



1805ICT - Human Computer Interaction

VisTech - Design Brief

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1.2	Scope	Tim	Tim	
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3	Target Audience	Ken	Ken	
3.1	Audience Belief	Ken	Ken	
3.2	Audience Demographic	Keelan	Keelan	
4	Problem Statement	Mitchell	Mitchell	
5	Goal	Adam	Ken	
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5.2	Mandatory Elements	Tim	Tim	
5.3	Deliverables	Ken	Ken	
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6.1	Structural Design	Ken, Keelan	Ken, Keelan	
6.2	Visual Design	Ken	Ken	
6.3	Supporting Design Tools	Ken, Tim, Mitchell	Ken, Tim, Mitchell	
7	Testing			
7.1	Testing Plan			
7.2	Test Results and Analysis			
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8	Final Goal			
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Alteration and Completion Table

Date	Ver.	Author/s	Section Number	Addition/Alteration

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1 Introduction

1.1 Purpose of this Document

This document details the work and findings addressed from the design scenario and design solutions for our client, LifeTec.

This Design Brief outlines the conception, research, drafting and testing for our solution to the design scenario put forth by the client, LifeTec.

Our solution is VisTec's Home Modifications and Design application. Information is provided throughout on the target audience, their beliefs and demographics, the project goals, objectives and deliverables, the initial designs for structural and visual elements, product testing methodology and analysis, and final findings, recommendations and design.

1.2 Scope of this document

The following list details the project elements covered by the scope of this Design Brief:

- The **background** details the precursory information including the rationale behind the project and details on the problem to be addressed by the system. Also discussed are the benefits for clients and users of the system.
- **Target audience** identifies the specifics about the expected user base of the product, the human factors that govern their interaction with the product and the detailing of research activities undertaken. **Audience beliefs** examines the situation of the target audience and their feelings regarding technology present in their lives, and how this influences the product design and issues that need addressing. **Audience demographics** provides details about various aspects of the audience that may influence design decisions.
- The **problem statement** provides a clear description of the task, the fulfilment requirements, including constraints such as budget and time and the parameters of the solution.

- **Goals**, with reference to the problem statement, provides information on **usability objectives** and how usability and success are measured, **mandatory elements** including the client's information, and **deliverables**, detailing what is to be delivered to the client upon completion.
- The **alpha design** of the product including **structural design**, detailing the navigational and information structure of the product, **visual design**, for aesthetic features including mock-ups of the product, and the **supporting design tools** which describe the design tools used in the structural and visual design, the reasoning behind the decisions and outcomes.
- The **testing** phase describes the planning and approach to collecting data about the product in the **test plan**, details of test dates, participants, results and notes in **test results and analysis**, and a review of the initial design in **finding and recommendations**.
- The **final design**, detailing the revisions to the design based on analysis from the testing phase.

For the purposes of this project, the following is defined to be outside the scope:

- Implementation. This project is strictly design only, therefore it will not produce any application, software product or hardware system.
- Agile development process, including elements such as use cases, UML diagrams of worksheets, etc.
- Anything outside of the producing the deliverables (i.e. this document, the alpha and final designs).

2 Background

Millions of Australians every year suffer from some form of disability, ranging from a mild extent, to a severe extent, where walking and carrying is impossible.

According to the Australian Bureau of Statistics 35.5 % of all Australian households contain a person with a disability^[1]. Many of these households will need modifications made to increase livability and independence of disabled persons. Also, a survey conducted by the Australian Network on Disability reported that 62% of small to mid-sized enterprises are “likely to make changes to accommodate customers with disability in the next year”^[2].

About LifeTec

The aforementioned client LifeTec, is a company that aims to enable people by using the state of the art assistive technologies to improve their quality of life. LifeTec also employs a collection of health professionals to provide the highest quality physical support advice to people of all backgrounds and ages.

Easy Planner

This project was conceived in order to offer a form of augmented living largely to the disabled, but also to the general population. This is being undertaken in an attempt to improve the ease of living for all people, and solve a currently difficult issue that the disabled may face. The issue being addressed with this project is that of interior design, as well as capably being able to move furniture around a room without the need for any strenuous activity.

