**CS691 - Computer Science, Fall 2019**

**Project Initiation Document**

Project: Super Servoli Systems

Project Manager: Poovadol Pradubsri

Start Date: 9-17-2019

Completion Date: 9-28-2019

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Approvals

This document requires the following approvals:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Role | Signature | Date | Version |
| Poovadol Pradubsri | Project Manager | Poovadol Pradubsri | 9-26-2019 | 3.0 |
| Hao Dong | Product Owner | Hao Dong | 9-26-2019 | 3.0 |
| Andrew Paykin | Lead Business Analyst | Andrew Paykin | 9-26-2019 | 3.0 |
| George Mechalakos | Lead Developer | George Mechalakos | 9-26-2019 | 3.0 |
| Ryan O’Hara | Developer | Ryan O’Hara | 9-26-2019 | 3.0 |
| Jaepil Lee | DBA | Jaepil Lee | 9-26-2019 | 3.0 |
| Janielle Vazquez | Lead QA Analyst | Janielle Vazquez | 9-26-2019 | 3.0 |

Distribution

This document has been distributed to:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Role | Date of Issue | Version |
| Poovadol Pradubsri | Project Manager | 9-26-2019 | 3.0 |
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| George Mechalakos | Lead Developer | 9-26-2019 | 3.0 |
| Ryan O’Hara | Developer | 9-26-2019 | 3.0 |
| Jaepil Lee | DBA | 9-26-2019 | 3.0 |
| Janielle Vazquez | Lead QA Analyst | 9-26-2019 | 3.0 |

# Document Purpose

This document is the Project Initiation Document (PID) for Super Servoli Systems. This document serves to define the scope, objectives, individual roles, responsibilities, costs, timing, deliverables, and requirements for the Super Servoli Systems project.

This PID will cover the following information:

◾ Specific details of the approach adopted for the implementation of the Super Servoli Systems project

◾ Details of the individual roles and responsibilities, functions and activities

◾ Define and explain the processes

◾ Detail the communication plan among project team members and stakeholders

◾ Quality records, risks, project controls and exceptions

This document will be constantly evolving to reflect the ever-changing and dynamic nature of the Super Servoli Systems project. Changes over the lifetime of this project will be recorded in this PID document. This PID will also be used as a baseline to ensure consistency, timeliness, and success of the project.

# Background to the Proposed Work

Technology continues to move forward at lightning speed and changes the world around us. Businesses in the hospitality industry must adapt and embrace the latest technologies and trends in order to remain relevant, competitive and successful. Customers demand greater efficiency, speed, quality, and satisfaction. Restaurants are unique, dynamic, and require many different moving-parts in order to function successfully. Various platforms are utilized in order for a restaurant to operate effectively. Super Servoli Systems combines services to the client-restaurant in one package and streamlines the delivery in the most user-friendly approach possible. Super Servoli Systems combines self-service ordering for the customer, self-service booking/reservations, and seating, a bespoke-tailored style customer profile to save previous orders, preferences and suggestions, instantaneous data analytics for restaurant operations, partnerships with the community in order to provide up-to-date information on the customer screens on the kiosks, partnerships with various companies in order to provide customers ideas and options outside of their normal dining experience. Super Servoli Systems is unique to every single restaurant and is certainly not one size fits all (unless requested by the restaurant group)

# Vision

The goal of this project is to combine the important, necessary components of a restaurant all in one place to provide customers with an amazingly fast, efficient, and fun experience while providing restaurant managers and operators accurate, simple to use, efficient solutions to better run their businesses.

# Project Objectives

This section includes how the purpose of the project breaks down into individual objectives and the specific, measurable results expected upon project completion.

Objectives in this section need to be outlined in a way that will enable them to measure the success of the project.

