



# Software Requirement Specification

Project Name: **LocateUs**

Client:

Yulop WebSense Solutions Pvt Ltd  
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## Revision History

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By:

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## Objective

To Design and Develop a CES (Customer Engagement Solution)

- Helps organizations orchestrate a consistent conversation with their audience that builds across channels.
- Integrates mobile, email and social into a single engagement platform.
- Streamlines transitions and interactions across channels, ultimately leading to conversion and better business results for your organization.
- A single integrated platform from which to orchestrate, monitor and measure all your customer interactions
- Engagement automation to easily conduct unlimited 1:1 conversations across all online and offline channels
- Powerful engagement analytics to optimize marketing spend
- Built-in, pre-integrated email, web and social media channels with flexibility to integrate into existing channel tools
- A universal profile connector that plugs in to Customer engagement analytics, 3rd party analytics providers

## Constraints

- Timelines
- Milestones to be met
- Any change in design & interface will also affect integration.

## Risks

Client may have frequent and major changes.

## Design and Implementation

Design Approach Use	3-tier Web Architecture
Programming Language	PHP
Database	MySql
Application	MVC Architecture
Methodology	Agile methodology
GMap web services	Google Map Version 3.0

## Scope

- Explaining the system functionalities
- Documenting the Application Architecture
- Explains the design constraints of the system



## Scope of work

Locateus is a web interface, a utility, which enables registered users to locate pieces of information of a particular product / information , exact location of availability of this product / information, through Search interfaces like Text search, Line Search, Polygon Search, Near Search, customised point search.

Customers are given subscription and the ability to perform certain tasks based on their defined roles.

In simple words Locateus is a flexible multi user environment that helps to reach-out to their customer effectively and efficiently using GIS Based Application.

## Application Flow

### <<Customer>>

- A Customer comes to the Locateus and registers with the website for a specific period with a defined package and cost of the product (locateus).
- Email is sent to the customer informing him of his registration and also the Steps to access the same on his site.
- The Locateus provides an UI, with administrative based roles, edit delete and control the users (x number users) who is able to track their communications with their customers.
- Users can upload, edit and delete the data using their specific url (wep.locateus.in)

### <<Customer's customer / end user>>

- Comes to the site and registers with Locateus with customer's link.
- An Email is sent for confirmation
- User can locate his business using customized search.
- User can look for various business information from the site.

### <<Locateus (here as customer's admin)>>

- Once the registration is done, admin will activate the Customer's ID (BNGWEP001) for the usage of the product (locateus)
- Locateus admin will be active and plays super admin role and will support whenever needed. Controlling the overall access such as modules, subscription payments, etc.

## Definition Acronyms and Abbreviations

- PMP : Project Management Plan
- SRS : Software Requirement Specification
- FSD : Functional Specification Document
- QMS : Quality Management System and SQA : Software Quality Assurance



## References

Client had shared requirement document "Specs-Locateus.docx" on Thu, Oct 11, 2012 at 6:52 PM and CIF-Specs-030912.pdf on Wed, Sep 5, 2012 at 7:39 PM.

- Project Management Procedure (PMP)
- Process Handbook for Medium Projects
- System Requirement Specification (SRS)
- Technical Specification Document (TSD)
- 4-6-GoogleMaps.pdf

## Purpose of the document

To communicate what is understood by MAC from the document and discussion with assumptions and boundaries so that in future this will be used as a baseline to make necessary modifications and enhancements.

## Design Overview

### Application Overview

To provide an Interface that has a plug'n'play Modules to track the various stages of business process between the Customer and the User.

## Software/Hardware Requirement

S. No	Description
1.	Open Source Software , Using an MVC Architecture Like CodeIgniter and open source
2.	Php Version 5.3.5
3.	MySQL Version 5.5.8
4.	Apache HTTP Server, version 2.2.x

## Front-end User Module

**Definition of "Customer":** A business customer whose details are captured and displayed. A customer can register his company; upload all relevant business listings (through XL or individual form updation) and edit when needed; get all relevant reports and visit statistics anytime and through emails. A customer can also get the widget URL for applying the same in their website.

**Definition of "User":** A User is the customer's customer or any person visiting and accessing / using our website. A User can register in our website; can do multiple



activities (send SMS, email, get direction, print, give feedback etc) for different businesses listed in Locate Us for different Customers.

