**Project Plan**

Image result for instant edge logo

**The Enterprise Transformation Platform**

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

|  |  |
| --- | --- |
| Document Reference: | ISS\_IE\_PP\_2.1 |
| Client: | **I**nstant **E**dge |
| Project: | **I**nstant **E**dge- Manage Operations Module |
| Document Title: | Project Plan |
| Version | 2.1 |
| Date | 12/12/2016 |
| Author | Rameswari Mohanty |
| Approver | Mathias Behne |

**Amendment History:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Version | Review & Approval Form Number | Date | Brief description of amendments and affected pages, paragraph | Author | Reviewer |
| 1.0 | ISS/IE/PP/1.0 | 28/08/2016 | Initial version | Rameswari Mohanty | Vrinda Gupta |
| 1.1 | ISS/IE/PP/1.1 | 05/12/2016 | * Re-Plan for new available resource. * Incorporate Quality audit comments | Rameswari Mohanty | Vrinda Gupta |
| 2.1 | ISS/IE/PP/2.0 | 12/12/2016 | * Re-Plan the new scope of Project. * Addition of new features. * Resource planning for the new scope. | Rameswari Mohanty | Vrinda Gupta |

**Team Members:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Group** | **Matriculation No.** |
| Rameswari Mohanty | SE24/4FT | A0148532E |
| Vrinda Gupta | SE24/4FT | A0148518X |
| Vignesh Selvaraju | SE24/4FT | A0148576N |
| Zhao Pengcheng | SE24/4FT | A0148528W |

Table of Contents

[Version 2](#_Toc468183039)

[Review & Approval Form Number 2](#_Toc468183040)

[Date 2](#_Toc468183041)

[Brief description of amendments and affected pages, paragraph 2](#_Toc468183042)

[Author 2](#_Toc468183043)

[Reviewer 2](#_Toc468183044)

[2.1 Project Initiation 7](#_Toc468183045)

[2.2 Requirements Gathering & Effort Estimation before each Sprint 7](#_Toc468183046)

[2.3 Sprint Planning 8](#_Toc468183047)

[2.4 Requirements Analysis and Design 8](#_Toc468183048)

[2.5 Software Implementation 8](#_Toc468183049)

[2.6 System Testing and User Acceptance Testing for Sprints 8](#_Toc468183050)

[2.7 Overall System and Acceptance Testing 9](#_Toc468183051)

[2.8 Project Management Activities 9](#_Toc468183052)

[2.9 Configuration Management Activities 9](#_Toc468183053)

[2.10 Risk Management Activities 9](#_Toc468183054)

[User Representative (UR): 10](#_Toc468183055)

[Project Manager (PM): 10](#_Toc468183056)

[Quality Manager (QM): 10](#_Toc468183057)

[Technical Leader (TL): 11](#_Toc468183058)

[Software Architect (SA): 11](#_Toc468183059)

[Business Analyst (BA): 11](#_Toc468183060)

[Developer: 11](#_Toc468183061)

[Testers: 12](#_Toc468183062)

[4.2 Major Deliverables of the Project 15](#_Toc468183063)

[4.2 Work Breakdown Structure 16](#_Toc468183064)

[4.3 Work Break down Structure for Sprint 0 and Sprint 1 17](#_Toc468183065)

[4.3 Scope Change Control 19](#_Toc468183066)

[5. TIME MANAGEMENT 20](#_Toc468183067)

[5.1 Effort Estimation for Overall Project 20](#_Toc468183068)

[5.2 Activity Description 20](#_Toc468183069)

[5.3 Milestones and Schedules 22](#_Toc468183070)

[5.4 Project Progress Control 22](#_Toc468183071)

[6. PROCUREMENT MANAGEMENT 23](#_Toc468183072)

[6.2 Accommodation 23](#_Toc468183073)

[6.3 Computer Hardware and Software 23](#_Toc468183074)

[7. COMMUNICATION MANAGEMENT 24](#_Toc468183075)

1. **Introduction**

Enterprise IT organizations, their systems integrators and software vendors have been reasonably good in the past more than 15 years to help business organizations integrate their disparate commercial processes into a (more) holistic whole – while at the same time neglecting own (management) decision support processes and systems.

Instant Edge provides a transformation platform that addresses this problem space by helping executives, line- and project managers, team leads, members, and employees – essentially any stakeholder of a business transformation initiative to drastically improve motivation of actors within the corporation, enable better decision making, avoid failed transformations and dramatically improve quality of delivery – achieving the desired real business partnering status with on par business interactions.

The Instant Edge Platform is structured following business process areas:

1. Ensure Benefits delivery
2. Manage Changes
3. Manage Programs and Projects
4. Manage Operations
5. Manage Organizations

The application provides immediately executable business processes such as idea management, change management, managing programs and projects, managing services within their organizational context. It is a best-practices based with the capability of managing any kind of and any size of initiative, project, procedure or service.

Executable processes encompass:

1. Managing ideas for new initiatives, products, services, projects
2. Configurable change initiatives with integrated messaging to keep various stakeholders in the loop of progressing change requests, requests for approval, repeatable procedures, etc. at all times
3. Easy and fast setup, preparation and planning of simple or complex projects from templates, from existing practices or from scratch
4. Detailed scheduling, scoping, risk management, cost management, resource management, exception management of projects, programs and entire portfolios
5. Managing operations across the life-cycle of products and services, incident- and configuration management, service desk management, application management
6. Top-down monitoring, real-time reporting, pro-active issue- and alert management, configurable cockpits and dashboards.

The platform provides integrated easy-to-use best practices content (PMBOK, PRINCE2, ITIL, ASAP, templates and more) enabling any kind or size of enterprise to successfully plan, execute and monitor any type or size of transformational initiative in a highly efficient manner. It is configurable and, hence, can accommodate highly diverse business requirements.