Our app, Easy Planner, will enable the user to pull fixtures and furniture from catalogues and overlay them on the room they wish to design. If the user wishes to see how a piece of furniture looks somewhere else, this app will allow them to do so without the need for any physical activity whatsoever. In addition to this, the app allows users to check and decide if they'd like furniture from the catalogues in their house, apartment, place of work, etc.

Benefits

Ultimately, the value to both the client and user is extensive. The nature of the app will further LifeTec's goals as an altruistic company as well as solidify their role in the software business. While the user will benefit from the app in several ways, the most important being that the disabled will be capable of “moving” furniture around their house in the event that they wish to see how a redecoration would look with no risk.

3 Target audience

Two target audiences have been identified and considered for this application:

- **Handicapped:** Household modification can prove to be strenuous. In particular, it can prove to be an impossible task to the physically disabled. Often a handicapped person will receive help from a separate party using verbal instructions. Easy planner can prove to be highly useful as the disabled person can use visual representations of the household modifications for instructing the third parties.
- **Businesses:** It was considered that a business can benefit from the use of Easy Planner for interior design in cases of allocating to new locations, or renovation/modification to the current layout of existing premises. Synonymous to the benefits to other audiences, the business can benefit by saving time and money due to the ability to prototype and visualize designs, thus saving effort and labour costs. This group of users, are considered the secondary users for this application.
- **General Public:** The general public can also use this application for the purpose of household modification, as a variety of applications were identified; A user can plan a modification prior to actually carrying out the task to determine whether the location, angle and object is suitable in the environment or location. Additionally, extending from the general public, a user can use Easy Planner to demonstrate layouts of interior design for commercial purposes. This audience, is considered a tertiary user party, as opposed to the handicapped, which are the primary users.

Key Human Factors:

- **Vision** - Eye interaction with the application. Tracking where the desired object is placed in the scene.
- **Touch** - Finger and hand interaction with the mobile device. The mobile device needs to be held with the hand whilst the fingers are used to move the objects in the application and navigate through the application.
- **Cognition(Memory, attention)** - Users need to be aware of their environment in which they are placing their desired modifications. Angles, heights and locations need to be considered with full

attention. Additionally, memory/experience of using applications and mobile devices is required.

As the primary target audience are handicapped, the minimum human factors are illustrated above. Users with the minimum physical capacity and mental condition (in terms of attention, cognition etc) to use a device and the application are those considered for the application. The human factors from those potential users in a condition that renders them impossible to use the application, are not considered.

Research:

Internet resources were used to further understand our audiences. In particular, design requirements for the general public that demonstrate that our application is seemingly aimed at the general public, were investigated online to find examples, models and ideas.

The primary target audience (i.e physically disable people) were identified as the client's requirements for the application is to improve the quality of life of said primary audience. Thus the target audience is included.

The remaining audiences were included from consideration of the audiences that can benefit from the application.

Resources supporting the primary target audience:

Australian Bureau of Statistics - Disability, Ageing and Carers, Australia: Summary of Findings, 2012^[1]

- 35.5% of Australian households have a person with a disability, over half of which are "without a carer".
- "While older people make up around one seventh of the Australian population (14%), one quarter of all households contain an older person (25%)."

Resource supporting the secondary target audience:

Australian Network on Disability - Disability Confidence Survey report^[2]

- 80% of small to mid-sized enterprises (SMEs) "believe they have some customers with disability".
- 53% of those reported having "done something specific to assist.
- 62% "are likely to make changes to accommodate customers with disability in the next year".

- Only 1 in 5 “don’t cater for customers with disability”.

Audience beliefs

As identified above, the two target audiences are those interested in interior design ranging from specialists to the general public and those with physical disabilities that can benefit from an application that can visually represent furniture organization to a separate party capable of handling the minimally required physical labour.

Physically Disabled Audience: This demographic can utilize Easy Planner to visually represent their needs for furniture arrangement. In particular, this target audience can benefit from using Easy Planner, as often verbally expressing one’s ideas can be misinterpreted or not understood to the fullest capacity. As the user can demonstrate visually where to place the desired furniture (with attributes such as specific location, angle etc), the margin of error is reduced significantly. As an example, it is shown in [4], that the elderly with physical limitations will benefit from the use of this application.