## **Home Page**

- About us
  - What is Locateus
    - Animated Images / Flash screen
  - Why Locateus
- Search
  - Text Search
  - Point Search
  - Line Search
  - Polygon Search
  - Near - to-Search
- Registration
  - Customer Registration
    - Login / Logout
    - Login Form
    - User registration
  - Login / Logout
    - Login / Logout << Name >>
  - Login Form

## **User Registration and My Account Module**

- User Registration
  - UI Design, Mandatory fields for registration: User Name, Email ID, Mobile Number, Area, PIN Code, City and User Password. By default, user email ID will be the User ID, And Validation on the Client and the Server for the required fields.
  - Registration of the User in three simple Steps.
    - Account Data
    - User Data
    - Contact Data
  - Required Fields to be validated in both the server and the client side.
  - Client side validation through mail / mobile (clicking or auth code).
- Preferred Business
  - User should be able to select and store key business for accessing details.
- My Feedback
  - Feedback form
    - A Standard Questionnaire
    - Reference of Feedback forms he had submitted
    - A feedback form that accepts the user input's and records them in the database



- Validation of the feedback form and the required fields.
- Five-star Rating for the Quickness to response.
- My Profile
  - Profile of the user
    - Flexibility to update / modify his user details
- User Login
  - Login form
    - Valid Email and a password Form to log the user.
  - Register User
  - Forgot Password
    - Valid Email
      - A mail will be sent containing a link available 24 X7 to reset his password

## **Customer Registration and Org Account Module**

- Why Register
  - Write-up
- Customer registration
  - Form and Form Validation.
  - Registration of the User in three simple steps.
  - UI Design, Mandatory fields for registration: User Name, User Password, Email ID, Mobile Number, Area, PIN Code, City.
    - By default, user email ID will be the User ID, And Validation on the Client and the Server for the required fields.
  - Required Fields to be validated in both the server and the client side.
  - Validation of registered user
  - Client side validation through mail / mobile (clicking or auth code).
  - A 9character length Unique Identifier for the Registered company
    - A unique key combination of first
      - 3 characters of Customer
      - 3 characters of Location
      - And a unique ID
- Customer Admin Controls
  - Setup Customer roles (Name, General Role), IDs (by default their Email IDs) & Passwords.
    - Create Roles Based On Access.
    - Follow-up different stages of Orders / Requests.
    - View all User requests and pending tasks
    - Interfaces as required and specified
    - Review all user Inputs and Feedback forms.
  - Setup ACC for view by all customer registered users.
    - General view page standard for all registered user.
    - Manage and view the tasks of the User.
  - Facility to Modify Create, update, delete, modify, hold the account.





- UI to modify the Account at all times.
- Customer Profile and setup
  - Option to upload customer Logo and a text-company brief.
    - File Upload
    - Statements
      - Vision
      - Mission
      - About Us
      - Validations Client and Server
  - Define values for “Business Type” “Product or Service Categories” filter. Select display image (on the map) for each of them.
    - Defaults from the database
    - Marker Images
  - Reports and user details mail options.
    - Customised Report generating tools
- Customer Roles and Access control charts
  - Analytics
    - View Customer roles (Name, General Role), upon login
    - ACC View option for all customer registered users.
    - List of all actions / reports he/she has the access to.
  - Link to the respective actions.
  - Review / reply / action update against user feedback by authorised representative.
- Customer Reports
  - User visit statistics / reports.
  - User feedback, rating, summary
  - Access of reports on ROLE.
- Customer Data Upload
  - Form to add business data in a standard template.
  - Bulk updating option using XL sheet upload.
    - File uploads to be validated.
  - Customer downloadable template with clear instructions for data updates.
  - Search / View list for edit.
  - Verification and approval before publishing.

## Login Fields

- **Validations**
  - Client and Server Validations for the login Fields

## Search Interface

- **Search** (To locate the business or information he is particularly interested in.) map focused on his default city.
  - Distinguishable Icons / Legends displayed on the Map
    - Dealer