◾ Build-out of three client businesses

◾ Create simple, fun, user-friendly user interfaces which will include customer-order kiosks, and back-end analytics portion

◾ Build mobile application for the back-end portion

◾ Provide clients customizable interfaces

◾ Customizable storage of customer data

# Project Scope

This section will define the scope of the project, including:

**What the project must deliver**

* Allow a user to book a reservation
* Allow a user to view a menu
* Allow the user to place an order
* Web Based Application

**What’s in and out of scope**

* Set up external payment system
* Mobile Application

**The impact of the project – geographically, financially, etc.**

* Adoption from restaurants

**Outlining all who will be affected by the project.**

Technical:

◾ Understand the limitations and constraints based on time, skill, and resources

◾ Apply the best UX/UI practices

◾ How to tie in all of the various moving pieces of this project in order to be successful

◾ To fully understand each team member’s roles, responsibilities, and capabilities

◾ To properly create the necessary software

◾ To continuously update and expand the requirements in order to meet the scope of the project

Functional:

◾ Customers will be able to view restaurant menu items, available/unavailable seats and seating times, create a customer profile

◾ Customers will be able to provide payment for items

◾ Restaurant operators will be able to view, adjust information on the backend

# Business Case

This section will justify the project so the board can then decide if it gets to go ahead. Benefits should be quantified and balanced against the cost and timing being estimated during the creation of the project plan.

Large projects may summarize and include a link to the full business case.

|  |  |
| --- | --- |
| **Application Name** | Super Servoli Systems  Self-Service Ordering/Booking/Seating system |
| **Type of business model** | Freemium, Subscription.  The service would begin as a freemium (offering a free trial period) for 1 month before moving into a subscription service. |
| **Target audience of users** | The target audience for this software will be fast-food restaurants, take-out restaurants, pop-up restaurants, bars, concessions, and fast-casual restaurants.  The service would be for businesses that are looking to provide a dynamic and faster component to ordering food and booking tables and set-up reservations. The service allows customers to order food, book tables and set-up reservations themselves. Typically within restaurants, labor is a huge part of cost. The service would reduce this cost. |
| **Value proposition** | Our system allows for a huge reduction in labor costs by performing many tasks which normally require staff.  We provide an extraordinarily user-friendly interface so managers and supervisors can make lightning-fast adjustments such as new menu items, or daily specials, or adding/removing specific tables.  Each system is easily customizable by our team to match and exceed each restaurant’s specific needs and goals. |
| **How the system is used** | The system is used by allowing customers to order food, and select the location where they wish to sit throughout the restaurant. The system helps to expedite ordering and service. The system has the option of accepting credit cards, debit cards, and cash. As every restaurant is different (and perhaps even vastly different), the system is customized and adapted to be unique to each restaurant. |
| **Revenue generation** | Monthly subscription fee, Banner Ads |
| **Partners/Suppliers**  **(Stakeholders)** | Fast food chain restaurants, Coffee chain restaurants, dining chain restaurant |
| **Expected Benefits** | The time between a customer placing an order and receiving their food would be shortened significantly along with an easy to use interface to make selections simple. The software simply removes the need to have people tracking orders and instead track it on software. This would greatly reduce errors made in taking someone’s order. Eliminate the need for customers to rely on calling a restaurant to book a reservation. |
| **Known Prototypes** | Evoke (McDonald’s), ConnectSmart Hostess (Red Lobster, Olive Garden), Ribot (KFC), Opentable(Restaurant booking service) |

# Assumptions

This section will include assumptions made before the requirements specifications have been documented. It may look something like this:

|  |  |  |  |
| --- | --- | --- | --- |
| Assumption | Validated by | Status | Comments |
| Project Budget | All Members |  |  |
| Participation Time | All Members |  |  |
| Project Resources |  |  |  |
| Team Meetings | PM |  |  |
| Project Funding | Business Analyst |  |  |
| Team Work | PM |  |  |
| Consistency/Evolution | BA, Lead Dev, Dev, PM |  |  |
|  |  |  |  |

# Constraints

◾ Availability of funding

◾ Availability of resources

◾ Hardware build-out

◾ Development of system to be accessible across various platforms (including mobile)

