**CS691 - Computer Science, Fall 2019**

**Project Initiation Document**

Project: Super Servoli Systems

Project Manager: Poovadol Pradubsri

Start Date: 9-17-2019

Completion Date:

Table of Contents

[Document Purpose 4](#_heading=h.30j0zll)

[Background to the Proposed Work 4](#_heading=h.1fob9te)

[Vision 4](#_heading=h.3znysh7)

[Project Objectives 4](#_heading=h.2et92p0)

[Project Scope 4](#_heading=h.tyjcwt)

[Business Case 5](#_heading=h.3dy6vkm)

[Assumptions 5](#_heading=h.1t3h5sf)

[Constraints 5](#_heading=h.4d34og8)

[Risk Management Strategy 5](#_heading=h.2s8eyo1)

[Deliverables 6](#_heading=h.17dp8vu)

[Stakeholders 6](#_heading=h.3rdcrjn)

[Project Team 6](#_heading=h.26in1rg)

[Project Plan 7](#_heading=h.lnxbz9)

[Project Controls 7](#_heading=h.1ksv4uv)

[Communication Plan 7](#_heading=h.44sinio)

Document Details

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| 1.0 | Initial PID Document | Poovadol Pradubsri | 9-16-2019 |
| 2.0 | Added the contents of deliverables chart part, Stakeholders part and Communication Plan part | Hao Dong | 9-19-2019 |
| 3.0 | Formatted and added content to Project Scope, Assumptions, Constraints, and Project Controls | All Members | 9-20-2019 |
|  |  |  |  |

Approvals

This document requires the following approvals:

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| Name | Role | Signature | Date | Version |
| Poovadol Pradubsri | Project Manager |  | 9-17-2019 | 1.0 |
| Hao Dong | Product Owner |  | 9-19-2019 | 2.0 |
| Andrew Paykin | Lead Business Analyst |  | 9-20-2019 | 3.0 |
| George Mechalakos | Lead Developer |  |  |  |
| Ryan O’Hara | Developer |  |  |  |
| Jaepil Lee | DBA |  |  |  |
| Janielle Vazquez | Lead QA Analyst |  |  |  |

Distribution

This document has been distributed to:

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| Name | Role | Date of Issue | Version |
| Poovadol Pradubsri | Project Manager | 9-17-2019 | 1.0 |
| Hao Dong | Product Owner | 9-19-2019 | 2.0 |
| Andrew Paykin | Lead Business Analyst | 9-20-2019 | 3.0 |
| George Mechalakos | Lead Developer |  |  |
| Ryan O’Hara | Developer |  |  |
| Jaepil Lee | DBA |  |  |
| Janielle Vazquez | Lead QA Analyst |  |  |

# Document Purpose

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 document is the Project Initiation

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

◾ 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

* **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
* Dealing with cash payments
* **The impact of the project – geographically, financially, etc.**
* Improves businesses speed and efficiency and the bottom line.
* It will affect the businesses financials
* **Outlining all who will be affected by the project**
* Small businesses and the clientele and those businesses

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

|  |  |
| --- | --- |
| **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

|  |  |  |  |
| --- | --- | --- | --- |
| Assumption | Validated by | Status | Comments |
| Project Budget (~100$) | All Members | Complete | N/A |
| Participation Time(~300 hours) | All Members | In Progress | All members have decided to at least provide 3 hours per week to this project |
| Project Resources | QA Analyst | TBD | Testing will be implemented by the testing team when a new feature is completed. |
| Team Meetings | PM (Once a week) | In Progress | Manager will Schedule a weekly meeting and keep track of meeting minutes |
| Collaboration tools will be available | All Members | In Progress | Use collaboration tools to help with delivering project deliverables in a timely manner |
| Team Work | PM | In Progress | Project manager will keep details of all project deliverable due dates and will assign ‘Single or Team’ work on specific project tasks |
| Consistency/Evolution | All Members | In Progress | All members will provided there review of deliverables when necessary |
| Web Server will be available | Developer | TBD | Developer will verify that we have a functioning web server |
| SQL Server will be available | DBA | TBD | DBA will verify that we have a functioning database server |
| Feedback of the product from clients | Product owner | TBD | Engage client on product and ask for feedback |