Interior Design Audience (General): This demographic can employ the application for visual aid to assist them in planning furniture arrangement in their households or potential households. Easy planner can be highly useful for this audience as they can determine beforehand whether furniture in certain locations pleases their interests, saving a significant amount of time and physical labour.

It is anticipated that both audiences will be above the age of 16, therefore in terms of design elements, age will not be a design factor however, a minimum degree of design that incorporates a mature theme will be considered.

As this application is aimed at two demographics, one of which are handicapped, designs or implications in the application that are emphasized on one demographic will be avoided, keeping a neutral state of design.

Audience’s belief towards using Technology

It is evident that the use of technology has improved the quality of life of those with physical and mental disabilities. Several examples include:

- Applications and Gadgets ^[5]
- Prosthetic limbs ^[7]
- Body Function Reparative Research (i.e. Vision, spinal) ^[6]

From above, it is evident that technology has benefited the physically disabled significantly and science continues to aim to improve their quality of life. Although there are factors such as the elderly being technology skeptic/distant, it is a clear indication of comfortability from the number of disabled people using technology to improve their quality of life significantly.

Statistics

The National Center for the Dissemination of Disability Research in the United States reported that 42% of the respondents felt that Assistive Technology (AT) devices and services had decreased their need for help from another person “some” or “a lot” ^[8]. Furthermore, when asked whether people are “more aware of the need for and benefits of AT devices and services for persons with disabilities” compared to a decade previously, 93% “agreed” or “strongly agreed”. These results indicate that not only do assistive technologies help those facing disabilities, people are aware of their benefits and thus open to new technologies.

3.1 Audience demographics

The goal is to produce an app that can be used by a large demographic, keeping things simple through the use of common actions and symbols already used in everyday technology. Because of our vast spread for the demographic, we can ignore a lot of the factors such as sex, income, location, and occupation. And instead focus on the aspects of age, education, and knowledge of technology.

	Age	Communication ability	Tech experience	Income
Primary (handicapped, carers, ect)	16+	Depending on disability status, can range from normal to severely	Usually lower than general	Large range (low to

		impaired	population	high)
Secondary (business)	25 - 70	Can communicate clearly and concisely	Competent	Generally high
Tertiary (general population)	18 - 70	Normal, may be very occasional language barriers	Ranges from low to high	Middle to upper range

The primary audience for the product is a subset of the general population that includes people with disabilities and people caring for those with disabilities. We do not intend our product to be used by children. Technological experience can vary wildly, however we account for the use of our product by those with less opportunity with technology in their lives, especially the elderly. Income is not directly important in regards to use of the product, as it is inexpensive and coupled with support from organisations such as LifeTec. An important characteristic in the audience, especially the primary audience, is their ability to communicate their goals and desires. Depending on disability severity, the ability of a person to communicate can determine how effectively the product can serve them.

This product is designed for an extremely wide range of people, and as such is designed to be as simple as possible to allow the least able of them to use it. However there exists a subgroup of people within the primary audience who will be unable to use the product without special assistance i.e. those with severe disability that renders them unable to see or use their hands.

4 Problem Statement

The problem that we aim to solve is the difficulty that people, more specifically the disabled, have with moving heavy furniture around their home, workplace, etc. The issue here is that the normal practice of moving furniture can risk injury and generally be difficult or even impossible for the disabled. Any technology that can improve the standard of living for the disabled is an important issue.

Project Completion Date: October 23rd

Budget: Unspecified

Other Constraints: Limited resources as students

5 Goals

The goal of this project is to design and develop a mobile/tablet application which assists LifeTec in providing clients with information and tailored advice on assistive technology to disabled persons, or those who seek to 'future-proof' their homes against aging or progressive medical condition, as well as a tool for general home design.

5.1 Usability Objectives

To ensure that the product achieves the desired level of usability, VisTec will work closely with LifeTec to conduct informal usability testing in the homes of LifeTec clients with input from their specialists. Additionally, their highly trained staff can provide expert reviews on our product through it's testing phase to evaluate its design and provide recommendations on improving usability.

