



REQUIREMENTS SPECIFICATION

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1. INTRODUCTION

1.0 INTRODUCTION

The organic food market in Ireland increased sales, reaching €142 million, an increase of 23% (2016) from 2015 (6% growth recorded) (Bord Bia, 2016). And with several campaigns and studies by Bord Bia's Insight Centre, "The Thinking House" already underway in 2017, the issues of "simplicity, sustainability, showmanship and storytelling are important drivers" in the food industry. With many organic food online supermarkets enjoying success, The Green Door Pantry wishes to upgrade their existing site to showcase the artisan, high quality, organic produce which they already sell via their physical store, located at The Green Door Market, Newmarket, Dublin 8. They have been in business for just over 1 year and have spent this time growing their customer base with a very personalised approach. They wish to develop their online presence with as much care and integrity. They are very conscious of telling not only "their story" but offering insightful, informative blog articles relating to organic produce and health and nutrition educational features, in general.

1.1 INTENDED AUDIENCE

The intended audience for the site is wide and varied, it includes:

- Women, aged 35-45 with an interest in health and wellness
- Men, aged 25-35 who enjoy a sporty lifestyle
- Parents who are interested in sourcing organic, sustainably produced food
- Parents who enjoy high quality, artisanal produce
- People, ex-pats, in particular, who have trouble locating specialist items
- People who are on specialist diet and nutrition plans



2. IDENTIFYING THE NEED

2.1 WEBSITE OVERVIEW

The Green Door Pantry website will primarily feature a shopping showcase which enables the customer to click and collect produce from their physical store. The website will also serve to highlight their narrative as a trusted brand which has grown organically by means of their carefully nurturing approach to their customer relationship development.

While the click and collect function is a key requirement, The Green Door Pantry also wishes to become a trusted, leading source of information on health and nutrition, as well as sustainable food manufacture. They support local organic farmers as well as artisan produce manufacturers, with a focus on high quality. Their website must reflect their brand ethos and customer relationships in its content, design and functionality.

2.2 USER NEEDS

The fundamental need of The Green Door Pantry customer is to find and reserve online, artisan and organic produce, which they can collect later at the physical store.

Another need is to read informative material on health and nutrition and where to buy such produce. To have a trusted resource on all foods artisan and organic with an authentic brand story is also integral to The Green Door Pantry's customers' needs.

2.3 COMPETITIVE ANALYSIS

The online competitors were identified by typing in keywords such as “organic food dublin” and “whole foods dublin” and “healthy food shops dublin”.

The most relevant competition are the following:

	The Green Door Pantry	Nourish.ie	SmallChanges.ie	OrganicSupermarket
Educational Content	In Progress	Yes and it is good	Yes but it is poor	No
Niche Foods	Yes	Yes	Yes	Yes
Food Delivery Services	In Progress	Yes	Delivery depends on the product	Yes
Nationwide	In Progress	Yes	Yes	Yes
SEO Score	None	Good	This site tries to target keywords by creating content but has lots of error pages for that content.	Very good at targeting niche keywords such as “Agave Syrup Dublin” and other foods that people would be checking the availability in Dublin
UX/UI Score	In Progress	Good	Average	Very Good
Social Media Power and Reviews	Poor	Good	Average but they don't use it properly	Good but they need to educate their following more
Marketing Strategy	Poor because there is no strategy in effect at the moment, however, focusing on SEO and producing content will definitely make the strategy score well.	Good because they focus on reaching lots of new markets due to their wide range of products, they also know how important it is to include blog content into their SEO strategy. They use social media to provide lots of educational content too, rather than use it to push their products on people.	Their strategy is below average. They sell a wide range of products and cater to special diets, but they do not market it very well. Their content strategy seems to push their products on people too much. Not wise to do seeing as they don't provide good content to build credibility first.	Their marketing strategy is good, they use competitions and SEO to bring in their leads. However, educational content would work great with this site seeing as they are already a credible company.



3. SCOPE OVERVIEW

3.1 SCOPE OVERVIEW

The purpose of this website is to educate people about health and nutrition using well informed original content such as personal blog, articles, videos and recipes. There will also be provision for a future shopping cart (Click & Collect).

User Registration/Newsletter

The user may choose to register their details to receive a newsletter or continue as a guest user.

Viewing Content

Original articles will feature on the site along with links to interesting and relevant, non-original content. Video content, in the form of recipes etc. will also be available in future iterations. Articles on sale or promotion will also feature.

Searching/Browsing

The site will contain a search box function which will search the entire site. This will be particularly useful for shopping.

Connecting with similar users

Users will connect using The Green Door Pantry's social media presences. A billboard of events may be an interesting future iteration for the site.

Blog

The site will feature a blog page with interesting original content, featuring educational articles and recipes.

3.2 INITIAL REQUIREMENTS

- To provide suitable content, in the form of articles, blog and videos (recipes), to inform people about making healthier choices for their own health and the planet (sustainability, organic)
- The content may be appropriate for multiple markets, particularly targeting women (interested in wellness) 35-45 and men (interested in health and fitness) 18-35
- To improve their experience through the website and convert new visitors to leads
- The content will be in English

3.3 PRODUCT SPECIFICATION

Product Name	The Green Door Pantry website
Product Type	Website
Website Type	Fully responsive website
Deliverables	Published website files and supporting documentation with logo
Target Device	Mobile, Desktop
Target Platform	Browser
Initial Language	English
Viewing mode	Responsive

3.4 DESIGN GOALS

The main users of this website will be women interested in wellness aged 35-45 and men interested in health and fitness aged 18-35. The artisanal and natural quality of the produce for purchase also needs to be reflected in the company's branding and the website's look and feel. As a result, the design needs to:

- Look and feel artisanal/natural/environmental
- Clear navigation
- Natural colour palette, emphasis green tones
- Stronger colours for calls to action/promotions
- Feature hand drawn iconography/illustrations
- Plenty of whitespace
- Balance of font sizes across written content
- Optimised product photography
- Optimised website imagery

3.5 INITIAL REQUIREMENT LIST

Ref	Description
IR-001	Homepage
IR-002	Shop
IR-003	Why Organic
IR-004	Delivieries
IR-005	Our Story
IR-006	Blog
IR-007	Contact
IR-008	Newsletter/Mailing List
IR-009	Social Media Links
IR-010	Divi Platform & Woocommerce Compatibility
IR-011	Email address storage



4. REQUIREMENTS OVERVIEW

4.1 REQUIREMENTS OVERVIEW

A competitive analysis helps to understand the external market in which The Green Door Pantry is operating. It is the critical part of any business organisation from which we can understand the market and therefore what attributes focus in order to attract the target market audience. The table below outlines the particular market environment in order to choose the right digital marketing strategy for the company. The three main competitors which are very active on social media platform presently are as follows:

	Nourish.ie	SmallChanges.ie	Organic Supermarket
Organic Search Traffic	1.9K	0	1.4K
Paid Search Traffic	108	0	0
Backlinks	314	57	47
Display Advertising	0	0	0
Top Organic Keywords	925	25	188
Branded Search Traffic	56	0	0
Top Paid Keywords	35	25	0
Twitter Followers	1,329	1,158	5,051
Tweets Likes	390	740	327
Tweets	709	5,059	898
Facebook Likes	4,731	3,645	76,690
Facebook Followers	4,667	3,605	75,286
LinkedIn Followers	154	285	482
Google+ Followers			28
Google+ Views			340,985
Bounce Rate			50%
Daily Page Views per Visitor			3.6
Daily Time on Site			2.5

Source:

<https://www.semrush.com/ie/info/https%3A%2F%2Fwww.organicsupermarket.ie%2F>

<https://www.alexa.com/>

4.2 SURVEYS

SURVEY DIGITAL MARKETING RESEARCH The Green Door Pantry *Organic Food/Products*

We are conducting a survey for The Green Door Pantry, a new company which sells organic food/products. This survey is required as part of our college digital marketing research which is focused on the awareness and the purchase of organic products. The survey will take approximately 2 minutes. Thank you in advance for your participation in filling out our survey. Your feedback is important and confidential. By completing this survey you agree that we can use the information anonymously for purposes only related to the project research.

1. What is your gender?

Female
Male

2. What is your age?

15 to 25
26 to 35
36 to 45
46 over

3. How familiar are you with the Green Door Pantry or organic products/ food?

(If you are unfamiliar please take a few minutes to visit www.facebook.com/greendoorpantry/)

Very familiar
Moderately familiar
Slightly familiar
Not at all familiar

4. Do you believe that organic food is much healthier than non-organically grown food?

Definitely!
Not sure
No

5. How often do you buy organic food/products?

- Once every month
- Less than three times a year
- 3-10 times a year
- More than ten times a year
- Never

6. For which reasons do you buy organic products? (Please choose all that apply)

- They are healthier
- They taste better
- My friends/family recommend it
- I am convinced of the quality of the products
- None of the above
- Other (please specify)

7. Where do you normally buy organic food/products?

**8. Which of the following would influence your decision to buy organic food/products?
(Please choose all that apply)**

- Food fairs
- Promotions
- Newspaper article
- TV Program
- Newspaper Advert
- Blogs
- Online advert
- Referral from Friend /Family
- Other (please specify)

9. Which of the following social networking websites do you currently use?

(Please Choose all that apply)

Facebook

Twitter

YouTube

Google+

Instagram

Pinterest

LinkedIn

None of the above

10. Which of the following devices do you use most to connect to the internet?

(Please choose all that apply)

Desktop

Laptop

Phone

Tablet/Ipad

11. Do you consent to joining the mailing list of www.thegreendoorpantry.ie

(Website in construction) for Blog updates, E-news, Reviews, Product Catalogues, Email marketing, YouTube Video?

Yes

No

Please enter your email address

Thank you for completing this survey

WEBSITE SURVEY The Green Door Pantry *Organic Food/Products*

Please take a minute to tell us what you think about our website.

Based on your visit to the Green Door Pantry website, would you recommend us to your family and friends?

Yes ☐

No ☐

Please use the scale below (where 0 is 'not likely' and 10 is 'extremely likely')

Not at all likely
0 1 2 3 4 5 6 7 8 9 10
Extremely likely

How satisfied are you with your experience journey on the Green Door Pantry website?

Not at all satisfied
0 1 2 3 4 5 6 7 8 9 10
Extremely satisfied

Did you complete what you wanted to do today?

Yes ☐

No ☐

If No, Will you try contacting the Green Door Pantry another way?

No ☐
Keep looking on the website ☐
Visit the Shop ☐
Contact the Green Door Pantry by Phone ☐
Social media ☐
Something else ☐

Was our website the first place you visited to complete what you wanted to do?

Yes ☐

No ☐

If No, Please specify

Finally, please could you tell us the reasons for your ratings?