- Service Centre
  - Wep Offices
- Search result panel
  - **Well defined UI, Search Button to be provided on all TAB**
  - Dynamic Load of the Search results as per the Selections on the dropdowns with pagination and info window on markers with pagination.
  - Display results in the page depending upon user selection. Default 25.
  - Customized results 10/25/50
  - Pagination Previous and Next Buttons.
  - Top: 1 to 25 of 57 results.
  - Each Result to display neatly (suggest including icons for depiction) the Business Name, Area, City, PIN, Phone & Mobile numbers.
  - Unique Info window on each point, based on user click.
- Text Search
  - Key Selection Dropdown (dynamic display of the fields)
    - Business Type (Supplier, Dealer, Service Centre, Stockist)
    - Product or Service Categories
    - Area or PIN code
    - State or Province
    - City / District City (list depends on the city selected)
- Point Search
  - Dropdown
    - Key Selection: Business or Company
    - Business Type (Supplier, Dealer, Service Centre, Stockist)
    - Product or Service Categories
    - Map focused on default City.
    - Click a point on the map.
    - Define radius (Km) from the clicked point customizable.
- Line Search
  - User selects start and end points of a city to start the search
    - Business Type (displayed from the database)
    - Product Category (displayed from the database)
    - Key Selection: Business or Company
- Polygon Search
  - Polygon based search (polygon drawn on map).
  - Business Type (displayed from the database)
  - Product Category (displayed from the database)
- Near-to Search
  - Search Based on Locations or Landmarks within 1km.
- Info-Window for every Listing
  - 3 Tab Info-window: Contact / Services / Timings



- Publishing 1 or 2 images (for the corresponding business)
  - Send SMS (multiple); Send Email (multiple); Print; Get Direction; Feedback (Review) options for the corresponding business).
  - User registration is a must for giving feedback.
  - Separate pop-up window for each action, as above, with light-grey background effect.
  - Edit option in each tab of the info-window for Customer (Admin) to edit and suggest changes in case any of the information provided is incorrect (upon login and opening in a pop-up window)
  - Email and Print options should be done in JPEG standardised format only covering all details of the business (including images and reviews, if any) in a very neat and presentable form (HTMLized Email).
- Map Panel
  - Map focused on the city user belongs to or the city from which he is accessing the same from.
- User Review
  - Form for submission of feedback and ratings by the users.
  - Display of user rating / feedback upon review at backend
- Terms Of Use
  - Text Write-up

## Other Key Features

- Sub domain
  - Unique URL for direct, default company selection (Ex: <http://www.locateus.in/yulop> or <http://yulop.locateus.in>)
- Customer Widget
  - A customer should be able to get the code for the widget, which he should be able to use in their website for accessing their company details.
- Security
  - DMCA Protection compliant. Must be able to use DMCM Protected Logo
  - Must meet W3C standards and must be able to use W3C logo.
- Standard Masters
  - Country / State / City masters
  - Default STD and PIN code masters for each city

## Data Module

- **Fields for adding and editing existing data**
  - Business name
  - Address 1:
    - Number, Floor, Street
  - Address 2:
    - Cross, Main
  - Address 3:



- Sub-area, colony
  - Area
  - City
  - State
  - PIN Code
  - Nearest Landmark(s)
    - (Comma separated)
  - Contact person (Name)
    - Role / Designation Dropdown (Logged in user)
  - Contact numbers -
    - Phone 1 / 2 / 3 Dropdown (Logged in user)
  - Mobile numbers -
    - Mobile 1 / 2 / 3 Dropdown (Logged in user)
  - E-mail
    - IDs - 1 / 2 Dropdown (Logged in user)
  - Business (company)
    - Website URL (textbox)
  - Business Type
  - Category of Products / Services
    - Dropdown
  - Timings - Open, Close, Off-time
  - Weekly holiday
  - Products and Services
  - Special offers
    -
  - Latitude and Longitude for on map marking (map interface)
    - Update user location on map
  - Images (upto 3) Any other specific information
- **User Registration**
    - First Name\*
    - Last Name
    - Email Id\*
    - Password\*
    - confirm Password\*
    - Date Of Birth
    - Contact/Mobile Number\*
    - Company Name\*
    - Address
    - Area
    - City
    - Pin code
    - Captcha



- Terms & Conditions\*
  - \* Mandatory Fields and Require Server and Validations

## **Data Maintenance**

- Add / Edit Flags Maintained
- Status captured in a separate Tables (Status Field To be made mandatory in all important tables to capture the status updates)
  - Submitted
  - Verified
  - Published
  - Cancelled - Options shall be there to capture the reasons for the same.
- Every data - added or edited - must be captured with the credentials of the person submitting the data. Modified and Created by dates to be captured within the time zone
  - Appropriate flags must be used to denote the quality of data.
  - Location accuracy - Point, Street, Area/City
  - Tele-verification done - within 6 months, within 12 months, within 24 months, None
- Map integration to update / move and submit with changed location (Lat-Lon).
- Images shall be displayed in smaller sizes (150 X 150) with optimized images as options for zoom (max 1000 X 1000).