Label/Button Usability

The buttons included in this application will have simplistic texts that very clearly outline the page or function they are to perform. In addition, icons and images that assist the users in understanding the meaning of the buttons will be included (i.e. settings button will have a cog wheel icon which is commonly used for settings). This is to avoid incorrect navigation and operations.

Navigation Usability

Excluding the login process (which can be skipped for quick access), users can take themselves to any point of the application with 2 clicks. Thus, the usability in terms of navigation is simplified for the users. Additionally, the camera view will have intuitive grouping of items in a side menu for placement over the background.

Users do not require a login. This is to reduce the cognitive effort required by the user in memorising a username/password combination, as well as reducing the capacity for errors. If they do log in, their credentials can be

saved. Login serves to save application settings and extended furniture libraries for specific users.

Design Usability

LifeTec works closely with clients, providing the services of various specialists in the field of assistive technologies, who can be trained in the use of this application, however it must achieve a high level of usability with the target audience, as independence is an important goal of assisting people.

To achieve this level of usability it will be aimed to minimise physical and cognitive effort on the part of the users.

Learnability is a high priority usability objective to avoid user frustration. The product will make use of simplistic features to minimise the possibility of user error and maximise efficiency. By achieving these usability objectives, the aim is the user will find the experience satisfactory.

5.2 Mandatory elements

The mandatory elements are as follows:

- LifeTec's logo, address and phone number.
- VisTec's logo
- Design accustomed for users above the age of 16.
- Consistent navigation flow
- Consistent Design elements for entire application
- Icon for iOS
- Icon for Android

5.3 Deliverables

The items to be delivered to the client upon completion are as follows:

- **Design Brief Document** - The Design Brief Document is the main deliverable component required by the client.
- **Designs** - The preliminary designs in addition to the alpha designs will be delivered as that is the scope of the Design Brief Document.
- **Recommendations/Feedback from the testing** - Feedback from the users obtained through the testing phase will be delivered along with the other deliverables.

6 Alpha Design

6.1 Structural Design

Wireframes



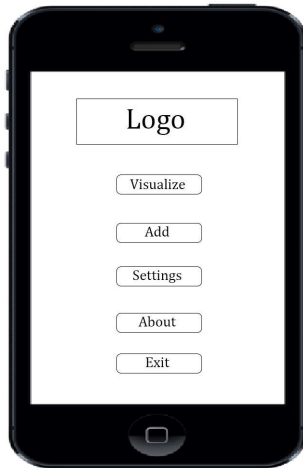
Loading Screen

Upon loading Easy Planner the user will be presented with a loading screen with the sole purpose of informing the user how much of the program the device has loaded.



Login Screen

After Easy Planner has loaded, the login screen will be presented. This screen will be the first point of interaction between the user and the application. The user will be required to enter in their profiles username and password in order to proceed further into the app. Once added the user will be required to press the login button to confirm the details. Other noteworthy elements for the screen would be the use of VisTec's logo, and Easy Planners icon and slogan towards the top of the interface.

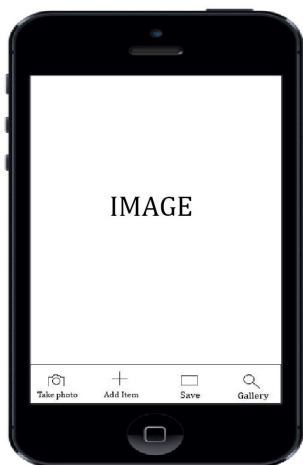


Main Menu

Once the user has successfully logged in, the main menu will be displayed. This is the main hub for application and navigation. From here the user can reach various elements to the application the user wishes to use. The main navigation elements will include:

- Visualize - a way to get to the app's main interface.
- Add - add new images to the user library.
- Settings - various settings that can be customized.
- About - an information section for finding out a little about VisTec and Easy Planner.

Once again the logo and icon will be displayed at the top of the interface.



Main Interface

The main interface is the heart of the application. This is where all of the apps main functions will be presented to enable the user to interact with and perform the main task Easy Planner was designed for. Here the user can take pictures of their surroundings and use items found in the inventory to add to the surrounding space creating a room's desired layout. A shop will also be present to allow for an extra search function to expand the user's inventory to help with room decorating.