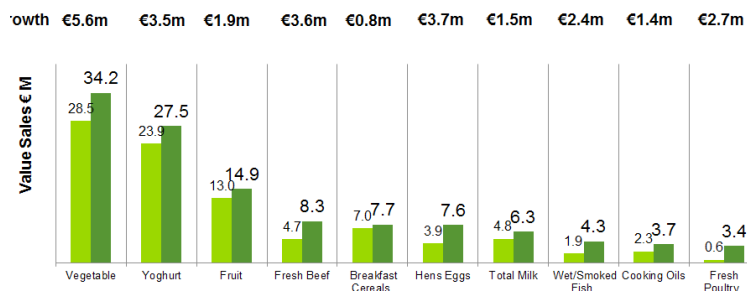
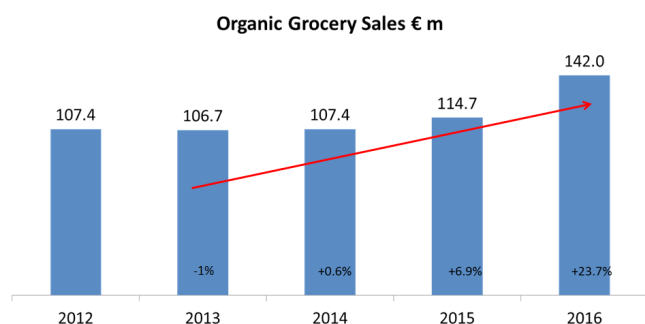
4.3 RESEARCH

Organic grocery in the Irish retail market has experienced strong growth in recent years. “Building on the momentum of 2015 growth (over 6%), new figures in late 2016 show a further year on year increase of 23.7% bringing the total value of organic grocery sales to €142 million. This growth is driven by more shoppers making more trips and picking up more packs on each trip, with pack prices actually down fractionally.

The retail focus on organic products has increased somewhat with organic private label gaining share within the category, though this remains limited when compared to elsewhere in Europe. As of mid-August 2016 SuperValu was the leading retailer for organic in value terms, with Tesco leading in terms of volume and boasting over a million organic shoppers, the highest number for any retailer.” (Bord Bia, 2017)

The Organic Grocery market is in growth +23.7% on LY

Top 10 Organic market categories by latest year actual sales



Vegetables, fruits and yoghurts continue to see most growth in retail, with organic beef and eggs showing solid growth as well. This is a good indication for smaller retail outlets and markets. Despite the increase in organic produce sold, many consumers may experience conflict in buying organic from large supermarket chains. The difference in price between organic and non-organic fruit and vegetables is more than substantial, in the US, “a Consumer Reports analysis found that, on average, the prices on organic foods were 47% higher than on their conventional counterparts. USDA numbers bear out this difference too. The wholesale price of a 25-pound sack of organic carrots in San Francisco in 2013, for example, was more than three times the price of a conventional bag.” (Quartz Media, 2015) This may drive customers to locally grown and organic food markets and pop-up stores, where customers may ask the sellers (often the growers, themselves) about the produce, how it was grown, what if any pesticides were used etc.

From this research alone, the Green Door Pantry’s USPs of high quality, artisanal and organic produce at an affordable price with access to authentic sellers with a personalised approach are very much vindicated. Trust seems to be a key issue which the Green Door Pantry has spent their first year of business, earning, for future market growth.

4.4 PERSONAS



Stephen and Caoimhe

Age:

Stephen, 43

Caoimhe, 38

Family Status:

Married with young children

Interests:

Stephen and Caoimhe are both professionals. They have 2 children aged 7 & 10. They are high earners with a household income of over 80K and as such, are less concerned with cost when compared to other customers. They shop at the market every Saturday morning.

Their reasons for coming to the Market are to find very high quality food for their family. They are looking for upmarket and artisan Irish produce along organic/healthy versions of common foodstuffs.

They are likely to make impulse purchases of products that they see and find interesting, irrespective of whether they need them or not.

Scenario

It is Saturday morning and Caoimhe is checking her personal email. Four emails down she sees the weekly update email from the Green Door Pantry that she loves reading since it always gives her inspiration for some healthy food options. She goes to the website and continues straight to the blog section since she knows from the past that is where she can find interesting recipes that are updated weekly. Within the blog section Caoimhe filters to recipes only and starts reading from the archive. She loves the way the recipes section is laid out and that is why she enjoys using it. She calls Stephen to show him the recipes that she has found for the Saturday dinner that she is preparing for themselves, the kids and Stephen's mother that is visiting over the weekend. They agree that the option would be perfect for a dinner and Stephen takes the note of the recipe and remembers from the last time that staff in the shop are very knowledgeable and there is no need to write down the ingredients. Stephen makes his way to the Green Door Pantry and while browsing through the shop decides to buy more food for Sunday breakfast too.



Sarah

Age: 31

Family Status: Single

Interests:
Fitness

Sarah is 28 and is extremely focused on her health and fitness, she makes a conscious effort to eat healthily in order to achieve her fitness and health goals. She regularly goes to the Gym and Yoga.

Sarah closely examines the contents of food labels before purchasing and is very assured of what food types she likes. She is likely to ask for advice on which product is better when faced with a choice and values the advice she receives. However, she does not ask for recommendations for product types.

Sarah enjoys using Instagram to share her lifestyle and see the lifestyle of like-minded people.