* 1. **Purpose**

The Project Plan will provide a definition of the project, including the project’s goals and objectives.

**The Project Plan defines the following:**

* Project purpose
* Business and project goals and objectives
* Scope and expectations
* Assumptions and constraints
* Project Timeline
  1. **Audience**

The Project Plan will be the reference point for the entire execution of the project. The project team and the project sponsor shall refer this document to:

* Plan the required activity that each one needs to perform
* Plan the Effort and timeline
* Specify the deliverables for the Project.
  1. **Organization**

The approach to be adopted by the project to carry out the work is summarized in Section 2 and major activities are identified in Section 3. Staff effort estimates to undertake the work are defined in Section 4 and timescales are given in Section 5. Section 6 describes the deliverables and Section 7 gives details of the project's structure and staffing. Finally, the resources required to support the work are specified in Section 8.

* 1. **References**

To fully understand the background to this project, the reader should also be familiar with the Instant Edge Manage Operations Quality Plan (reference ISS/IE/QP)

1. **Approach**

To develop the **I**nstant **E**dge- Manage Operations Module we are using agile software Development process. The Entire project will be developed in 6 sprints.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PART TIME PERIOD | | | | |
| SPRINT | **MONTH** | **DURATION** | **DAYS** | **DESCRIPTION** |
| Sprint 0 | Aug to Sep | 1.5 months | 14 | **Requirements Gathering & POC (Sandbox)**  Product, Release Backlog Planning, Sprint Schedule |
| Sprint 1 | Oct to Nov | 2.0 months | 11 | **Prototype**  Release A: Sprint 1 (POC) |
| FULL TIME PERIOD | | | | |
| SPRINT | **MONTH** | **DURATION** | **DAYS** | **DESCRIPTION** |
| Sprint 2 | Dec | 1.0 month | 21 | **Pilot**  Sprint 2 |
| Sprint 3 | Jan | 1.0 month | 21 | **Pilot**  Release B: Sprint 3 |
| Sprint 4 | Feb | 1.0 month | 20 | **Public** **Go-Live V1.0**  Sprint 4 |
| Sprint 5 | Mar | 1.0 month | 23 | **Public** **Go-Live V1.0**  Release C: Sprint 5 |

**Sprint 0: Requirements Gathering & POC (Sandbox)**

**Initial Project Planning:** Includes identifying roles and responsibilities in team, set up SVN version history, do Initial Project Planning, Quality planning, Configuration Management planning, and Risk Management planning. This phase also includes Software Architecture Analysis and Creation of Initial High level Design. Team will take reference from Instant Edge existing documents as and when required.

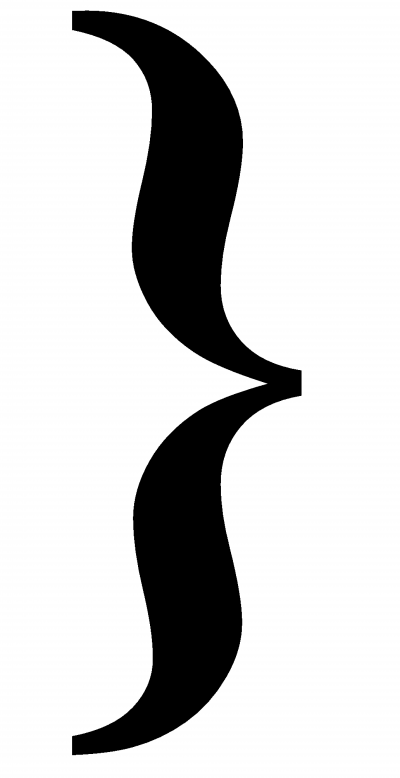
* **Macro Schedule & Scoping**which Timeline, ITIL Functions, Processes, etc.
* **Software Development Process**Agile/Scrum & DevOps
* **Coding Standards & Design Principles**Client Model, UX, Configurability, Authorization/Role Concepts, etc.
* **Deliverables Mapping**Agile/Scrum vs. Instant Edge vs. NUS

**Requirements Gathering**

The Project is a new venture by Instant Edge to include Manage operations functionality into their platform using ITIL Principle. Following strategy will be used for requirement gathering:

* Team along with the Product Owner (Project Sponsor) must go through the ITIL V3 documentation, Do some Market as well as web research to understand ITIL Process Area, Processes, Function, Roles , Objective
* Based on the understanding following Process areas were scoped into the project.

**ITIL v3 Service Lifecycle Scoping**



* Strategy Generation
* Financial Management
* **Service Portfolio Management ✔**
* Demand Management

**SPRINT 1**

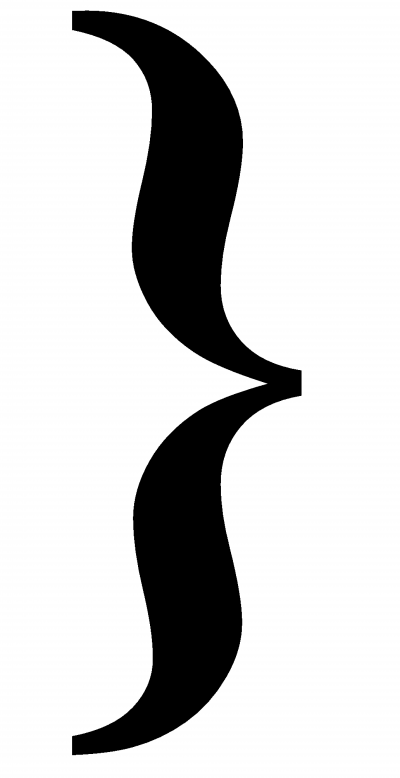
SERVICE STRATEGY

SERVICE DESIGN

* Service Catalogue Management
* Service Level Management
* Capacity Management
* Availability Management
* IT Service Continuity Management
* Information Security Management
* Supplier Management