Synonymous to a traditional application, the user will be taken to a loading screen upon starting the application. Subsequently a main menu, which includes (from top to bottom) Visualize, Add furniture, user settings and exit.

As mentioned above, Easy Planner uses a traditional style navigation system with a menu that leads to other pages. Most navigational options are also synonymous to a traditional application, with a core page (Visualize), a page to add items (Add furniture), user settings and the exit option. This traditional system, provides familiarity to the audience and therefore no difficulty using.

Navigation: Upon examining the navigation flow of the application, it was established that simplicity and familiarity are the most essential components required for the design. Although logical and efficient navigation is also included, an emphasis is placed on simplicity and familiarity. This is enabled by use a primary navigation process, a list menu. A considerable amount of applications use this navigation approach which creates familiarity and thus simplicity as use of the application is simple from the familiarity of the navigation. The core navigation process as seen in the wireframes, is as thus:

1. Login Screen
2. Splash Screen (With Friendly Reminders)
3. Main Menu
4. Subsequence pages from the main menu. (Visualization, Settings, Add Modifications, About Lifetec, Exit)

For an in-depth visual representation, the storyboard illustrates navigation flow and structure of the application. (See 6.3, figure 5.1)

6.2 Visual Design

6.2.1 Layout:

Design: Upon designing the application, the following elements were considered and aimed to be incorporated:

- **Aesthetically pleasing** - This is done by testing and discovering colours and aligning the design with design principles^[9], illustrated in various sources that depict the principles of design.
- **Familiar** - Familiarity is achieved by using design elements and icons that have been used in previous applications. Most applications consistently use icons that represent and action,

such as password or user authentication icons, and thus through simple design such as this, familiarity is achieved.

- **Simple** - Simplicity is achieved by eliminating redundant elements and cluster, thus ensuring simplicity. This allows the users to observe the design elements without confusion, enabling ease of use.
- **Logical** - Design elements make sense. This is allowed primarily by using icons and graphics that are representative. Furthermore, the texts for buttons are very clear that adhere a logical structure.
- **Efficient** - The user can be taken from the login screen to any point in the application within 3 clicks.

6.2.2 Graphics

Easy Planner Imagery

To keep things fluid, Easy Planner uses iconic symboling within its designs to allow for intuitive use. There are three major parts in the menu:



Items/Inventory

The Inventory, which will be a place to store the user's owned items.

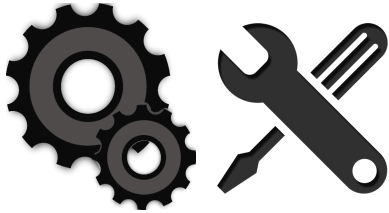
← Figure 1.1 - Items



Shop/Search

The Shop, which will be used to provide the user with a method of searching for new furniture and decorations.

← Figure 1.2 - Search



Settings

And the Settings, where a user will be able to find various app customization tools.

← [Figure 1.3 - Settings](#)

6.2.3 Icons/Logos

Starting with VisTec's logo and Easy Planner's Icon, making something simple yet aesthetically pleasing proved to be challenging. Multiple variations were created as a base however, it was narrowed down to an angular VT Letter merge design as per figure 1.4 below.



Logo Experimentation

Starting with VisTec's logo and Easy Planner's Icon, making something simple yet aesthetically pleasing proved to be challenging. Multiple variations were created as a base however, an angular VT Letter merge as per figure 1.4 below.

← [Figure 1.4 - Logo Choices](#)



Logo Decision

← Figure 1.5 - Logo Decision

After experimenting with colour schemes and variations the white image with the green and black background was chosen. The image can then later be added to documents without the coloured background and still be easily identified on foreign coloured backgrounds.

6.2.4 Colour Palette

The color design of Easy Planner consists of 1 primary color and several minor colors. LifeTec is a company that aims to improve the quality of life for it's users through the use of assistive technologies. From this goal, it was determined that a friendly, light color design be incorporated. This is done mainly, with the primary color applied as a background and the contrasting minor colors.

