Core Services - These core services run in the background of the application and are integral to every Item created in the Project (see below about Items).

- *Documents -*

    Documents should be uploaded to a cloud storage solution such as Amazon S3.

    Documents should never be deleted, but rather have a version history. Where any new versions of a particular document have a unique identifier, automatic date stamp and revision number

    Any user that the document relates to, or has an interest in, should be automatically notified of the new revision.

    A user uploading a document should be able to provide a name and description for each document.

    All documents should be searchable and archivable.

- *Messages -*

    Messages are the main form of collaboration on the application.

    A set of messages between users will be referred to as a "thread"

    A thread may be between multiple users

    A thread can be created between any two users that have a relationship within an item.

    All Messages should be searchable and archivable

- *Tasks -*

    Tasks are also an important tool for collaboration on the application.

    Please have a look at www.wunderlist.com for an idea on how tasks should work.

    Tasks should be able to be created by any user within an item and assigned to any other user within that item.

    All tasks should be visible to all users within a particular item.

    A task should be able to have a due date, which sends notification to creator and assignee

    A task should be able to have a reminder, which sends notification to creator and assignee

    Tasks should be checked off and hidden, but tasks should never be deleted. They should be archived and searchable.

- *Notifications -*

    Notifications are needed to keep all users aware of any changes that occur to parts of the application they are a stakeholder in.

- *Quotes -*

    Quotes form an important part of the application, which allows the user to provide to a requesting user a price to complete work.

    A quote needs to be set out in line item format, where more lines may be added as required.

A quote needs the ability to be revised
A quote needs the ability to be declined or accepted
The quotes will only be used in particular items.

- *Addendums -*

Addendums are a basic part of the application which allows a Package to be altered and all parties to be notified of the same change.

The addendums will only be used in particular Items.

Items - Items are created in projects to break up the entire project into smaller pieces. Each type of Item has a particular behaviour - as described below. All items have core services integrated.

- *Builder Package -*

The builder package is the package between the Homeowner and the Builder. A builder package requires a name, a description and a date to start work.

The Builder should be able to submit a Quote to the Homeowner
The builder package should be automatically created when a new project is created

When a builder creates a project, they can
     1. Send the builder package to one homeowner. They should supply a quote at the same time as sending the builder package to the homeowner.
     2. The homeowner will need to Accept the quote for

- *Contractor Package -*

The contractor package is the package between a Builder and a Contractor. A contractor package requires a name, a description and a date to start work.
The Contractor should be able to submit a Quote to the Builder.

When a builder creates a Contractor Package they:
     1. Send the contractor package to multiple contractors
     2. Each contractor that the Contractor Package is sent to will need to provide a quote to the builder
     3. The builder will need to select the quote that they want to proceed with
     4. The package should be removed from all losing parties.

- *Staff Package -*

The staff package is a package of work between the Builder and an Employee. A staff package requires a name, and a description.

When a builder creates a Staff Package they:
     1. Send the staff package to one or multiple staff members

2. When the package of work is complete, the staff need to mark as complete.

- *Material Package -*

The material package is the package between a Builder and a Material Supplier. A material package requires a name, a description and a date to supply the materials.

1.The builder should be able to submit a list of material in Line Item format that is required.

2. The builder can send the material package to multiple material suppliers.

2. Each material supplier that the Material Package is sent to will need to provide a quote to the builder

3. The builder will need to select the quote that they want to proceed with

4. The package should be removed from all losing parties.

- *Invoice -*

An invoice is attached to a Builder Package, a Contractor Package or a Material Package. An invoice needs to look at the relationship of the users in the relevant Package.

A Builder can submit an invoice to a homeowner under a Builder Package

A Contractor can submit an invoice to a Builder under a Contractor Package

A Material Supplier can submit an invoice to a Builder under a Material Package

- *Variation -*

A variation is attached to a Builder Package, a Contractor Package or a Material Package. A variation needs to look at the relationship of the users in the relevant Package.

A Builder can submit a variation to a homeowner under a Builder Package

a. When a builder submits a variation they need to provide a quote with the variation.

A homeowner can submit a variation to a Builder under a Builder Package

b. When a homeowner submits a variation the builder will then need to provide a quote

c. In both cases, the homeowner will need to accept or decline the variation.

A Contractor can submit a variation to a Builder under a Contractor Package

a. When a contractor submits a variation they need to provide a quote with the variation.

A Builder can submit a variation to a Contractor under a Contractor Package

b. When a builder submits a variation to the contractor, the contractor will need to provide a quote to the builder

c. In both cases, the builder will need to accept or decline the variation.

- *Defect -*

A defect is attached to a Builder Package, a Contractor Package or a Material Package.

A Homeowner can submit an defect to a builder under a Builder Package
A Builder can submit a defect to a Contractor under a Contractor Package

Project
- *Roles* -

Each project will need to have a set of Roles where teams can be added and removed.
Roles can only be edited by the Builder who created the Project.
When an organisation is assigned to a role, the project will need to be assigned to the Administrator of that organisation, who will then add the organization's users in to the Project Roles.

Teams - A collection of users with similar permission sets based on having a role in a project. There will need to be an area in the app that the user is able to create a Team. A user may belong to multiple teams.

- *Company* -

A team could be a company that is a group of user accounts.
The company team is assigned a role in a project.
The user account that creates the Company team will become the team administrator, adding and deleting users from the team
The team administrator will be responsible for delegating each user to specific projects that the company has a role within
These permissions must be very strict to ensure only data that is meant to be seen by a particular user is seen.
The administrator is able to assign other existing team members as administrators also.

- *Clients* -

Homeowners also want the option to be a team (they may invite a spouse). The same rules apply as the above.