SERVICE TRANSITION

* Transition Planning & Support
* **Change Management ✔**
* Service Asset & Configuration Management
* Release & Deployment Management
* **Service Validation & Testing**
* Knowledge Management
* Evaluation



SERVICE OPERATIONS

* Event Management
* **Incident Management ✔**
* Request Fulfillment
* Access Management
* Problem Management

**SPRINT 3, 4, 5**

FUNCTIONS IN ITIL

* Service Desk
* Technical Management
* IT Operations Management
* Application Management

**Mobile App development for Instant Edge platform for both Android and iOS ✔** 

**SPRINT 2**

* The team will be divided into 2 parts and Process areas will be divided among the teams to study and come up with the product back log
* The product backlog for a particular process area will be reviewed by other team to refine and finalize the product backlog.
* The product backlog will be reviewed by product owner and the list will be updated.

**Sprint 1: Prototype Development**

For the Prototype development Process Area- Service portfolio Management will be taken.

* The User Scenario for the Service Portfolio will be broken down into user stories.
* The User Stories will be further broken down into task.
* The Use case Realization diagram for all the entity involved will be drawn.
* All the relationship between entities will be established.
* It will be followed by producing the Detailed Design specification.
* Implementation will be carried out based on Object Oriented Programming design (OOP)
* Unit testing done to ensure the defects are captured and fixed early at an early stage.

As the project team has only 4 resources all the development will be done in group of two with one member focusing on functional aspect and other member focusing on the technical aspect. For all document, design, plan development the team will follow Walkthrough or Technical review. For Coding and testing team will follow pair programming and Technical review. The group structure is as follows:

|  |  |  |
| --- | --- | --- |
| **Group No** | **Members Name** | **Responsibilities** |
| Group 1 | Rameswari | Functional |
| Vignesh | Technical |
| Group 2 | Vrinda | Functional |
| Zhao | Technical |

**Sprint 2: Push Notification Development**

Push Notification functionality to be introduced into Instant Edge Platform. Cross Platform mobile development software Xamarin will be used to develop the Instant edge app. The app is supposed to comprise of login screen, list of Push notification, details of each notification and flow in the platform.

* Team is required to pick up xamerin and C# .NET skill.
* User Scenario for Push notification will be prepared and broken into user stories.
* The User Stories will be further broken down into task.
* All security and authorization certificates to be provided by Instant Edge.
* Apple developer program account to be provided by Instant Edge.
* Detailed unit and system testing for the app to be performed on the platform.

**Sprint 3: Incident Management Development**

Incident management functionality to be introduced onto Instant Edge platform. The system should be able to raise incident, route the incident and close the incident successfully on the platform. Push notification to be embedded into the incident management module.

* Team is required to go through the ITIL document to come up with user stories for Incident management
* Product owner will review the user stories and together with the team fix the sprint back log.
* Team will break down the user stories into task and perform effort estimation.
* The Use case Realization diagram for all the entity involved will be drawn.
* All the relationship between entities will be established.
* It will be followed by producing the Detailed Design specification.
* Implementation will be carried out based on Object Oriented Programming design (OOP)
* Unit testing done to ensure the defects are captured and fixed early at an early stage.

# **2.1 Project Initiation**

After project kick off and project briefing, a formal project plan will be produced (this document). Subsequently, a Quality Plan, Configuration Plan and Risk management Plan will be produced. To complete the project initiation tasks, a Project Filing System and SVN version set-up will be done.

# **2.2** **Requirements Gathering & Effort Estimation before each Sprint**

The project overall requirements gathering before starting development of every software module by:

1. Liaising closely with User Representative to identify the user requirements;
2. The major requirements of the project will be identified details and User Requirements Specification will be updated.
3. Creating UI Layout Screens for the requirements identified.

4. Then each team member will create the Product Backlog Items/UI Layouts listing for all features and same will get finalized from User Representative.

5. Function Point counting will be performed after requirements gathering during each Sprint. Efforts required in order to the implement the requirements will be verified with initial estimation and any modifications on schedule/requirements will be agreed with the Customers.

# **2.3 Sprint Planning**

Team will do a story point estimation for the features in Product Backlog items and take up the features which will be implemented in the Sprint. Each group will decide which product backlog items should be targeted in current and future Sprints.

The following work program has been identified to complete the development of the system according to the approach described in Section 2.

# **2.4** **Requirements Analysis and Design**

The project will undertake requirements analysis and design before start development of every Sprint by:

1. Identifying the domain objects, creating class and UCMS diagrams
2. Identifying the analysis and design objects, creating class and HLD diagrams
3. Pick up some complicated use case and create DMR
4. Use Case Model Survey will be revised for use cases identified during implementing the Sprint.

# **2.5** **Software Implementation**

With the DMR of the system as the input, the software development will be carried out for each Sprint as follows:

1. Create and review detailed analysis and design document for each increment use cases.
2. Coding and unit testing for each increment use cases.
3. Integrating with the developed modules and integration testing.

# **2.6 System Testing and User Acceptance Testing for Sprints**

At the end of each Sprint, software testing for incremental use cases implemented will be carried out as follows:

1. Create/Update and Review System Test Plan with test cases;
2. Create/Update and Review User Acceptance Plan with test cases;
3. Undertaking System Testing;
4. Undertaking User Acceptance Testing;
5. Activities to finalize acceptance of the completed Sprint by Requirement Analyst on behalf of User Representatives;
6. Showing demo to the User Representatives;

# **2.7 Overall System and Acceptance Testing**

After development of each module, software testing for incremental use cases implemented will be carried out as follows:

1. Update System Test plan with test cases;
2. Update User Acceptance plan with test cases;
3. Undertaking System Testing;
4. Undertaking User Acceptance Testing;
5. Activities to finalize acceptance of the completed System by User Representatives;

# **2.8** **Project Management Activities**

The Project Management activities needs to be carried out throughout the project which includes Project Planning for Sprints, monitoring Project Progress, and Project re-planning if required.