Nicole and James

Age:

Nicole, 27

James, 35

Family Status:

Couple with no children

Interests:

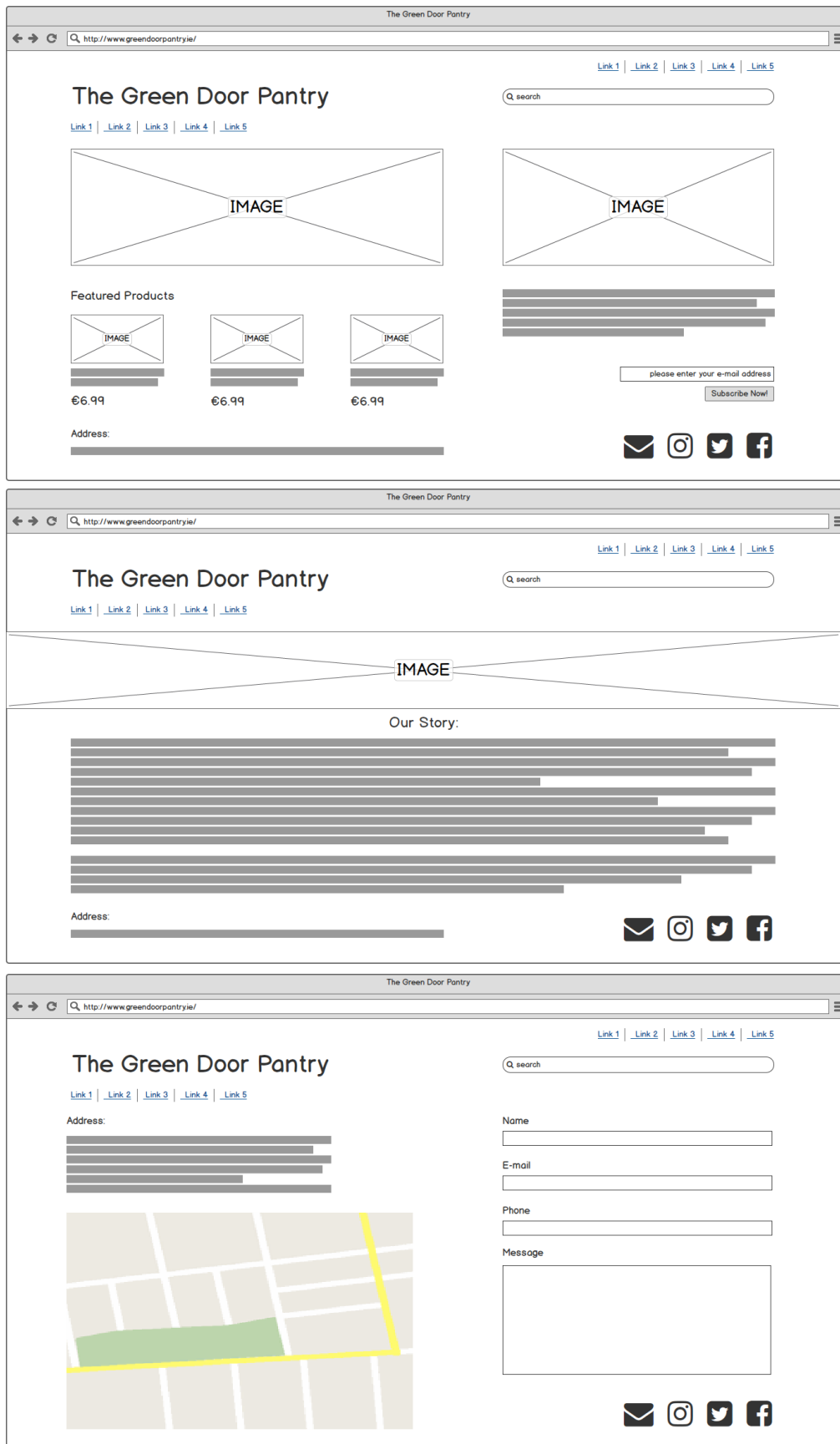
Nicole and James, are young professionals who live in the Dublin 8 area, and work in the Media/Tech fields. They enjoy being at the forefront of urban culture.

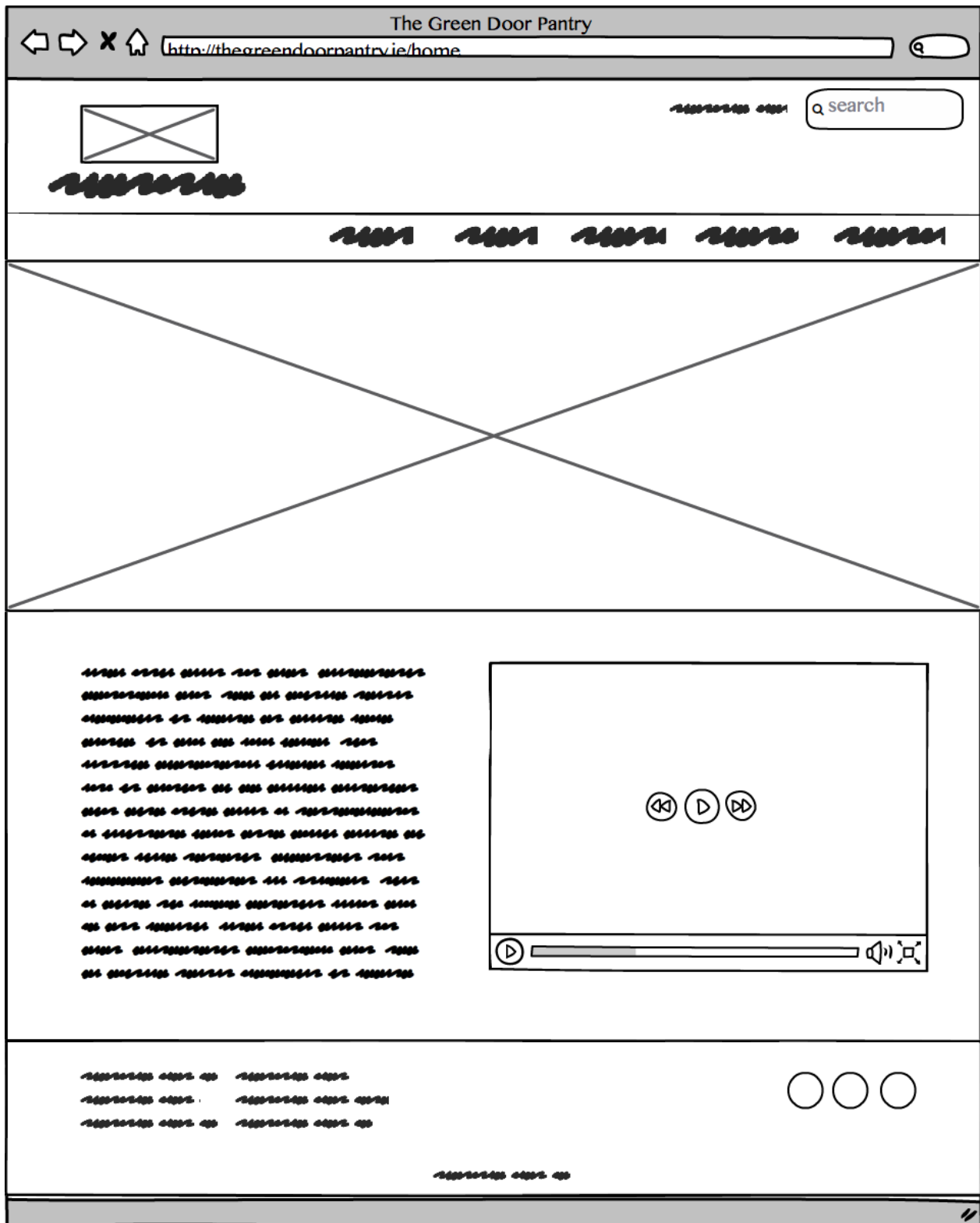
They enjoy the experience of shopping in a market atmosphere rather than a chain. They live locally and tend to shop regularly. They will call in 4 times a week to pick up goods as they need them.