◾ Time obligations among team members

# Risk Management Strategy

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Probability | Impact | Mitigation Method |
| Inadequate Resources | Medium | Low | Readjust specifications and requirements in order to create with necessary resources. |
| E-Commerce integration for transaction handling being difficult to add to the application. | Medium | Medium | Team members will utilize premade resources such as PayPal or Square to handle secure transaction handshakes. If a premade solution fails to work, a custom solution may be needed. |
| Project will take more time to complete than allocated | Medium | Medium | Constant and consistent check-ins will be conducted. Readjustments as needed, and proper evaluations of each phase will be conducted. Constant and consistent communication among the entire team is necessary, as well as a clear understanding of minimum viability. |
| Security of transaction handling solution must be up to standard. | Low | Low | The payment handling solution we decide upon must be able to protect consumer information/personal details. We will utilize SSL and input sanitization to make sure that the database is secure. We will also ensure encryption when user personal details are sent to any needed servers. |
| Database connection being faulty, requiring a different configuration | Medium | Low | Team members will evaluate and adopt different database technologies based on quality of hosting services. If our existing database solution is not up to par, we will swap to another hosting platform or technology to provide better database integration. |
| Components of the end-product may run compatibility or concurrence issues | Medium | High | Team developers, coordinators and database administrators will maintain clear communication to mitigate these issues. Testing will emphasize flexible and loose coupling between components of the complete application. |
| End product does not meet all guidelines of widely accepted distributors | Low | Medium | The case of not being compliant would limit exposure for widespread use of the product.  However this does not affect functionality and overall accessibility. |

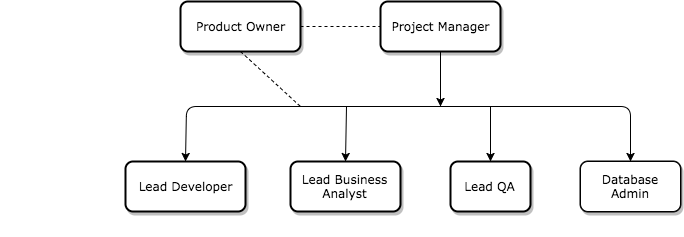
# Deliverables

|  |  |  |
| --- | --- | --- |
| **No** | **Artifact Name** | **Responsible Party** |
| **1** | Project Plan | PM |
| **2** | PID document | PM |
| **3** | BRM Diagram | Product Owner |
| **4** | Context Diagram | Lead BA |
| **5** | Architecture Diagrams (2) | Lead Dev/DBA |
| **6** | User Requirements | Product Owner |
| **7** | RCT (includes func. decomp., supplementary reqs) | Lead BA |
| **8** | Use-Case Diagram (UML) | Lead BA |
| **9** | Activity Diagram (UML) | Lead BA |
| **10** | Data-flow Diagram | Lead BA |
| **11** | Functional Requirements (user stories) | Lead BA |
| **12** | Class Diagram (UML) | Lead Dev |
| **13** | Sequence Diagram (UML) | Lead Dev |
| **14** | ER Diagrams (conceptual, logical) | DBA |
| **15** | Table Specs | DBA |
| **16** | Source code sample (part of Application Demo) | Lead Dev |
| **17** | Test Plan document | Lead QA |
| **18** | Application Demo | All |

# Stakeholders

|  |  |
| --- | --- |
| Stakeholder | Interest |
| Restaurants | Improving Business |
| Restaurant Association Groups | Each restaurant association group maintains its own individual style, bringing customers different restaurant experience. At the same time each restaurant association group shares a common dedication to the highest standards of safety meals and customer service. |
| Team Members | executing tasks, deliver the tasks in time, solve unstable problems like debugging in the app/web for better user experience |
| Sponsors | Helping restaurant to get more funding support and restaurant advertises them for higher attention in the public |