Primary Color: The primary color used for the application is a light green “sea foam” color (#71EEB8).

Secondary Colors: White space and white texts (#FFFFFF) were used as they contrast noticeably with the background. Furthermore, a shade of black was used for text for the buttons with white backgrounds. This is to allow for contrast to increase visibility.

Other Colors: A variety of colors were used overall in the application. Examples include originals colors from the LifeTec Logo, and colors included in icons and graphics. (Refer to figures 3.1 - 3.3)

Note: Please refer to figures 3.1 - 3.3 to observe samples of the included colors mentioned above.

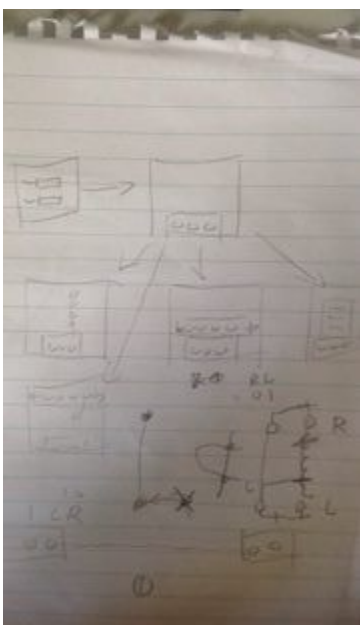
6.2.5 Sketches



Icons/Logo Design

Figure 2.1 above illustrates the early designs of logos to be used for the application. Through majority votes, the popular logos were kept, and the unpopular eliminated. The selected logos were further refined using photoshop by modifying color elements and adding other design elements. The final list of icons were created as per figures 1.1 - 1.3.

← [Figure 2.1: Logo Sketches](#)

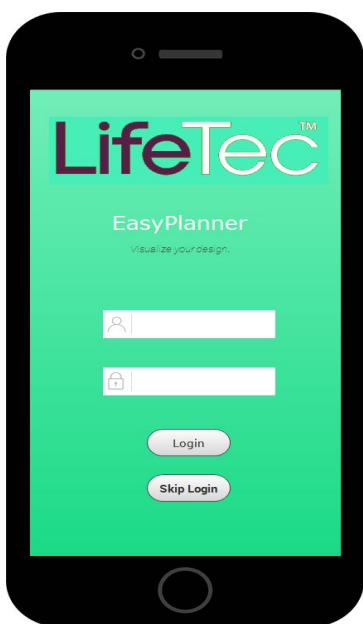


Alpha Storyboard

Figure 1.2 displays early samples of the storyboard ideas. As illustrated in 6.3 the final storyboard demonstrates a modified version from this early alpha sketch, however the main conception of the hierarchy and navigation flow of the application is illustrated and was designed in this early alpha sketch. The navigation flow being, the user starting from the login screen to the main menu. Following this the user can then select to take part in the core process of visualization, adding more modifications/furniture, changing settings or exiting the application.

← [Figure 2.2: Storyboard Sketch](#)

6.2.6 Screen Design

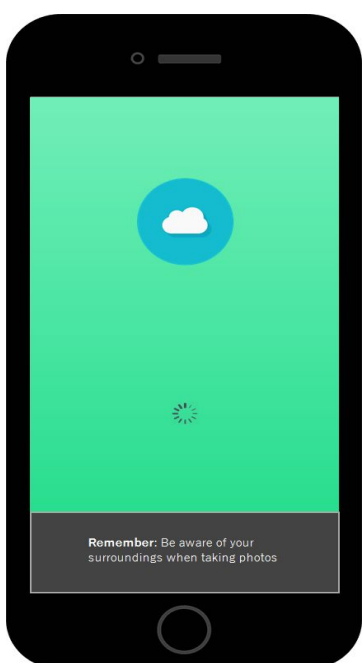


Login Screen

This screen is where the users can login or skip to login to proceed to the main menu, which contains the core processes. The login form is indicated with the person icon, commonly used for login forms. Additionally the same is for the password form with a lock icon. The buttons directives then should be also effortless with clear texts such as login and skip login.

