**Requirements**

What human needs are we proposing to address?

* Being able to visualise how their room would look with certain design choices and interact on the fly with many aspects of the room.
* Having the ability to filter through and connect with local decorators who are able to make your design a reality.

What do we want the system (hardware & software) to do?

* Filtering system: so that users can search for decorators within a certain distance, budget, qualifications etc.
* Tipping system? Possibly.
* Secure card payments?
* A heavy focus on the augmented reality aspect of visualising and interacting with the interior design of your home.

How do we want the software to perform?

* The app should start up in less than 5 seconds.
* It should appeal to the younger generation of homeowners.
* It should be intuitive/accessible to less technically minded users.

Stakeholders

* Users who want their rooms/houses decorated.
* Painting/decorating companies who want customers to choose them for the job.
* Possibly companies selling furniture or items we could add to a catalogue to visualise in the user’s room.

Interacting systems

* Payment system
* Augmented reality system (core functionality of the app)
* Built-in messaging system for the users to interact with the decorators (possibly).

Who needs what?

* Users need an intuitive and functional augmented reality system to visualise possible changes to their room.
* The decorating companies need extra customers and a ready-made visual plan to work from.
* Furniture sellers are always after an extra outlet for their goods.

What the System should do

* Have a functioning intuitive AR system with many design options available.
* Save snapshots of the room to the device.
* Allow the user to send these pictures as well as messages to the decorators via a built-in messaging app.
* Allow the user to locate and filter decorating companies to find the right team for the job.

Constraints on the System

* It should run on tablets and large phones.

Data

* Review/rating data on decorators will be non-volatile, accurate and up to date.
* Persistent data in the form of saved snapshot images of the room will be stored on the user’s device.
* Data will be collected on things such as: average spend, age groups of users, number of repeat customers etc.

Social environmental factors

* A
* B
* C

Organisational factors

* Any??
* I don t know

Technical limitations

* To run on tablets etc. Most likely not on a computer as though it would be good, the AR element needing a live video feed most likely wouldn’t work on a PC unless the user was using a non-built in webcam.
* How realistic will the AR be able to be while not looking clunky and allowing a high level of user interaction?

Software resources

* Payment system/card verification
* Open source augmented reality code libraries?