



LunchBox

Simple lunches for people in a hurry

Requirements Specification

Date : 23rd May 2016

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Version: 1

Status: Work in progress

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Version History			
Date	Version	Status	Comments
19/05/2016	1	Work in progress	First run!

Changes since last version

Known Omissions

Approvals				
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Reviewers Comments

No comments

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1 Introduction

1.1 Purpose of the Document

The purpose of this document is to record the requirements specification for the Minor Project application by Team 23 - LunchBox.

The document defines the scope for the project and the functionality to be delivered to the client.

It will also serve as a shared and central reference point for the development team, defining functional and nonfunctional requirements.

The Document is split into six sections.

1. Identifying the Need	Competitor Analysis, and comparisons of core functionalities, possible users and their characteristics, and the target device and platform.
2. Requirements Overview	Initial Requirements and Creative Brief from the client, pen and ink wireframes
3. Validating the Need	Research, further competitor analysis, how this has impacted requirements
4. Assumptions, Issues and Risks	(To be completed in later module assignments)
5. System Requirements	(To be completed...)
6. Requirements Definitions	(To be completed...)

1.2 Document Conventions

Requirements stated in the document will be assigned priority levels based on the perceived importance of the function. This priority is subject to change, and the document will be amended to reflect changing priorities, circumstances, needs and resources as required.

All amendments will be agreed upon between the team and client.

1.3 Intended Audience

This document is a business level document intended for all project members, the project stakeholders and potential users of the system. It is also intended for potential investors, and potentially for inclusion in a peer review process by students who are part of the Webelevate Program Facebook Group.

1.4 Definitions, Acronyms and Abbreviations

UCD : User Centred Design

Requirements Specification: A document that describes the high level functional requirements of the system to be developed.

2 Identifying the Need

2.1 Concept Overview

LunchBox is a product to assist parents, carers and others to quickly prepare healthy, light meals.

2.2 User Needs

LunchBox meets a confluence of needs experienced by people preparing lunches themselves or for others but are limited in time available, choice of available ingredients and/or ability or inclination to cook. In particular:

- Parents who wish to encourage their children to eat well at school and help prevent them from constantly eating snack-foods or unhealthy meals
- People short of time, especially parents rushing to get children out to school or people rushing to get out to work
- Busy people who want variety in their lunch choices but don't want to, or cannot, spend too much time researching alternatives
- People without much cooking experience or who dislike cooking but enjoy homemade food
- People who cannot afford alternative ingredients

- People bored with their lunch food choices and who want imaginative and tasty alternatives to sandwiches
- People who need help to combat obesity in children
- People with dietary restrictions who wish to eat tasty food at lunch time
- People who are looking for new ideas in their lunch choices

While these are separate needs that we have identified, in many cases they may well overlap and a user may find themselves in two or more of these categories.

2.3 Device Affordances

Smartphones & Tablets have been identified as the initial target devices because of the following affordances in terms of the user needs and behaviours:

- Large, easy to view screens
- Large typing area & keys
- Touch Screens
- Front facing cameras
- Barcode reading capability (via 3rd party app)
- Voice Recognition
- Internet connectivity via Wifi and or 3/4G

2.4 Competitor Analysis

Is there anything out there like this in the same domain or in a similar domain?

There is nothing out there that is exactly the same as LunchBox, but there are some similar applications which overlap our idea.

Are there combinations of functionality across existing applications and domains that are similar?

Many apps have the same premise, enter the ingredients you want and the application will deliver a recipe based on those ingredients. The apps also enable the user to save recipes and also create shopping lists from the desired recipe, as well as recipe sharing.

What have you learnt from reviewing these what functionality or approaches would you used or not use?

The Fridge Check app promises lots of functionality, but does not always deliver. Many of the users complained that when an ingredient was specified, the result did not always output a recipe including that ingredient. The result therefore could be somewhat erratic. We think that the application needs to deliver on its promises.

Lunch Recipes scores well with its users; its simplicity seems to be it's success, and this is something we are aiming for. Keeping the product simple but also doing what it "says on the tin". It needs to deliver everything it promises.

Competitors:

Fridge Check - <https://play.google.com/store/apps/details?id=com.fridgecheck>

Fridge Check is a very simple app that gives you a list of recipes to cook based on the ingredients you have in your fridge.

There are 3 criteria in which the user is required to input:

1. The user must enter the ingredients they have in their cupboard and fridge.
2. Choose the category of meal they desire.
3. Select the time they have available to make the meal.