# **2.9** **Configuration Management Activities**

To Configuration Management Activities are to control changes in requirements and baselining of Project Documents. Please refer Configuration Plan (ISS/IE/CM) for more details.

# **2.10 Risk Management Activities**

During subsequent intervals the risks perceived in the project needs to be identified and proper risk mitigation needs to be proposed. Please refer Risk Management Plan (ISS/IE/RR) for more details.

1. **Project Organization**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Role** | **Acronym** | **Person in Charge** | **Organization** |
| 1 | User Representative | UR | Mathias Behne | Instant Edge |
| 2 | Project Manager | PM | Rameswari Mohanty | ISS |
| 3 | Quality Manager | QM | Vrinda Gupta | ISS |
| 4 | Configuration Manager | CM | Selvaraju Vignesh | ISS |
| 5 | Software Architect | TA | Zhao Pengcheng | ISS |
| 6 | Technical Leader | TL | Zhao Pengcheng | ISS |
| 7 | Business Analyst | BA | Rameswari Mohanty | ISS |
| 8 | Software Developer | DP | Zhao Pengcheng , Selvaraju Vignesh , Rameswari Mohanty , Vrinda Gupta | ISS |
| 9 | Software Tester | WP | Zhao Pengcheng , Selvaraju Vignesh , Rameswari Mohanty , Vrinda Gupta | ISS |

The overall roles and responsibilities for the required deliverables are described in the following subsections:

## **User Representative (UR):**

* Provides interface between the project team and the sponsor.
* Focal points of contact for the ISS team
* Approves project deliverables from client side
* Provide project requirements to Team
* Provide sign off to module requirements

## 

## **Project Manager (PM):**

* The day-to-day management of the project and has specific accountability for managing the project within the approved constraints of scope, quality, and time, to deliver the specified requirements and deliverables as agreed with the Client and ISS.
* Monitoring the progress of the project and takes appropriate action when required.
* Acting as the main point of contact for Client with the project
* Acting as the change authority for requirement and software change requests.
* Setting up and conducting User Acceptance meeting
* Conducting progress meetings
* The production of Project Plan
* End of Project Report
* Progress Reports

## 

## **Quality Manager (QM):**

* Developing and managing QA procedures for the project and ensuring that they are followed by the project team
* Quality Assurance matters
* Works with CM to set up project filing system
* Planning, prioritization of all the test-related tasks
* Providing Test Strategies, Test Plans, Conducts Peer Review sessions and Test sessions
* The production of Quality Plan
* Maintain and Update Risk register, Issue Log
* Acceptance Test Plan
* System Test Plan

## **Technical Leader (TL):**

TL will be responsible for the following tasks defined as below:

* Prototyping Design and Development;
* Review architectural design and database design;
* Review high level and detail design;
* Assist Project Manager in Project Management activities

## **Software Architect (SA):**

* Leads the development of software work product
* Works with TA to decide between technical alternatives
* For the overall delivery of the technical deliverables
* UCMS
* UCRR

## 

## **Business Analyst (BA):**

* Eliciting requirements
* Documents and analyses functional requirements for user by the team
* Getting sign off on User Requirements Specifications
* Works with Quality Manger on System and Acceptance testing
* User Requirements Specification
* Acceptance test report

## **Developer:**

* Backend software development activities
* Working with SA to develop the prototype and work products
* Works with SA and BA on User Interface Design
* Desktop application development activities
* Working with SA to develop the prototype and work products
* Works with SA and BA on User Interface Design
* Assist in producing the quality plan, user requirements specification document and the project plan
* Perform the prototyping to determine the detailed software requirements
* Assist in producing the system specification document
* Undertake the software coding
* Plan and perform system testing of the d software
* Assist in producing Acceptance and System test plan
* Support user acceptance
* Produce the User Guide
* produce weekly time reports
* Attend progress meetings
* Maintain the project filing system.

## **Testers:**

* System Testing
* Assist the users during acceptance testing
  1. **Liaison With Client**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Team** | | | **Client** | |
| **Responsibility** | **Name** | **Deputy** | **Name** | **Deputy** |
| Project Management | Rameswari Mohanty | - | Mathias Behne | Sebastian Voss |
| Project Liaison | Rameswari Mohanty | Vrinda Gupta | Mathias Behne | Sebastian Voss |
| Technical Matters | Zhao Pengcheng | Selvaraju Vignesh | Mathias Behne | Sasmita Patnaik |
|
| Quality | Vrinda Gupta | - | Mathias Behne | Sebastian Voss |
| Business Analyst | Rameswari Mohanty | Selvaraju Vignesh | Mathias Behne | Sebastian Voss |

The points of liaison between Client representatives and their respective counterparts within the software project team are as given in the following table.