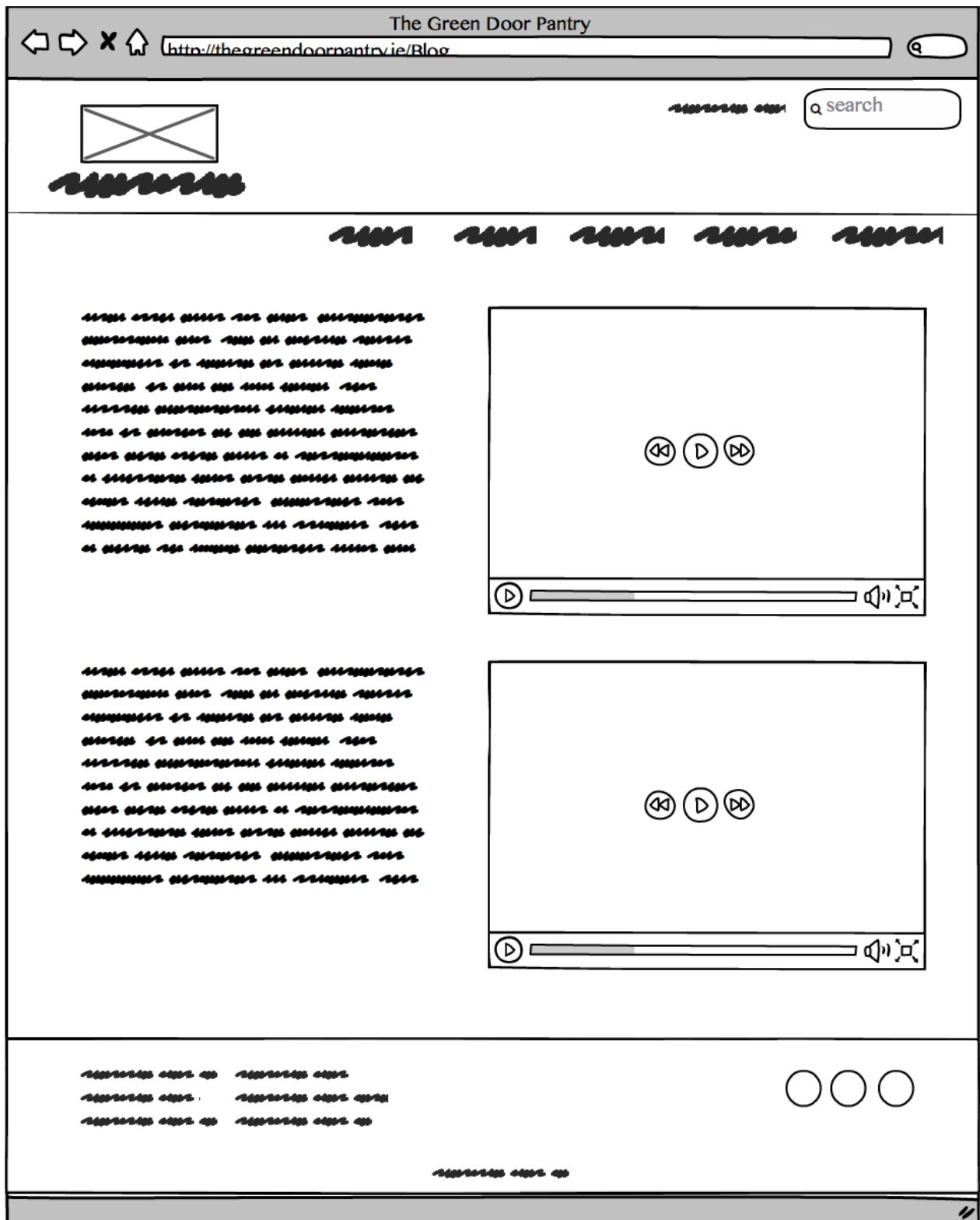
Nicole and James are not price sensitive shoppers. A sense that they are shopping in their community with people they know, and who know them, is more important to them.