Fridge Check will then give the user a list of recipes based on the above criteria.

It also allows the user to enter ingredients that they may be allergic to or don't like. So if they are vegetarian or perhaps a coeliac then this will be taken into account when generating the recipes.

Core Functionality:

- The user can browse and save recipes directly to their profile.
- The recipes for the most used ingredients will show at the top of the list.
- The user can avoid certain ingredients, for example if they have a nut allergy, the app will allow them to exclude this from the results.
- The user can create shopping lists, which can be used offline – while they shop in their local supermarket.
- The user can also save favourite recipes to their online profile, to be used on another occasion.

Lunch Recipes - <https://play.google.com/store/apps/details?id=com.cookware.lunchrecipes>

This is a step by step instructional app for cooking new and healthy dishes.

The user can find the recipe they want by a search tool, entering the recipe name or ingredients.

The user can view recipes offline by adding them to their profile.

Recipes can be bookmarked and put into a favourites section.

Users can add ingredients to their shopping list so they can buy it from the supermarket.

Core Functionality:

- Special of the day
- Search recipes by ingredients or a particular recipe
- Shopping list
- Search recipe by preparation time
- Offline recipe access
- Favourite recipes can be stored separately
- Nutritional facts
- Recipes can be shared to friends or family
- Recipes are provided with their nutritional value and calories
- Enables a search for a specific type of lunch, for example if the user wanted a “low carb” lunch then the app would generate the appropriate recipe.

3 Requirements Overview

3.1 Functional Scope

In this project the team are tasked with developing a mobile app that delivers recipes to users smartphones or tablets. Recipes will be based on the real time contents of users fridges and kitchens. The recipes will be simple, tasty and nutritious. Users will require almost no cooking skill, and cooking time is twelve minutes or under. The recipes will contain nutritional information, so users can assess the calorific and nutritional content of the food they are cooking. And users will be able to specify dietary requirements that the app will cater to in building recipes.

Users, based on the ingredients they input into the app, will receive step by step instructions while they are preparing food, to create meals from ingredients actually in their kitchens. Users will also be able to access recommendations for recipes based on the typical contents of Irish kitchens. The focus will be on meals that are tasty, nutritious, simple and quick.

Users will be able to create lists of favourite recipes. Users will be able to use the app to build shopping lists based on favourite recipes they have saved, and on recommendations the app makes.