* 1. **Resource Skill Matrix**

The details of skill mapping is done in ISS/IE/SM document. The same document shall be updated for any change in skill set

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Skill Name/Resource Name** | **Rameswari** | **Vrinda** | **Vignesh** | **Zhao** |
| Web Technology (html,js,css) | 3 | 3 | 4 | 4 |
| Java Persistence API | 3 | 3 | 4 | 4 |
| Prime Faces | 4 | 4 | 4 | 4 |
| Database | 3 | 3 | 3 | 3 |
| Application Server(Glass Fish) | 3 | 3 | 3 | 3 |
| Enterprise Architect | 4 | 4 | 4 | 4 |
| Apache Shiro Framework | 2 | 2 | 2 | 2 |
| Enterprise Java | 4 | 4 | 5 | 5 |
| Requirements gathering and Analysis | 5 | 4 | 3 | 3 |
| Programming Concepts | 4 | 4 | 4 | 4 |
| Project Management | 4 | 4 | 3 | 3 |
| Software Testing | 3 | 5 | 3 | 5 |
| ITIL Framework | 4 | 3 | 3 | 3 |
| Agile Framework | 4 | 4 | 4 | 4 |
| Android Development | 3 | 3 | 4 | 4 |
| iOS Development | 4 | 4 | 4 | 4 |
| C# .NET Development | 3 | 4 | 4 | 3 |
| Xamarine Development | 3 | 3 | 4 | 4 |

**Legends:** 1- Not Aware

2- Aware

3- Hands on Experience

4- Able to handle complex problems

5- Subject Matter Expert

* 1. **Skill Acquisition Plan:**
* The minimum accepted value for a particular skill to work in this project is 3
* Any resource below 3 in a particular skill set need to go for a skill acquisition process
* The skill acquisition process includes :
* Taking up basic elective in ISS matching the particular skill set.
* Self-study to acquire the required skill set.
* Approach ISS ITIL expert to gain domain knowledge
* Study competitor product to understand the domain better

1. **SCOPE MANAGEMENT**

**4.1 Project Scope**

This project aims to implement the Manage Operations module for Instant Edge which provides a transformation platform that addresses this problem space by helping executives, line- and project managers, team leads, members, and employees – essentially any stakeholder of a business transformation initiative to drastically improve motivation of actors within the corporation, enable better decision making, avoid failed transformations and dramatically improve quality of delivery – achieving the desired real business partnering status with on par business interactions.

The Instant Edge Platform is structured following business process areas:

1. Ensure Benefits delivery
2. Manage Changes
3. Manage Programs and Projects
4. Manage Operations
5. Manage Organizations

As per the initial requirement proposal, scope of the Manage Operations module of Instant edge Platform will include the following Process areas

1. Service Portfolio Management.
2. Incident Management
3. Push Notification

The scope of the project will be limited to these Process Areas and the requirements in each process area will be identified and requirements can be de-scoped based on the time contains of the project. The requirements of this project can be modified in these modules defined or in new modules can be performed after proper Change Request from the User and the request has to go through the Change Control Process. The scope of the project does not includes any other modules which are not defined in the User Requirement Specification (URS) and any customization requirements which are required has to be explicitly mentioned in the URS.

# **4.2** **Major Deliverables of the Project**

As a result of undertaking the work described in this plan, the following deliverables will be produced by the project at different phases

|  |  |  |  |
| --- | --- | --- | --- |
| **S/No** | **Phase** | **Deliverables** | **Location** |
| 1 | **Requirements Gathering & POC (Sandbox)**  **Prototype** | Project Plan | ISS/IE/PP |
| Risk Management Plan | ISS/IE/RMP |
| Configuration Management Plan | ISS/IE/CMP |
| Quality Plan | ISS/IE/QP |
| Unit Test Plan | ISS/IE/UTP |
| Prototype Study Report | ISS/IE/PSR |
| User Requirement Specification | ISS/IE/URS |
| Requirement Model Report | ISS/IE/RMR |
| Design Model Report | ISS/IE/DMR |
| High Level Design | ISS/IE/HLD |
| Use Case Model Survey | ISS/IE/UCMS |
| Product Backlog | ISS/IE/PB |
| User Stories | ISS/IE/PUS |
| 2 | **Pilot** | User Requirement Specification | ISS/IE/URS |
| Detailed Design Specification | ISS/IE/DD |
| Source Code and Executable |  |
| Requirement Model Report | ISS/IE/RMR |
| Design Model Report | ISS/IE/DMR |
| High Level Design | ISS/IE/HLD |
| Test Specification | ISS/IE/TS |
| 3 | **Go-live** | Requirement Model Report | ISS/IE/RMR |
| Design Model Report | ISS/IE/DMR |
| User Requirement Specification | ISS/IE/URS |
| Detailed Design Specification | ISS/IE/DD |
| Source Code and Executable |  |
| Test Specification | ISS/IE/TS |
| Project Closure Report | ISS/IE/PCR |

# **Work Breakdown Structure**

This section identifies the various tasks which needs to be performed for the implementation of the system according to the approach described. It provides the list of tasks that have been planned at a different increments of the project.

|  |  |  |
| --- | --- | --- |
| S/No | Phase | Tasks |
| 1 | SPRINT 0 and SPRINT 1 | Task 1: Project Briefing  Task 2: Project Planning  Task 3: Project Initiation  Task 4: Requirement Gathering and Analysis  Task 5: Story and Function Point Estimation  Task 6: Analysis Modeling (for each Sprint)  Task 7: Detailed Design Modeling (for each Sprint)  Task 8: Implementation (for each Sprint)  Task 9: Unit Testing (for each Sprint)  Task 10: User Acceptance Testing (for each Sprint)  Task 11: Quality Audit Meeting  Task 12: Project Presentation |
| 2 | SPRINT 2 and SPRINT 3 | Task 13: Requirement Gathering and Analysis  Task 14: Story and Function Point Estimation  Task 15: Analysis Modeling (for each Sprint)  Task 16: Detailed Design Modeling (for each Sprint)  Task 17: Implementation (for each Sprint)  Task 18: Unit Testing (for each Sprint)  Task 19: System Testing (for each Sprint)  Task 20: User Acceptance Testing (for each Sprint)  Task 22: System Testing for whole System  Task 25: Quality Audit Meeting  Task 26: Project Presentation |
|  | SPRINT 4 and SPRINT 5 | Task 27: Requirement Gathering and Analysis  Task 28: Story and Function Point Estimation  Task 29: Analysis Modeling (for each Sprint)  Task 30: Detailed Design Modeling (for each Sprint)  Task 31: Implementation (for each Sprint)  Task 32: System Testing (for each Sprint)  Task 33: User Acceptance Testing (for each Sprint)  Task 34: Produce User Manual (for each Sprint)  Task 35: System Testing for whole System  Task 36: Acceptance Testing for whole System  Task 35: Project Closure  Task 38: Quality Audit Meeting  Task 39: Project Presentation |

The details WBS for each increment will be produced in the planning activity of each phase.

