# CrowSoft

The customer would like an on-line system to take in building details for analysis. CrowSoft is an engineering and tech company. The product that they wish to market is BusIntelligence. The system must take details for buildings and to provide easy to use analysis features. For example, they may wish to have a review all buildings which cost more than €1 million to build and have special features as this may indicate future maintenance projects that may be exploited. Keep the analysis simple. The analysis system should be clean and simple. The system needs to take into account the usual details and present simplified graphics. It must be possible to upload files or images. The administrator should be able to access detailed information and edit as appropriate. Once the client enters details it should not be able to be changed by the client.

# Functional Requirements

## Client/User Requirements

1. **Sign-In/Sign-out**
   1. The Client/User shall enter sign-in credentials (username and password).
      1. On successful sign-in the user shall be brought to the signed-in home page.
      2. On unsuccessful sign-in the user shall be displayed an error and be brought back to sign-in page.
   2. The Client/User shall sign-out and confirmation page/home page is displayed.
2. **Create Account (Sign-up)**
   1. Client/User shall create an account via the sign-in page.
   2. Client/User shall be able to enter in following sign-up credentials:

* First name
* Last name
* Telephone/Mobile
* Address line 1
* Address line 2
* County
* Country
* Eircode
* Email
* Company name
  + 1. On successful sign-up the Client/User shall be redirected to the sign-in page.
    2. On unsuccessful sign-up the Client/User shall be displayed an appropriate error message.

1. **Enter Details of Buildings**
   1. Client/User can create a new entry
   2. Client/User must be able to upload images from file
      1. Client/User must be able to upload images from mobile device
   3. Client/User selects measurement types from drop down boxes
      * 1. Select imperial or metric standard
        2. Select height, width, depth
        3. Select material type of building
        4. Select purpose of building
   4. Client/User will view selected items and confirm/cancel
   5. Client/User can select various analysis features (cost per sqm, buildings for purpose, age of building etc.)
   6. Client/User will receive confirmation email when required analysis feature is activated, viewed and confirmed.
   7. Client/User cannot edit details once confirmed

## Admin Requirements

1. **Sign-In/Sign-out**
   1. The admin shall enter sign-in credentials (username and password).
      1. On successful sign-in the admin shall be brought to the signed-in home page.
      2. On unsuccessful sign-in the admin shall be displayed an error and be brought back to sign-in page.
   2. The admin shall sign-out and confirmation page/home page is displayed.
2. **Add new client/user**
   1. The admin can create an account for new client/user
   2. The admin shall be able to enters the following client/user details:

* client/user ID
* First name
* Last name
* Contact number
* Address
* Email
  + 1. If client/user account is created successfully the admin shall be redirected to the admin homepage.
    2. If employee account is unsuccessful an error message shall appear.

1. **Edit client/user** 
   1. The admin shall enter unique Employee ID.
   2. Employee details page will appear, edit details and save any changes.
      1. A successful save will redirect the admin to the admin homepage.
      2. An unsuccessful save will prompt an error.
2. **Edit client/user building details**
   1. The admin shall enter unique Client/User ID.
   2. Client/user details page will appear, edit details and save any changes.
      1. A successful save will redirect the admin to the admin homepage.
      2. An unsuccessful save will prompt an error.
3. **Remove client/user**
   1. The admin shall enter a client/userID which they wish to remove.
   2. The admin shall select a Remove client/userbutton.
   3. A message prompt will ask to confirm, select yes.
      1. A successful remove will redirect the admin to the admin homepage.
      2. An unsuccessful remove will prompt an error.

# Non-Functional Requirements

## Availability

1. Application must be available 24 hours a day.
2. Application must be available 365 days a year.

## Reliability

1. Application must always present the correct information for each user.
2. Application must analyse the correct information and display to screen.
3. Invalid inputs must be properly reported as such.
4. Application must always maintain data integrity

4.1 Table relationships must always be consistent.

4.2 Foreign key fields must agree with the primary key that is referenced by the foreign key.

4.3 Ensuring that changes made to the database by authorized users do not result in the loss or confliction of data consistency.

1. The application failure rate shall be less than 1 failure per 1000 hours of operation.

## Performance

1. Application must not exceed given amount of memory.
2. Web application must be performed within milliseconds.
3. Application must not lag or freeze when in use.

## Usability

1. Layout should be simple and clean.
2. Buttons must be of equal size and shape.
3. Application interface must be visually appealing and easy to use.
4. Use at least font size 17 with contrasting backgrounds.

## Scalability

1. Application must be able to work with different languages.

## Compatibility

1. The application must be compatible on every browser i.e Chrome, Firefox, IE, etc.

## Security

**1.** User application must lock login after 5 incorrect password attempts.

* user must contact administrator to reactivate log in.

**2.**User data must be encrypted during application synchronization with back end database to provide secure transfer of sensitive information such as personal and financial details.