3.2 Initial Specification

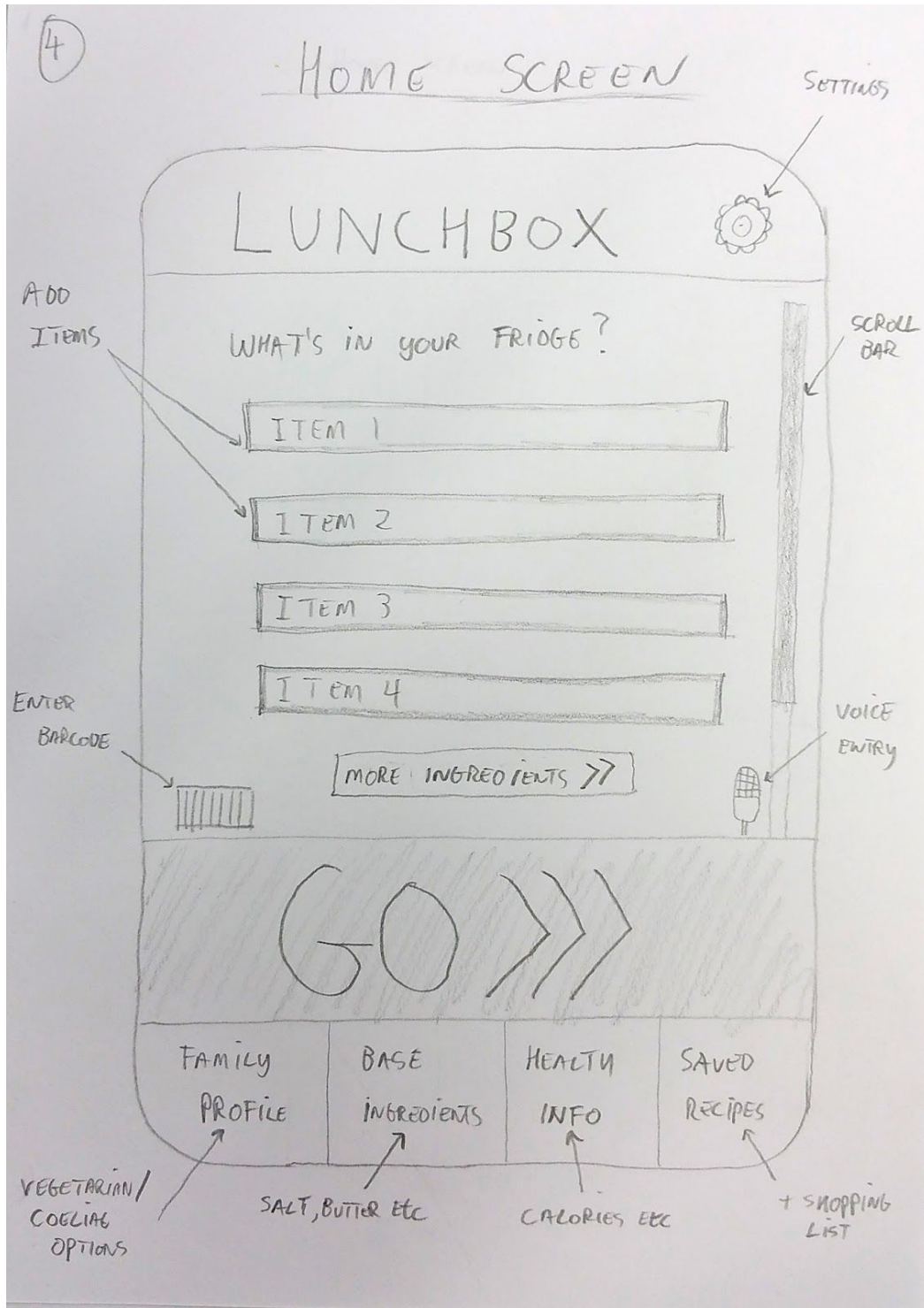
Lunchbox is a mobile app designed for use on smartphones and tablets.

Lunchbox will have the ability to enable busy people to create quick and easy snacks and lunches in under 12 minutes. With Lunchbox you can create healthy, imaginative alternatives to sandwiches by specifying a list of ingredients from your fridge. Food Allergy and restricted diets will be catered for.

Lunchbox will allow the user to create shopping lists, maintain a favorites list and view lists of recommended ingredients for purchase when using the app to create food.

The User Interface for Lunch box will be clear and easy to follow.

3.3 Wireframe



3.4 Initial Requirements List

Ref	Description
IR-0001	Phone/Tablet Mobile app The app should initially be made available for smartphones and tablets.
IR-0002	Add/Search ingredients The main home screen should have a simple search box where you can enter your fridge/cupboard contents into your app inventory. Food items will auto suggest as you type. A barcode scanner and voice recognition may also be included here.
IR-0003	Recipes There will be a recipes button to view sample recipes based on typical Irish fridge/cupboard contents or recipes you've created or used in the past. Recipes will also be broken down into categories.
IR-0004	Follow recipe Easy to read recipe screen that stays on and allows you to follow along as you cook.
IR-0005	Calorie/Health info Calorie and health information is available to view for each food type or recipe.
IR-0006	Vegetarian/Coeliac options Recipe categories can be narrowed down with vegetarian/Coeliac options.
IR-0007	Base ingredients A base ingredients button which shows standard ingredients you are expected to have.
IR-0008	Add to Favourites & Shopping List

	Add any preferred recipe and it's ingredients to your bookmarks. Bookmarked recipes can also be visualised as a shopping list of ingredients.
IR-0009	Prep time There should be a maximum prep time of 12 mins for every meal.

4 *Validating the Need*

4.1 Introduction

This is the documentation of the data gathering process and its results

4.2 Interviews

Initial discussion of the concept with users in general and the potential users who would need it OR you think would need it.

4.3 Research

Is there any research in this area, interest groups, blogs, articles.

4.4 Other data gathering methods used

Other methods used to validate the need

4.5 Validation Results

The results of the validation process resulted in the validation of the requirements, rewrite of the requirements, dropping of the idea completely, taking a different approach around an aspect of the idea.

Ref	Description
VR-0001	
VR-0002	
VR-0003	
VR-0004	

4.6 Critical Success Factors

What do the users see as the key functionality or experience that must be present or achieved in order for this application, app, product or service to meet their needs and for them to use it, pay to use it and tell their friends, workmates or associates about it.