Note: As LifeTec's minimum design requirements were to incorporate the LifeTec logo,

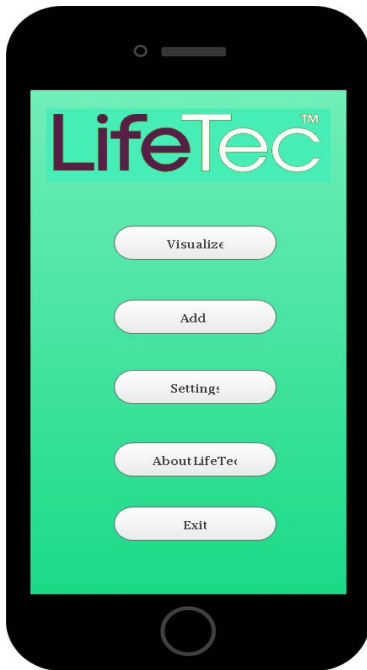
← Figure 3.1: Login Screen



Loading Screen

During the transition between the login screen and the menu screen, it was considered useful to implement a screen that displays helpful reminders for users to ensure the application is used responsibly and under safe conditions. Examples of tips include, awareness of surroundings (as illustrated in figure 1.2), reminding users to not physically stress themselves whilst taking photos and others.

← Figure 3.2: Loading Screen



Main Menu Screen

The main menu screen incorporates simplicity, where buttons contain text that are clear in terms of functionality. The LifeTec main page is the hub of navigation therefore ease of use is focused.

← Figure 3.3: Main Menu Screen



Core Functionality

This page allows for the user to take a photo of a scene in their environment they would like to input modifications or furniture. This is done by the take photo option which is accompanied by a representative camera icon. Additionally functionalities include adding a modification to the scene, saving the photo and observing previous saved photos. These functionalities are clearly captioned below and accompanied by representative icons.

← Figure 3.4: Core Functionality

Note: The scene and TV (modification) is put in figure 3.4 as an example, this page is not static.

6.3 Supporting Design Tools

Prototype

Prototypes were created to demonstrate the screen design and the flow of the application. This is to develop preliminary designs of the application and using this, receive feedback on design elements from both testers and the VisTec group and quickly create a model of the desired application. The prototype is submitted separately and figures 3.1 - 3.4 are the samples of the prototype. Additionally, the prototype was developed using Justinmind Prototyper.

Persona 1:

John Smith is an elderly pensioner living alone at his home in suburban Brisbane. He suffers from hearing loss, and arthritis in both knees affecting his mobility and ability to transition between standing and sitting positions. Also, his short term memory has deteriorated. He recently contacted LifeTec in search of information on assistive technologies. He is determined to continue living independently. However, due to sentimental attachment to his home he is somewhat apprehensive about performing modifications to his home. John Smith is typical of LifeTec's clientele and thus, the primary target audience for this product.

Scenario 1:

LifeTec suggested to John Smith that he use our product to assist in visualising home modifications. He downloads the application and develops the goal to visualise how a handrail would fit and look in his bathroom. He skips login, as he doesn't believe he could remember a username/password combination. Arriving at the menu, he immediately clicks "Visualise", as he lacks patience to browse the settings or about page and is only interested in achieving his goal. Holding his device in a

landscape orientation, the camera displaying his bathroom on the screen, with a menu on the left displaying common items and categorised standard library. Following the simple instruction “drag and drop”, he drags the handrail item onto the camera view. He spends a minute moving the device, positioning until he is satisfied, and presses the save image button. He decides that he will install the handrail, completing his goal within four or five button presses.

This persona and scenario helped with the design. For example, we decided to include a skip login option to support users unwilling or unable to memorise login details. Also, it assisted in identifying unnecessarily complicated workflow in the use of the product.

Persona 2:

Jane Doe is a thirty-five year old business owner who has recently purchased a storefront to open a retail outlet. She is relatively wealthy, and somewhat proficient at using mobile/tablet technologies and applications. She employs several staff, none of whom have any disabilities. Jane Doe is representative of our secondary target audience.