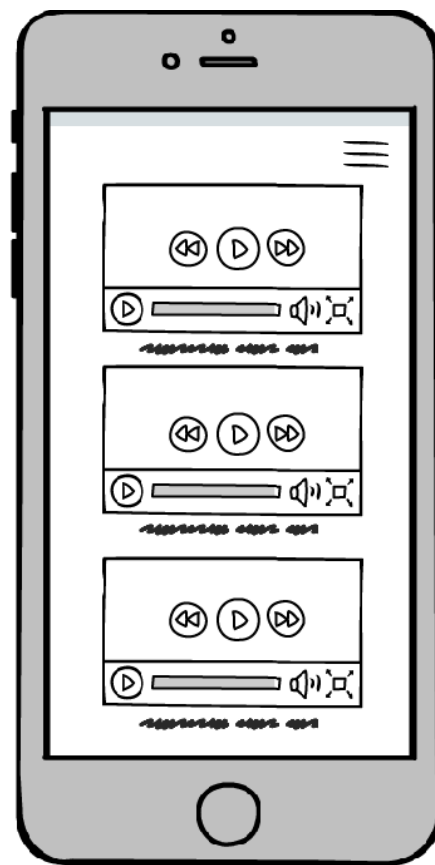
4.5 WIREFRAMES

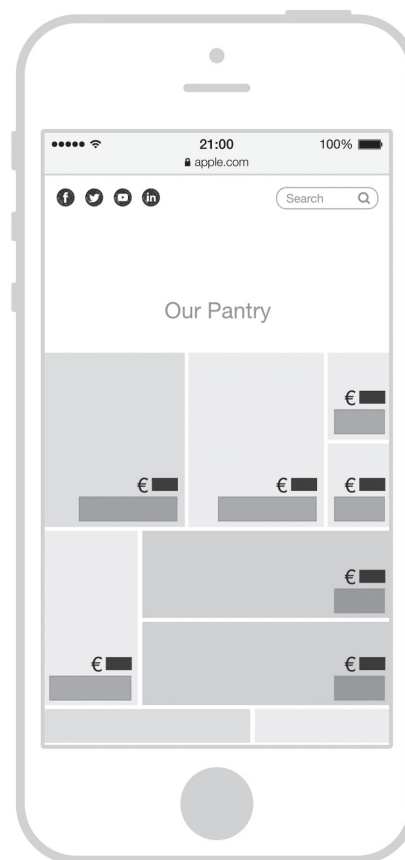
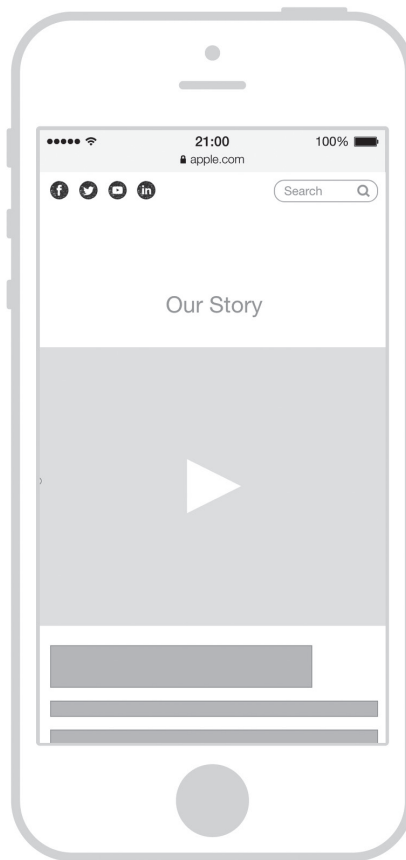
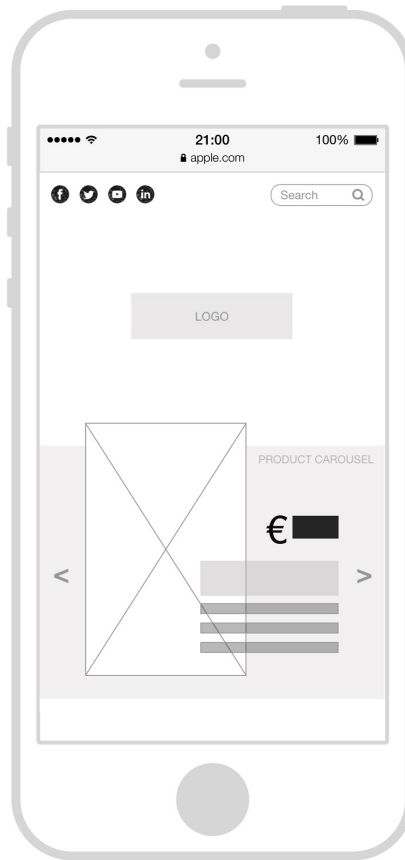
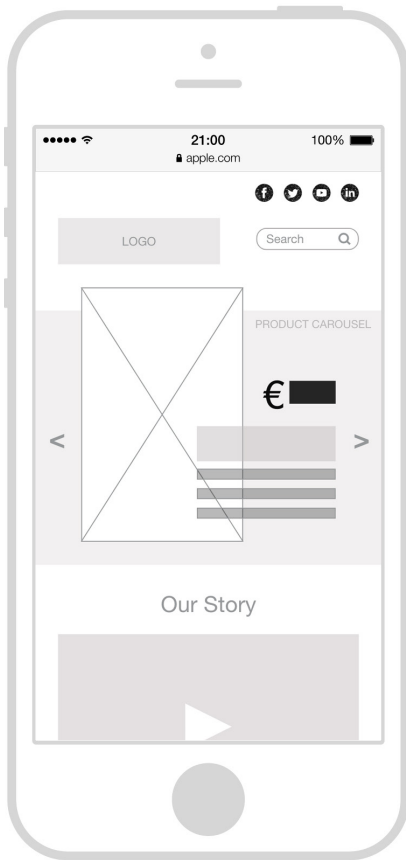
Low Fidelity Wireframes 1