# **Work Break down Structure for Sprint 0 and Sprint 1**

The work break down structure for Initial Project Planning is given below. The Exact sprint backlog for the sprint 1 is mentioned in ISS/IE/EE file with the details of story point and effort estimation.

|  |  |
| --- | --- |
| **S.No** | **Tasks** |
| **1** | **INITIAL PROJECT PLANNING AND FEASIBILITY** |
| **1.1** | **Instant Edge Project Briefing** |
| 1.1.1 | Instant Edge Project & Customer Briefing |
| 1.1.2 | Identify roles and responsibilities |
| **1.2** | **Project Management Planning** |
| 1.2.1 | Produce Project Plan(ISS/IE/PP) |
| 1.2.2 | Review Project Plan (PP) |
| 1.2.3 | Revise Project Plan |
| 1.2.4 | Produce Quality Plan |
| 1.2.5 | Review Quality Plan (QP) (ISS/IE/QP) |
| 1.2.6 | Revise and Quality Plan |
| 1.2.7 | Produce Risk Management Plan (RMP) (ISS/IE/RR) |
| 1.2.8 | Review Risk Management Plan |
| 1.2.9 | Revise Risk Management Plan |
| 1.2.10 | Produce Configuration Management Plan (CMP) (ISS/IE/CMP) |
| 1.2.11 | Review Configuration Management Plan |
| 1.2.12 | Revise Configuration Management Plan |
| 1.2.10 | Produce Unit Test Plan (UTP) (ISS/IE/UTP) |
| 1.2.11 | Review UTP Plan |
| 1.2.12 | Revise UTP Plan |
| **1.3** | **Project Initiation** |
| 1.3.1 | Resource Shifting ((ISS/IE/SM) (ISS/IE/WD) |
| 1.3.2 | Project Plan Discussion |
| 1.3.3 | Set up SVN repository |
|  | Set up NAS Cloud Station |
| 1.3.4 | Set up Java Project depends on initial requirements |
| **1.4** | **Requirement Gathering & Effort Estimation** |
| 1.4.1 | Gather requirements & Create Product Backlog |
| 1.4.2 | Document User Requirements and Draw UI Layout Diagrams |
| 1.4.3 | Review & Finalize Requirements for the sprint 1 |
| 1.4.4 | Story Point Estimation (ISS/IE/EE) |
| 1.4.5 | Determine Scope of Prototype |
| **1.5** | **Detailed Requirements and Analysis Modelling** |
| 1.5.1 | Identify Domain Objects |
| 1.5.2 | Produce Requirement model report(ISS/IE/RMR) |
| 1.5.3 | Review and Finalize Requirement model report |
| 1.5.4 | Conduct Use case model analysis |
| 1.5.5 | Produce Use case Model Survey (UCMS) (ISS/IE/UCMS) |
| 1.5.6 | Review UCMS |
| 1.5.7 | Revise and Finalize UCMS |
| **1.6** | **High Level Design** |
| 1.6.1 | Produce High level Design (ISS/IE/HLD) |
| 1.6.2 | Review High level Design |
| 1.6.3 | Revise High level Design |
| 1.6.4 | Create design transition strategy. |
| 1.6.5 | Identify design objects |
| 1.6.6 | Transform analysis objects to design objects. |
| 1.7 | **Detailed Design** |
| 1.7.1 | Create Design Class and Sequence diagrams |
| 1.7.2 | Produce Design Model Report (ISS/IE/DMR) |
| 1.7.3 | Review DMR |
| 1.7.4 | Revise DMR |
| 1.8 | **Software Construction** |
| 1.8.1 | Study URS |
| 1.8.2 | Produce Unit Test Cases |
| 1.8.3 | Review Unit Test Cases |
| 1.8.4 | Revise Unit Test Cases |
| 1.8.5 | Create project layer structure, classes and packages |
| 1.8.6 | Coding |
| 1.8.7 | Perform code review |
| 1.8.8 | Perform unit testing |
| 1.8.9 | Document Unit Test Results |
| 1.8.10 | Perform Corrective Action |
| 1.9 | **Prototype Study** |
| 1.9.1 | Prepare Requirement traceability Matrix |
| 1.9.2 | Review Requirement traceability Matrix |
| 1.9.3 | Revise Requirement traceability Matrix |
| 1.9.4 | Conduct Prototype study |
| 1.9.5 | Prepare Prototype study Report |
| 1.9.6 | Review Prototype study Report |
| 1.9.7 | Revise Prototype study Report |
| 1.9.8 | Get approval for Prototype. |