Scenario 2:

Jane Doe becomes aware that her new premises has poor disability accessibility. The entrance has a small flight of stairs and changing rooms have no accessibility devices, such as handrails. She is eager to make her store welcoming to all customers, however she is unsure how to go about making modifications, and what they would look like. She develops the goal to learn about assistive technologies, and visualise and implement the modifications. Initially she skips login, browsing the “About LifeTec” page to find information on assistive technologies. She browses the “Add Modifications” page to find business-oriented assistive technologies. To save her data, settings and library, she creates an account. She then experiments with the visualisations, until

she is satisfied, saving the images. She uses the images to help inform contractors of her vision to complete her goals.

This scenario highlighted the importance of keeping the login option, as certain users would desire to save information. Also, the “About LifeTec” page should be readily accessible from the menu, as for many users learning about the various assistive technologies is vital to a successful outcome.

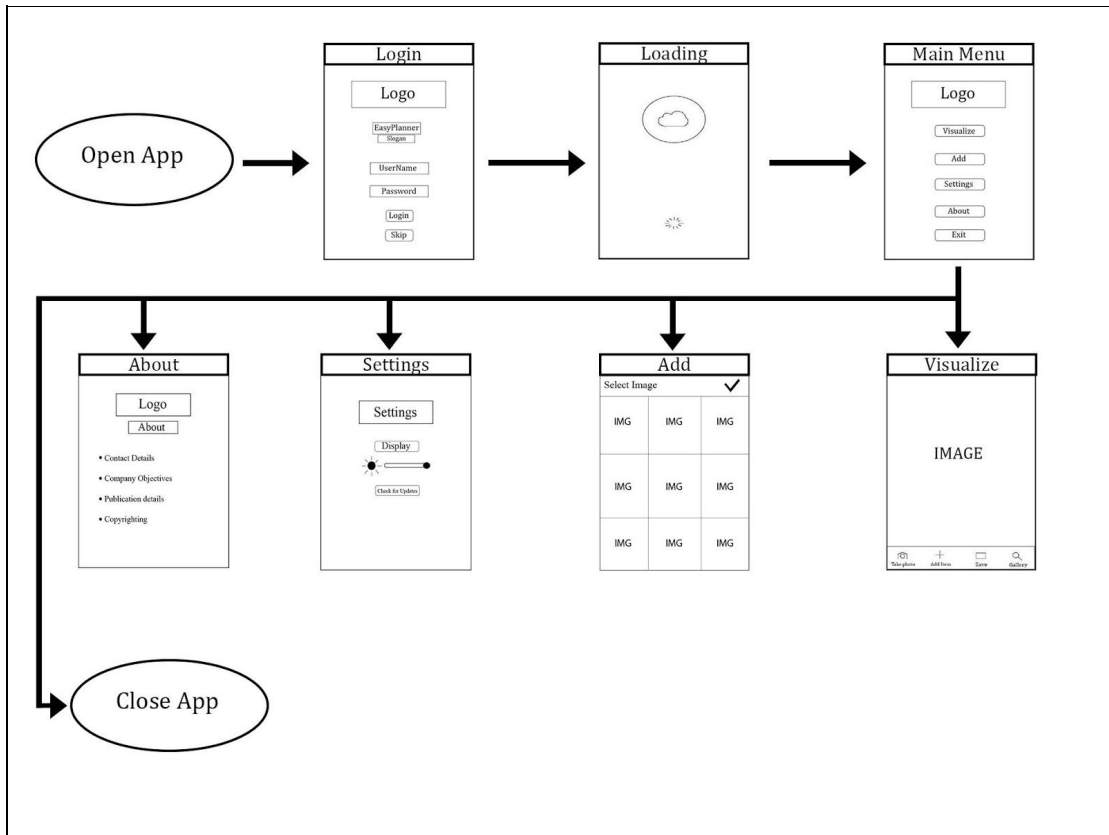


Figure 5.1: Storyboard

The storyboard as per figure 5.1, illustrates the visual representation of the navigation structure of the system. This design tool is highly useful, as it can convey the structure of the application more efficiently and accurately rather than a written document that details the structure. The logistics of the application can be closely observed when developing and designing, and other essential elements will not be overlooked.

References:

- [1] Australian Bureau of Statistics,
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