quality as well as functionality. Similarly the management throughout the entire process in development, quality assurance and in terms of forecasting risk as well ensured a seamless implementation which could be stated as evidence for excellent project management.

Development of the software artefact was broken down to prototypes which were presented at highlight report milestones for inspection by both the project executive and the client. Due to proper mitigation of issues and risks along with constant quality management with regards to the acceptance criteria, the final deliverable went through a steady flow. This was aided by the communication strategies which were well managed throughout this duration. Communication between the client and the project executive at weekly meetings ensured when and where changes were required and how the system could prove to be more desirable while proper Prince2 and PMBOK documentation practices ensured mutual understanding among the stakeholders.

As a summary, the key aspects/ processes which were best managed are as follows.

* Feasibility study and Scope management
* Communication management
* Resource management
* Team management
* Time management
* Risk/ Issue forecasting and management
* Efficient development of software
* Documentation
* Flexibility
* Quality Assurance

While no management/ quality processes could be categorized as failures, improvements proved desirable in terms of future proof design and multithreading. These issues were also handled later during the final stages of development and are discussed under deviations.

## 5 Deviations

While no abnormal events/ deviations were visible in terms of the entire project in terms of management or team members, the software artefact was subjected to several deviations from the initial plans with respect to the instructions and critical analysis of the project executive. These suggestions were discussed with the client in terms of assessing viability and preference before being induced into the final system.

The changes include;

* Addressing the suggestion of desirable multiple user level availability within the system which was not planned initially. (User levels have now been established with proper privilege limitation and have been evaluated by the project executive at progress meetings.)
* Implementing the employee attendance sub component as a different system that functions on a different thread which enables the other components to run in tandem with no issue to the parallel functioning.

## 6 Method/Tool Performance

* In terms of development, prototyping methodology was used as the system development lifecycle of choice which proved to be a great methodology specifically for developing this particular project. This was backed by the requirements of prototype demonstrations pertinent to the project board’s decision and also made sure that the client; being new to digitization of company processes, also had a say and was able closely monitor the development of the project.
* In terms of actual development Java was used as the language of preference due to object oriented programming capabilities and aspect driven programming capabilities the team proposed to use pertinent to prior project experiences. Furthermore this choice also enabled faster development due to the development experience the team consisted of and the flexibility Java had as a robust programming language.
* In terms of project management itself, Prince2 and PMBOK practices were closely followed with respect to team management (in terms of defining roles & responsibilities, performance evaluation etc), documentation and appraisal.

## 7 Recommendations

CAC Management System was developed as a software solution for a small company at the time of concern. Since the company was still developing, there were a number of considerations to be analysed during the requirement analysis phase, which acquired the most time within the project course. Still, the team had to make amends when suggestions were made for the additional functionality which was introduced to the system which was previously discussed under section 5, deviations.

Therefore, in terms of project management it would be beneficial to take even more time to analyse requirements at each level of potential users in order to ensure minimal changes and even faster development.

When considering post-delivery of the final system, strategic planning for maintenance and system acknowledgement seminars (for the client staff) could also prove beneficial for both the project team and the company in the long run. (However, we are not concerned about this in the current project scope justifying the inclusion of the idea within recommendations section.)

## 8 Measurements of Effort

When considering the effort put in to producing all the deliverables that were required for the scope of the selected project, below measurements could be considered useful.

* Time duration of the project
* Weekly meeting minutes
* Lines of code in the final system
* Content & subcomponents of the system
* Overall project documentation
* Highlight reports
* Project Executive remarks
* Client satisfaction & appraisal

## 9 Quality/Test Assessment

In terms of testing the system for quality and functionality, the project documents such as quality plan, risk plan, test cases/ test plan, risk log, issue log, acceptance criteria etc. stands useful as evidence for detailed records of improved modifications, testing and functionality relevance to initial project plans.

Furthermore, the client and the project executive has been able to keep monitoring the development with weekly meetings in terms of assessing the quality of the products delivered and this combined with documentation has been fully effective as benchmarks for evaluating the project standards in both technical and non-technical aspects.

In analysing the reason behind the success for achieving client satisfaction regarding quality of the system and its functionality, the team’s ability to mitigate issues and risks ranks particularly high. The team being able to forecast potential risks and issues even before their proximity and severity are at the lowest has enabled the project to be delivered with very minimal delays/ issues and no quality degradation.