# **Work Break down Structure for Sprint 2 and Sprint 3**

|  |  |
| --- | --- |
| **S.No** | **Tasks** |
| **1** | **SPRINT PLANNING** |
| 1.1 | **Scope and Functionality Planning** |
| 1.1.1 | Incident Management feature understanding |
| 1.1.2 | Push notification functionality briefing |
| **1.2** | **Project Management Planning** |
| 1.2.1 | Review Project Plan (PP) |
| 1.2.2 | Revise Project Plan |
| 1.2.3 | Review Quality Plan (QP) (ISS/IE/QP) |
| 1.2.4 | Revise and Quality Plan |
| 1.2.5 | Review Risk Management Plan |
| 1.2.6 | Revise Risk Management Plan |
| 1.2.7 | Review Configuration Management Plan |
| 1.2.8 | Revise Configuration Management Plan |
| 1.2.9 | Review UTP Plan |
| 1.2.10 | Revise UTP Plan |
| **1.3** | **Project Initiation** |
| 1.3.1 | Install visual studio |
| 1.3.2 | Install xamerine |
| 1.3.3 | Install Xcode |
| 1.3.4 | Install xamerin studio on mac |
| 1.3.5 | Set up xamerin project |
| 1.3.6 | Set up iOS simulation gateway |
| 1.3.7 | Set up android SDK |
| 1.3.8 | Create a provisioning profile for iOS app in apple developer portal |
| 1.3.9 | Generate development certificate for iOS app using bundle identifier |
| 1.3.10 | Create FCM project on google FCM portal |
| 1.3.11 | Add android and iOS application to the FCM project |
| 1.3.12 | Upload apple development certificate to FCM (notification testing) |
| **1.4** | **Requirement Gathering & Effort Estimation** |
| 1.4.1 | Gather requirements & Update Product Backlog |
| 1.4.2 | Document User Requirements and Draw UI Layout Diagrams |
| 1.4.3 | Review & Finalize Requirements for the sprint 1 |
| 1.4.4 | Story Point Estimation (ISS/IE/EE) |
| 1.4.5 | Determine Scope of Prototype |
| **1.5** | **Detailed Requirements and Analysis Modelling** |
| 1.5.1 | Identify Domain Objects |
| 1.5.2 | Update Requirement model report(ISS/IE/RMR) |
| 1.5.3 | Review and Finalize Requirement model report |
| 1.5.4 | Conduct Use case model analysis |
| 1.5.5 | Update Use case Model Survey (UCMS) (ISS/IE/UCMS) |
| 1.5.6 | Review UCMS |
| 1.5.7 | Revise and Finalize UCMS |
| 1.5.8 | Produce Use case realization report (UCRR-A) (ISS/IE/UCRR-A) |
| 1.5.9 | Review and Finalize Use case realization report |
| **1.6** | **High Level Design** |
| 1.6.1 | Update High level Design (ISS/IE/HLD) |
| 1.6.2 | Review High level Design |
| 1.6.3 | Revise High level Design |
| 1.6.4 | Create design transition strategy. |
| 1.6.5 | Identify design objects |
| 1.6.6 | Transform analysis objects to design objects. |
| 1.6.7 | Produce Use case realization report (UCRR-D) (ISS/IE/UCRR-D) |
| 1.6.8 | Review and Finalize Use case realization report |
| **1.7** | **Detailed Design** |
| 1.7.1 | Create Design Class and Sequence diagrams |
| 1.7.2 | Produce Design Model Report (ISS/IE/DMR) |
| 1.7.3 | Review DMR |
| 1.7.4 | Revise DMR |
| **1.8** | **Software Construction** |
| 1.8.1 | Study URS |
| 1.8.2 | Produce Unit Test Cases |
| 1.8.3 | Review Unit Test Cases |
| 1.8.4 | Revise Unit Test Cases |
| 1.8.5 | Create project layer structure, classes and packages |
| 1.8.6 | Coding |
| 1.8.7 | Perform code review |
| 1.8.8 | Perform unit testing |
| 1.8.9 | Document Unit Test Results |
| 1.8.10 | Perform Corrective Action |
| 1.8.11 | Produce System Test Cases for push Notification |
| 1.8.12 | Review System Test Cases for push Notification |
| 1.8.13 | Revise System Test Cases for push Notification |

# **Scope Change Control**

Any change in the baselined Project Requirements will have to go through the Change Control Process. The changes to the Project needs to be verified against the Accepted Scope of the project. Change Requirements can be accepted by the Project Manager after Impact Analysis if the Scope does not affect the overall schedule of the project. If the change impacts the overall schedule of the project then new requirements can be addressed by de-scoping accepted requirements. All the decisions regarding the Change can be taken by the Change Control Board which includes the User Representatives and ISS Team 4 representatives. The details regarding change control process is defined in the configuration plan (ISS/AES/CM).

# **5. TIME MANAGEMENT**

# **5.1 Effort Estimation for Overall Project**

The Effort estimation is done through Function point count as detailed in file ISS/IE/FPC/1.0. The Sprint effort estimation is done in ISS/IE/EE file.

|  |  |  |  |
| --- | --- | --- | --- |
| Total No of Working day in Sprint 1 = 16 Days | | |  |
| No if of Hours per day = 8 hour | |  |  |
| No of Resource = 5 |  |  |  |
| Total No of Man Hour for sprint 1= 16\*8\*5 = **640** | | |  |
|  |  |  |  |
| Effort per person for Sprint Planning and retrospective = 1 day = 8Hr | | | |
| Total effort for Sprint Planning and Retrospective = 8\*5 = **40** hour | | | |
|  |  |  |  |
| Effort per person for Stand up meeting, Work Division and issues resolution = 1 hour /day | | | |
| Effort per Person for the sprint = 16 hour | | |  |
| Effort for the team = 16\*5 = **80** hour | | |  |
|  | | |  |
| Effective Working hour = **640 - (80+40) = 520** | | |  |
|  | | |  |
| Total Story points allocated in sprint 1 = 197 | | |  |
| As per Instant Edge standards 1 Story point = 2Hr | | |  |
| so hours per point = 2.38 hour | | |  |
| As we are doing the sprint for the first time hour allocated = 3hrs /point | | | |

# **Activity Description**

The various activities which needs to be performed for implementing the project is given below

**Activity 1 – Project Planning**

This activity covers the planning required to support the overall project such as project planning and quality planning. The Project Manager will proceed to prepare the project plan based on the project briefing and agreed project life cycle presentation given to customer (Instant Edge). The Project Plan will contains the information such as project schedule, estimated efforts and activities. Subsequently, Quality Manager of the project will proceed to produce a quality plan based on the customer provided information and the customer quality policy guideline.