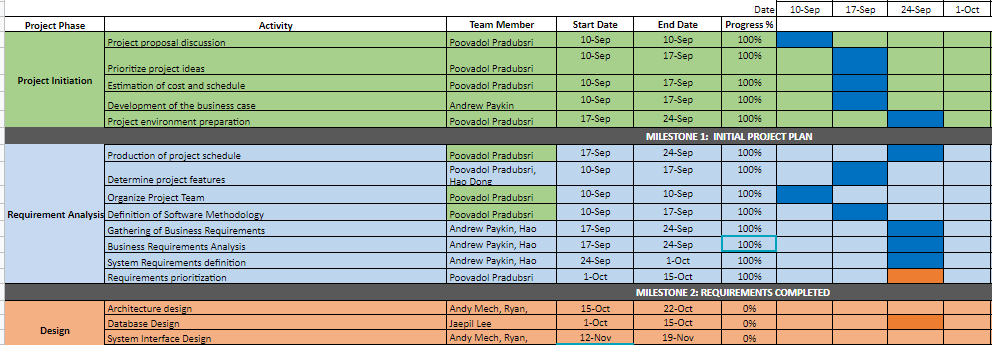
# Project Team



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Project Roles** | | | | | |
| **Process Area** | **Project Tasks** | Project Manager | Product Owner | Dev Lead | Business Analyst | QA | DBA |
| Project Management | Develop a project plan | A,R | C | C | C | C | I |
| Provide cost estimate\*\* | A,R | C | C | C | C | C |
| Establish a project portal on SharePoint | A,R | R | I | I | I | C |
| Maintain a project risk and issue log | A,R | R | C | C | C | C |
| Provide project status reports | A,R | I | I | I | I | I |
| Requirements | Perform requirements analysts | A | R | R | R | C | C |
| Gather business requirements | R | C | I | R | I | I |
| Produce functional requirements | A | I | C | R | C | I |
| Design | Produce high-level design specs | A | I | R | C | C | R |
| Produce data model | A | I | C | I | I | R |
| Produce detailed design specs | A | I | R | I | I | R |
| Coding | Establish a code repository | A | I | R | I | C | C |
| Develop component code | A | I | R | I | C | C |
| Testing | Develop a test plan | A | C | C | I | R | I |
| Establish a test repository | A | C | C | I | R | I |
| Develop test specifications | A | C | C | I | R | I |
| Execute testing, report defects | A | I | I | I | R | I |
| Conduct defect review calls | A | I | C | R | R | C |
| Produce, deliver defect metrics | A | I | C | R | R | I |
| Support test environments | A | I | R | C | C | R |
| Deployment | Produce a deployment plan | A | I | R | C | I | R |
| Produce deployment procedures | A | I | R | I | I | R |
| Deploy software into production | A | C | R | C | C | R |

# Project Plan

Super Servoli Systems project will utilize Agile methodologies



|  |  |  |  |
| --- | --- | --- | --- |
| **Weekly Delivery Schedule** | | | |
|  |  |  |  |
| **Project Phase** | **Week** | **Deliverables** | **Owner Role** |
| Project Planning | 2 | Project Proposal | PM |
|  | 3 | PID document; selected development process | PM |
|  | 4 | Project Plan, RACI, refined PID | PM |
| Requirements Analysis | 5 | BRM Diagram | Product Owner |
|  | 5 | Context Diagram | Lead BA |
|  | 5 | Requirements Types | Lead BA |
|  | 6 | User Requirements | Product Owner |
|  | 6 | RCT (includes func. decomp., supplementary reqs) | Lead BA |
|  | 7 | UML analysis diagrams (use case, activity diagrams) | Lead BA |
|  | 7 | Data-flow Diagram | Lead BA |
|  | 7 | Functional Requirements (use cases or user stories) | Lead BA |
| High-level Design | 9 | ER Diagrams (conceptual, logical) | DBA |
|  | 9 | Database Table Specs | DBA |
|  | 10 | Architecture Diagrams (2) | Lead Dev/DBA |
|  | 11 | Class Diagram (UML) | Lead Dev |
|  | 11 | Sequence Diagram (UML) | Lead Dev |
| Implementation | 8,9,10,11 | Source code sample | Lead Dev |
| Testing | 12,13 | Test documents (test plan, test design, test cases) | Lead QA |

# Project Controls

◾ Regular meetings on Tuesdays

◾ Regular communication using various communication platforms

◾ Regular communication with Professor Chernak and PM

◾ Updated information and documents readily available at all times for team members

◾ Consistent and constant evaluation and feedback from all team members to all team members

# Communication Plan

This section will include how stakeholders will be communicated with during the project and how frequently. This should include a note on where to find the Communications Plan if you have one.

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder | Frequency | Type | Purpose |
| Professor | As needed | Email, Slack | To approve Project implementation and direction. Advise if there are any potential issues. |
| Product Manager | Daily | Email, Skype, Slack, Whatsapp, phone | Inform team members the meeting locations and time, communicate with team members for more detail of the project, current plan and future steps whenever possible. |
| Team Members | Daily | Email, Skype, Slack, Whatsapp, phone | solve any potential issues and follow the steps of the projects each week for delivering the tasks in time. |
| End Users | Potentially during the testing phase and after release. | Email, online testing sessions | Take feedback to improve our product. |