## **Actions**

- Master tables
  - Role definitions
  - Role Based Access Control (Definitions)
  - Access control tables
  - User registration controls
  - Reports - Accessible to various roles.
    - Cumulative
    - Consolidated
    - Customized
- Master Data Table
  - Defining and modifying fields for data
  - Defining and maintaining flags
- Data Processing Tasks
  - Verification and updating of assigned data (new or user submitted)
  - Processing, reformatting, data cleaning and de-duplication
  - Tele-verification and status updates field to be updated after the verification process



## **Security**

- All User inputs to be safe inputs (SQL-Injections to be controlled)
- Client Side and Server Side Validations on all user input forms
- XSS to be handled.
- Content Copy, ctrl+C, must be block.

## **Security Requirements**

- All the secured information like password, credit card (not stored or used in system), user name and contact details, etc will be encrypted inside the database. We can avoid hackers to get data from the system by avoiding SQL injection and cross site scripting.
- Entering and editing of user data (incl user items, ...) will be done via SSL screens
- The users will not be allowed to get any information from the application URL during the page navigation.
- Secure Hash Algorithm will be used for encryption.
- Encrypted information cannot be retrieved by any human being and no option for retrieval is provided directly from the database. The System will be able to reset user information and also retrieve user data based on the key. Encrypted data is using the SHA algorithm to hold information in the database.

## **Exception Management**

- System will be developed with proper exception management.
- System will report execution failures by throwing exceptions. If a block of code cannot successfully do what it is designed to do, that will be considered an execution failure and an exception should be thrown.

## **Test Plan**

Test plans are prepared for each phase of testing. The initial test plan is created during the Project Planning phase. The initial test plan describes who performs which type of testing and when. Ideally master test plan covers all types of test i.e. from unit testing to production testing. The Lead Partner along with consortium partners is expected to submit the test plans to Utility for approval. Any changes made to the test plan during the project life cycle should be communicated to UTILITY for approval.

## **Test Execution**

The following testing steps are usually employed in the project lifecycle. MAC will apply the below testing methods for the developed application.



- **Unit Testing** - In unit testing, each piece of code has to be rigorously tested. At this stage testing is done according to the priority of path of code. All the test results are logged in the defect logging tools. After every the completion of testing, code is corrected for defect logs. This process is iterative till criteria for successful testing is reached.
- **Integration Testing** - Upon completion of unit testing, integration testing begins. The purpose is to ensure distinct components of the application still work in accordance to customer requirements. Test sets will be developed with the express purpose of exercising the interfaces between the components. This activity is to be carried out by the Test Team. Integration test will be termed complete when actual results and expected results are either in line or differences are explainable/acceptable based on client input.
- **Incremental Integration Testing** - Continuous testing of an application as new functionality is added.
- **System Testing** - System testing is performed when all the components are delivered to central repository prior to the release of the software. The testing is done on priority basis of business processes. All the defects are logged and assigned to respective component owners. The component and unit testing is performed after the correction of code. However, it may depend on size and type of individual test specifications. Impact analysis is useful to narrow down testing efforts by identifying critical test cases affected due to code change.

## **Application Affinity/Compatibility**

- The system shall be compatible with any of the following Internet browsers: Microsoft Internet Explorer, Google Chrome, Safari, and Mozilla Firefox.

## **Resource Utilization**

- The system shall be accessible from any type of computer with an active Internet connection. The system shall require an active server with adequate hard drive space and available memory.

## **Serviceability**

- The system shall be easily modified by referencing the documentation that shall be provided.

## **Assumptions and Questions**

- The Project is hosted on a cloud server
- Project Supports Role Based Access Controls
- Sample Data to will be provided
- The Initial Database Design Flow / understanding to be provided.



- All the dropdown and list values will be pulled from database
- User should be able to select and store key business for accessing details (Elaborate on this)
- It is understood that data entry is not part of the development. We will use dummy data for the testing of the application developed.
- Elaborate on Customer Widget.
- Will there be separate registration process for other user modules?
- Register with different companies restricts **emailid** check in the same table.
- Create Roles Based On Access [specify the roles]
  - Follow-up different stages of Orders / Requests.
  - View all User requests and pending tasks
  - Review all user inputs.

## **Point of Contact**

This project will have two point of contact as below:

- 1) Primary Point of Contact: M A Kodandaram <mak@yulop.com>
- 2) Secondary Point of Contact: Dharmendra Tiwari dharmendra@yulop.com

Note: Any change in requirements, or additional need to be discussed before the SRS sign off.