**Activity 2 – Setup SVN environment**

This activity is to setup necessary filing and document repository for project team to access and performs better for the required task in the project.

**Activity 3 – Requirement Gathering and Analysis**

This activity is to capture the user requirement from the user representative for Instant Edge. The team will then produce the requirement specification based on the information gathered from understanding the ITIL documents and UI prototyping. This requirement specification will be reviewed and confirmed by user representative. At the end of this activity, the Project manager will update the Product Backlog with the set of features and update the requirement specification document. After the features developed for each Sprint is confirmed, the project team will start the Requirement Analysis. The Use Case Model Survey (UCMS) report will be produced. If there is change in major features are added to the Parking lot part in the Product Backlog.

**Metrics:**

Average number of changes per module.

**Activity 4 – System Architecture and High Level Design Modeling**

The Architecture of Instant Edge Manage operations modules is similar to existing Manage project and Manage changes module of Instant edge platform. The existing architecture will be included into manage operations module.

**Activity 5 – Analysis Modelling**

After Requirement analysis, the project team will move on to the analysis modeling phase. The Use Case Realization Report (Requirement) and Use Case Realization Report (Analysis) will be provided at the end of this activity.

**Activity 6 – Detailed Design Modelling**

This activity will translate the requirement analysis model to the design models based on the transition strategy indicated in the High level design specification. The Detailed design specification will be provided for customer reviewed and approved before software implementation.

**Activity 7 – Implementation**

Upon completion and reviewed on the detailed design modelling phase, the project team will move on to the coding the program. The code produced shall be unit test and peer review before move on to the system testing phase.

**Metric 1:**

  Was defined as how many "simple tasks" can be delivered per day/week/Increment?

**Productivity = No of User Stories completed per day.**

**Activity 10 –Quality Audit Meeting**

At the end of the increment 1, the first quality audit meeting will be conducted by ISS. It is to verify the project team is adhering to the quality plan when execute the project activities. All the audit findings discovered during the meeting must be addressed in the subsequent phases of the project.

**Activity 11 –Project Presentation**

This presentation shall include the following agenda,

* Introduction or project background
* User requirements
* Project risks and technical challenges
* Project strategies
* Software architecture
* Project estimation and schedule
* Project progress
* Management problems that encounter during planning and feasibility phase.

# **Milestones and Schedules**

The following is the Project Milestones for Sprint 1,

|  |  |  |  |
| --- | --- | --- | --- |
| **S/N** | **Key Milestone for Software Modules** | **Duration** | **Dates** |
| 1 | End of requirement gathering for development of overall project backlog. | 4 Weeks | 09/09/2016 |
| 2 | Preparation of sprint back log for sprint 1 | 3 Weeks | 30/09/2016 |
| 3 | Development of porotype | 4 weeks | 28/10/2016 |
| 4 | Testing of prototype | 2 weeks | 04/11/2016 |
| 5 | Acceptance of prototype | 2 weeks | 18/11/2016 |

# **Project Progress Control**

After Product back log is created, the User representative will prioritize the user stories. The team along with the sponsor approval will pick up user stories for each sprint. User stories will be further

Broken down into task maintained in ISS/IE/WD File.

Every day there will be a standup meeting for 15 min .After the daily standup meeting task will be allocated to each team member by the project manager. The next day standup meeting will start will start with the updating of ISS/IE/WD File with completed task and allocating new task.

# **PROCUREMENT MANAGEMENT**

The supporting resources required to enable the project team to undertake the activities specified in Section 3 are described as below:

# **Accommodation**

The development work will be undertaken at Instant Edge office premises between working days during 9:00 AM to 6:00 PM. Each team member must visit Instant edge office during working hours for requirement gathering at least two days a week..

# **Computer Hardware and Software**

Each team member will get their own laptop to undertake all coding, testing and documentation tasks.

The following software support is required on each machines:

* Netbeans IDE;
* JBoss Tools 4.0;
* MySQL;
* MySQL Workbench (client);
* Jdk1.7.0\_25;
* Enterprise Architect
* Microsoft EXCEL spreadsheet package; and
* Microsoft WORD for WINDOWS word processing package.
* In addition, the Project Leader (Rameswari Mohanty) will use the following software packages installed in ISS computers.
* The Microsoft Project software package will be used for project scheduling.

# **COMMUNICATION MANAGEMENT**

The project communication can be performed via online mode (Scheduled Meeting/Informal discussion) or Offline mode (Email and Messenger) as and when required.

There will be a weekly or bi-weekly progress meeting will be held with Instant Edge Pte Ltd to highlight the project progress in terms of deliverables and activities.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **Objective** | **Who** | **Mode** | **Frequency** |
| Kick off meeting | Project Briefing, Review project objectives and management approach | UR,  ISS Team 4FT | Meeting | Once |
| Sprint Planning/  Progress Meeting | Report on the project status | UR,  ISS Team 4FT | Meeting | Bi-Weekly |
| Internal Meetings | Task allocation and internal progress update | ISS Team 4FT | Email or Face to Face | As and when required |
| Day Meetings | To understand the work done on previous day, plan for the day and obstacle face (if any) | ISS Team 4FT | Face to Face | Daily (when Internship started) |
| Adhoc / Informal Meeting | To clarify or discuss on urgent issue(s) | UR,  ISS Team 4FT | Messenger, Email or Face to Face | When required |