Ref	Description	Priority
CSF-0001		
CSF-0002		
CSF-0003		

CSF = Critical success Factor

4.7 Personas

Based on the requirements validation and the user community you talked to and engaged with, can you identify types of users that would use your application, app, product or service? Is there a novice user, infrequent user, frequent user, expert user, what are their attitudes regarding the use of the use of your application, app, product or service; where will they be using it; when will they be using it; on what device or on multiple devices?

5 *Assumptions, Issues and Risks*

5.1 Introduction

If any of the items below need to be taken into consideration, then list them, add potential mitigations if known. The Further information required should be used as a checklist of items that need information, work or investigation prior to the design phase as they only came up while this document was being finalised.

5.2 Assumptions

Ref	Description
0001	

5.3 Constraints

Ref	Description
0001	

5.4 Issues

Ref	Description
0001	

5.5 Risks

Ref	Description
0001	

5.6 Dependencies

Ref	Description
0001	Data required by the conversion process

5.7 Further information required

Ref	Description
0001	

6 System Requirements

6.1 Overview

From a technology perspective with regard to the device to be used and its ecosystem e.g. it needs wifi, internet, web servers, database servers etc. What infrastructure may have to be put in place or exist on the internet for your application, app, product or service to work e.g. google maps, email servers

6.2 Out of Scope

6.3 Objectives

The following table outlines the functional objectives (not project objectives) of this specification.

Ref	Description	Priority
DO-0001		

DO-0002		

DO = Delivery Objectives

6.4 Principles

6.5 Security requirements

6.6 Audit requirements

6.7 Localisation requirements

US English to be the seed language for the user interfaces.

It must be possible to localise all strings to a language and a variance of the language

6.8 Accessibility requirements

6.9 Integration requirements

6.10 Report requirements

6.11 Monitoring requirements

6.12 Publication requirements

6.13 Infrastructure requirements

6.14 Documentation requirements

- a user guide or help file., technical documentation

7 Requirements Definition

7.1 High Level overview

Based on the requirements gathering and analysis phases described above the following high level model of the system has been derived.

7.2 Functional Modules

The functional modules describe the main functional clusters within the system

Ref	Name	Description	Complexity
FM-0001			
FM-0002			
FM-0003			
FM-0004			
FM-0005			
FM-0006			

Rate the complexity of the functional module H = High, M = Medium, L = low

7.3 Functional Module Breakdown

7.3.1 NameOfFunctionalModel1 - Functionality

Description of the main functional requirements, objectives and behaviours of this module. A more detailed listing of these requirements is provided below:

Ref	Description	CrossRef.
FR-1.010		
FR-1.020		
FR-1.030		
FR-1.040		
FR-1.040		
FR-1.050		
FR-1.060		
FR-1.070		

7.3.2 NameOfFunctionalModel1 – asset Requirements

What art work, content, music, templates, video, audio might be requires to support the functionality:

Ref	Description	CrossRef.
AR-1.010		
AR-1.020		
AR-1.030		
AR-1.040		

7.3.3 NameOfFunctionalModel1 – complexity

Comment on the complexity rating given and the implications – are these noted in some form in the issues \ risks

7.3.4 NameOfFunctionalModel 2 - Functionality

Description of the main functional requirements, objectives and behaviours of this module. A more detailed listing of these requirements is provided below:

Ref	Description	CrossRef.
FR-2.010		
FR-2.020		
FR-2.030		
FR-2.040		
FR-2.040		
FR-2.050		
FR-2.060		
FR-2.070		

7.3.5 NameOfFunctionalModel 2 – Asset Requirements

What art work, content, music, templates, video, audio might be requires to support the functionality:

Ref	Description	CrossRef.
AR-2.010		
AR-2.020		
AR-2.030		
AR-2.040		

7.3.6 NameOfFunctionalModel2 – complexity

Comment on the complexity rating given and the implications – are these noted in some form in the issues \ risks

7.3.7 NameOfFunctionalModel X - Functionality

Description of the main functional requirements, objectives and behaviours of this module. A more detailed listing of these requirements is provided below:

Ref	Description	CrossRef.
FR-x.010		
FR-x.020		
FR-x.030		
FR-x.040		
FR-x.040		
FR-x.050		
FR-x.060		
FR-x.070		

7.3.8 NameOfFunctionalModel X – asset Requirements

What art work, content, music, templates, video, audio might be requires to support the functionality:

Ref	Description	CrossRef.
AR-x.010		
AR-x.020		
AR-x.030		
AR-x.040		

7.3.9 NameOfFunctionalModel X – complexity

Comment on the complexity rating given and the implications – are these noted in some form in the issues \ risks

7.4 Minimum Viable Product

What do the users see as the MINIMUM functionality or experience that must be present or achieved in order for this application, app, product or service to meet their needs and for them to use it, pay to use it and tell their friends, workmates or associates about it. There may be other functionality in the CSF that is required but if you had to put a vertical slice of the application out, and get users, investors and interested parties using it what would those features be and what technology would be needed to support that MFS (Minimum Feature Set)

Ref	Description	Priority
MFS-0001		
MFS -0002		
MFS -0003		

MFS = Minimum Feature set required as a Minimum Viable Product (MVP) release

8 References

9 Appendix

Appendix 1 : Team Roles, responsibilities and input

On the suggestion of Barry McAdam, we've included a brief precis of what individual team members have contributed to the project thus far.

We'd like to qualify that however, with a comment on the methods, values and media the team have used. The team has been hugely active on Google Hangouts, and Google Drive. It's probably fair to say that no task has been completed by an individual working completely in isolation. Almost every task, aspect, idea and section of the document have been contributed to by numerous team members. All documentation and work in progress was available on, and commented on in Google Drive by all members, as brainstorming documents on Coggle and Drive, and as part of the ever present Hangout Conversation.

Requirements document sections were also broken down into individual Trello cards and each team member added their name to a card to get the work done, moving the card into the Done column when complete and also notifying the team via hangouts.

The team have worked together well, and extensively, to produce the document as a collective effort. Peer review, and peer support were characteristics of the process.

The roles and responsibilities outlined below serve to give an idea of the person who was primarily responsible for delivery. But every task was, to a greater or lesser degree, the work of what we'd like to

think of as a cross disciplinary team. That degree might have been great, or as simple as answering a single question.

Derek O'Flaherty took on the role of Product Owner. This flowed naturally as Derek's idea was the app that came to be the project basis. Derek delivered the product tagline, the Concept Overview and the User Needs (in close collaboration with Mary Hurley).

He was actively involved in translating this into the Initial Specifications, and in providing substantial feedback on the Wireframes. And in helping design the group logo. All of this flowed quite naturally from Derek's position as Product Owner. He also participated actively in all other conversations and framed the group evolving understanding of the app in ways that underpinned the individual and group effort.

Mary Hurley delivered the Initial Specifications, and, closely collaborating with Derek, the User Needs. She also injected significant clarity into the team experience, locating, summarising and posting information on the brief, and underpinning the teams understanding of the project. Mary was actively involved in brainstorming, and in editing and suggesting on all other tasks, significantly contributing to the individual efforts of all other team members.

Niamh Monaghan took on the Competitor Analysis, navigating the shifting sands of the emerging app definitions to deliver an analysis of close competitors. She set up and maintained the groups coggle - the initial space we used to brainstorm - and setup the group taskboard on Trello. She was an active participant in all group discussions, actively feeding in to every other aspect of the project on hangout and Trello.

Leon Quinn took on the Wireframes, the Initial Requirements List, and the Device Affordances. He contributed insightfully to all other members in group conversations, and edited and contributed actively on Google Drive. Leon also did major work in organising the groups documentation, rationalising the group Google Drive structure, and uploaded and organised the Group Charter. Leon was also key in designing the group logo and putting together this final document.

Christopher Hennessy was active across the groups media, and communication platforms. He contributed significantly to the groups brainstorm coggle boards, to the development of ideas and the finessing of the tagline, creative brief and participants project tasks. He contributed to Initial Requirements and specifications. Christopher also assisted in editing documents while they were being done.

Keith Brennan took on the role of Scrum Master. He produced a video detailing the ideas and basic themes of Agile Project Management for the team. In practice, the Scrum Master role was swapped between team members as time, expertise and ability dictated. Mary, for example, guided the group initially with understanding the brief, Leon streamlined and organised the documentation on Drive. Niamh organised the groups coggle, the central hub outside Hangout for brainstorming. Derek took a lead in clarifying the product concept. Keith was responsible for the Functional Requirements, the Document Intended audience, Glossary and the Purpose of the Document. Keith also adapted the groups project taskboard based on Niamh's template.