# Constraints

◾ Availability of funding

◾ Availability of resources

◾ Hardware build-out

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

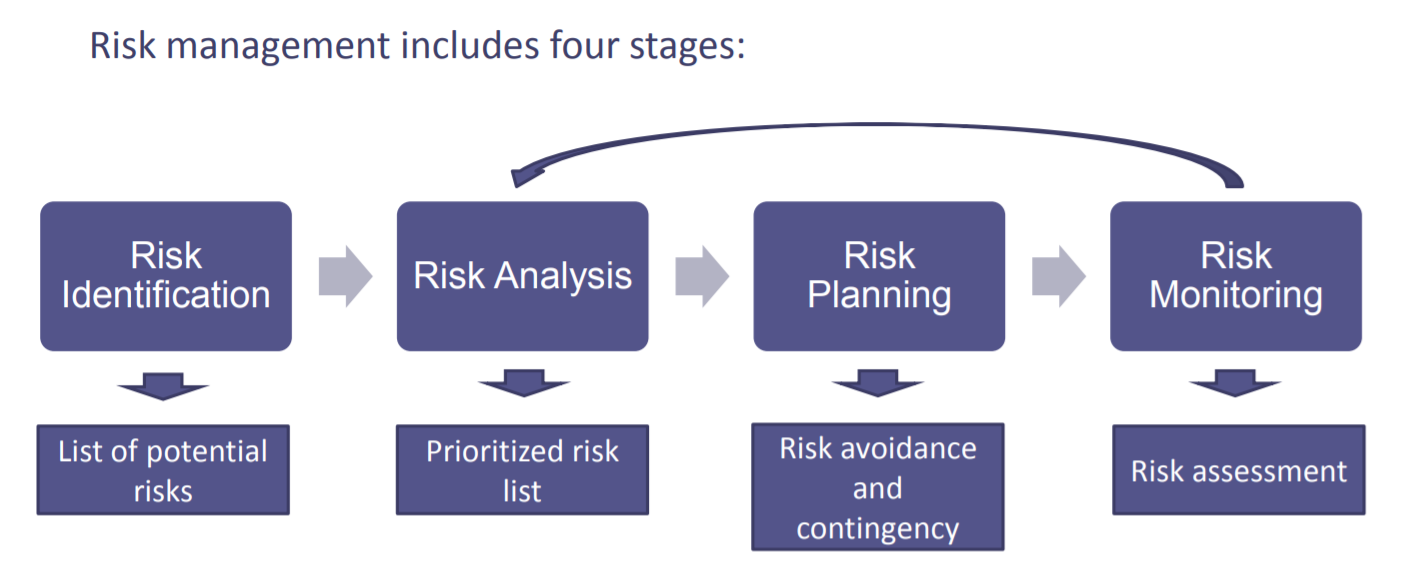
◾ Time obligations among team members

# Risk Management Strategy

This section will include the risk mitigation and management techniques and strategies that will be applied to the project. This may be presented in the following format:

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Probability | Impact | Mitigation Method |
| Inadequate Resources | Medium | High | Readjust specifications and requirements in order to create with necessary resources. |
| Skill requirements for each team member | Low | High | Team members were selected based on skills, and will be assigned based on skills, and will receive help as 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 entire team |
| New Technologies | Low | Low | Each team member will be assigned according to his/her strengths. Team members well-versed in specific technologies will provide training to members not as versed in specific technologies |
| Project will be sub-par and not meet standards | Medium | High | Team members will contribute the proper amount of time in order to ensure a high level of quality. Proper scheduling and communication between all members of the team. Adjustments will be made as necessary |

The most significant risks associated with this project will be requirements that are overly ambiguous, too lofty, or has impractical deadlines.



◾ Risk identification is the process of listing potential project risks and their characteristics. The results of risk identification are normally documented in a risk register, which includes a list of identified risks along with their sources, potential risk responses, and risk categories

◾ Risk analysis is the process of identifying and analyzing potential issues that could negatively impact key business initiatives or critical projects in order to help organizations avoid or mitigate those risks

◾ Risk planning is the process of identifying, prioritizing, and managing risk. Every project or initiative has objectives, that is, goals that it seeks to accomplish. These are often called Critical Success Factors (CSF). Risk events threaten the successful completion of these critical success factors

◾ Risk monitoring is the ongoing process of managing risk. Risk management often has an initial phase that involves identifying risk, agreeing to treatments and designing controls. Risk monitoring is the process of tracking risk management execution and continuing to identify and manage new risks

# Deliverables

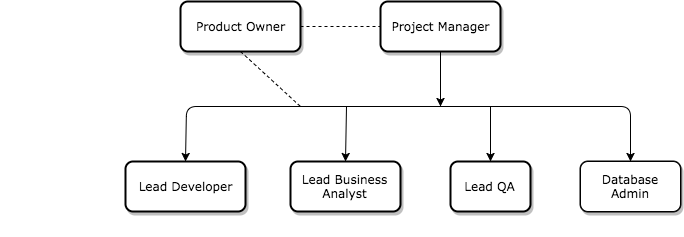
|  |  |  |
| --- | --- | --- |
| **No** | **Artifact Name** | **Responsible Party** |
| **1** | Project Plan | PM |
| **2** | PID document | PM |
| **3** | BRM Diagram | Product Owner |
| **4** | Context Diagram | Lead BA |
| **5** | Architecture Diagrams (2) | Lead Dev/DBA |
| **6** | User Requirements | 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 |

Take a list of deliverables from the Project Delivery Schedule excel document.

# 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 weekly

◾ 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 | When necessary | 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. |