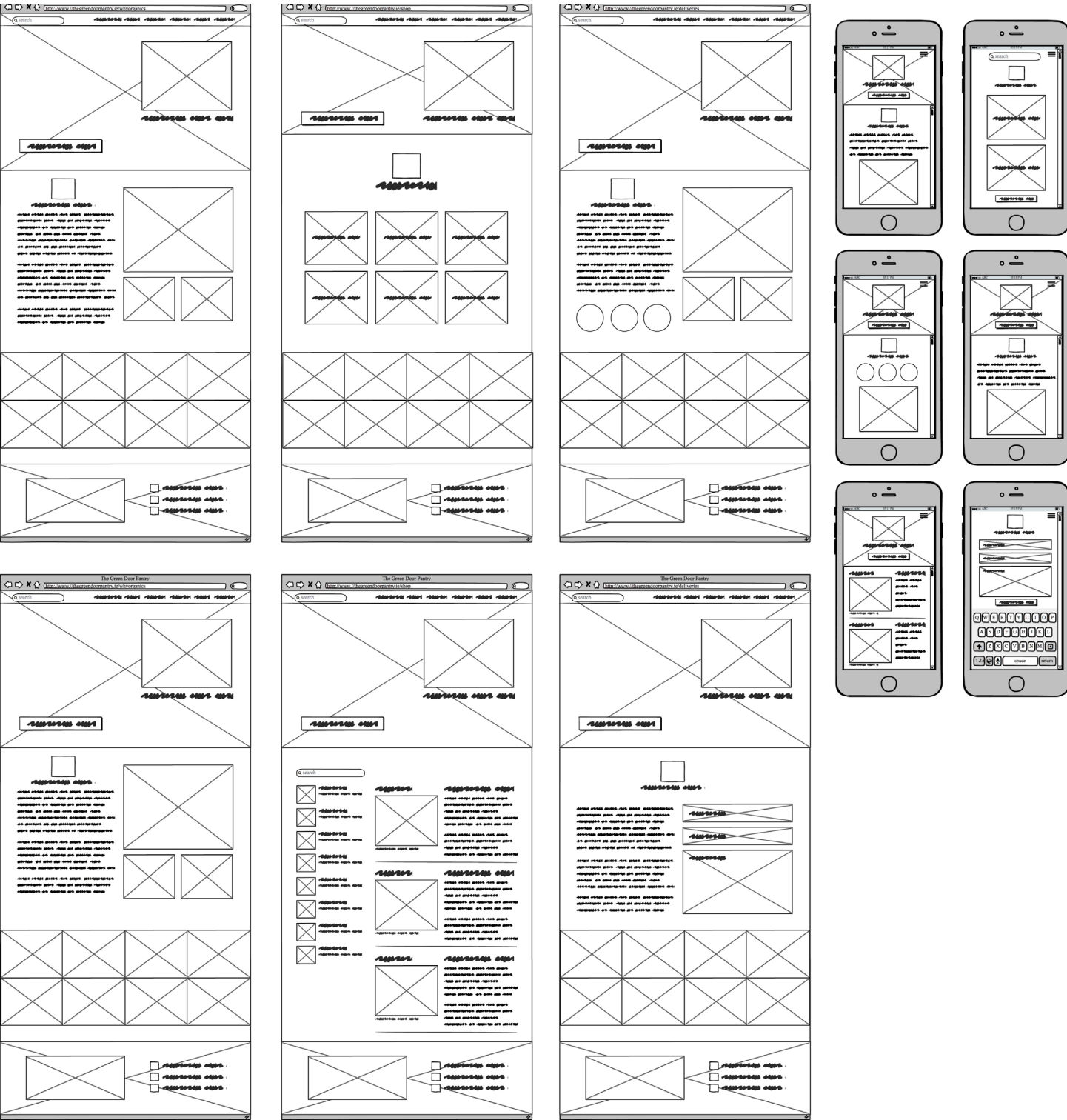




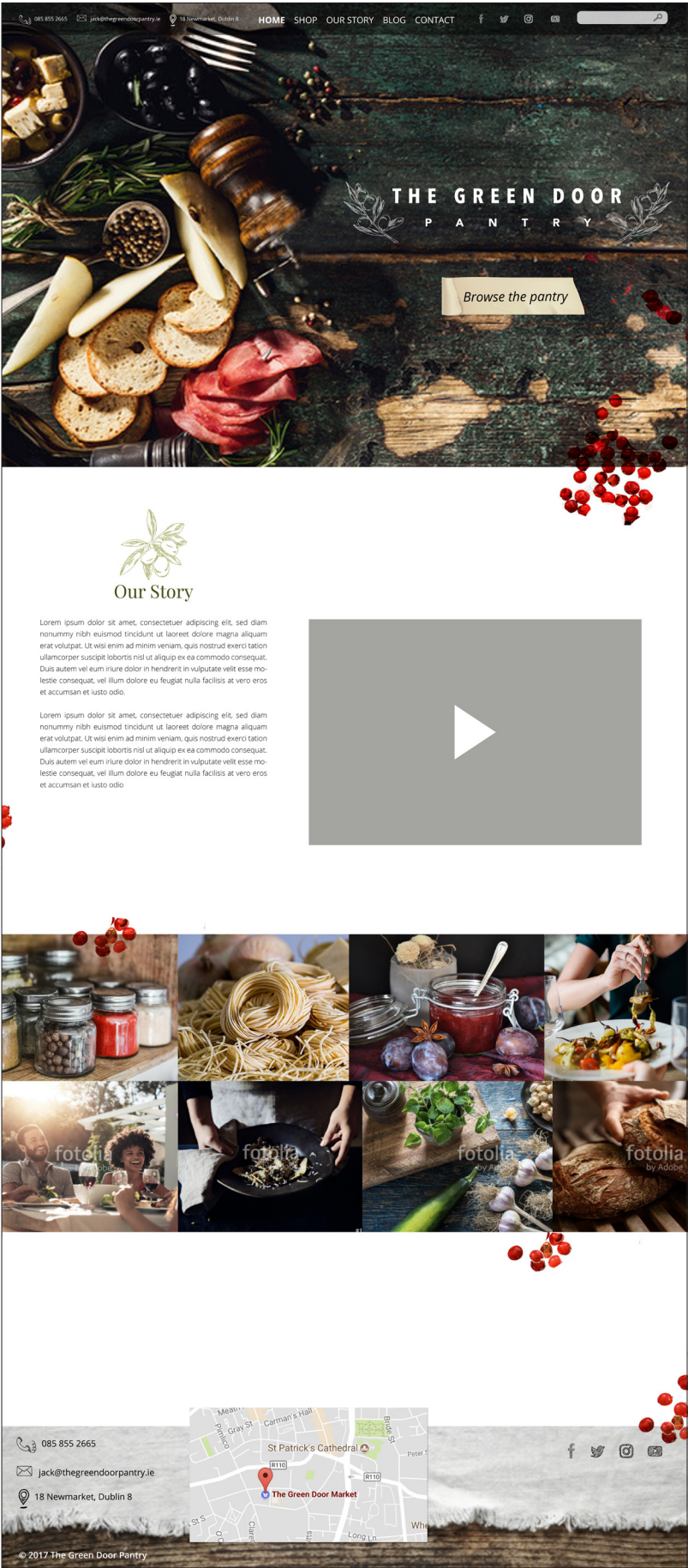




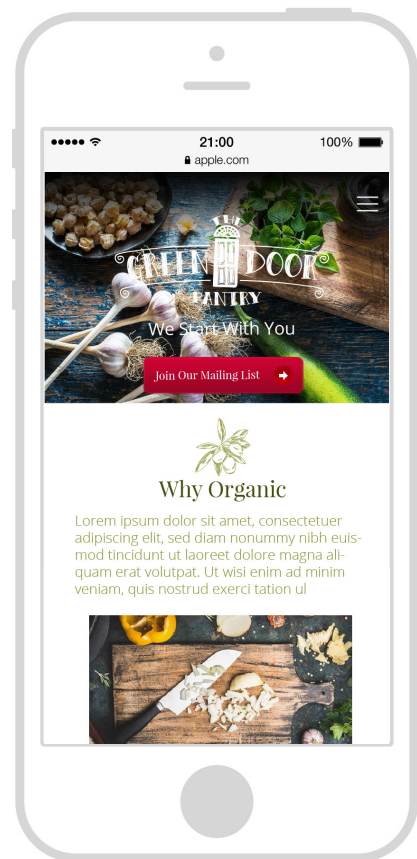
Low Fidelity Wireframes - Final (Mobile and Desktop)



High Fidelity Homepage Mockup



High Fidelity Homepage Mockup - Final (Mobile and Desktop)





5. ASSUMPTIONS, ISSUES AND RISKS

5.1 ASSUMPTIONS

- The website operating system supports the internet browsers
- User can easily access the gallery, blog etc.
- User can easily sign up to the newsletter
- User knows how to browse the website
- User has access to all the content and sections of the website
- User knows what the website is about
- User can access the website via mobile phone or tablet
- User understands the icons and visuals on the website
- User can accomplish specific tasks without instructions or guidelines
- User understands the information on the website
- User knows where the shop is located
- User knows how to access the shopping list
- User has access to his/her list of recent activities
- Easy access to website navigation
- Connection or link to social media platforms from the website is easily accessible by the user
- User can share links
- User finds content readable
- User knows how to contact customer service if he/she has a question or an issue

5.2 ISSUES

- Data protection
- Privacy of information
- The load time on the website may take long
- Server application used to ensure data protection
- User log in details and password may be inaccessible
- Password security
- Website link is unavailable
- Website is unresponsive
- Email address is shared with a third party

5.3 RISKS

- User data may not be used correctly
- Website server dependencies
- User expectations during his visit on the website are not met
- Lack of safety, security and/or reliability
- User data should be managed accordingly to the data protection legislation

5.4 CONSTRAINTS

- Mobile phone, tablet device compatibility
- GPS location
- Android , iOS compatibility
- Screen resolution, screen size, color
- Reduce error pages on the website
- Challenges in creating a responsive website

6.1 OVERVIEW

Devices running **Rider** application requires constant data connection to enable real time data to directional audio prompts. Application will require access to JC Decaux developer API to access bike station data including station position, number of bike stands, payment terminal availability, station state, number of available bikes, number of free bike stands, etc.

<https://developer.jcdecaux.com/#>

Mapping data will be provided by Google mapping API which will afford various options for custom map styling.

<https://developers.google.com/maps/>

Voice interaction is handled by Cloud speech API which has context aware recognition allowing for integration with mapping API.

<https://cloud.google.com/speech/>

Database servers required to store encrypted user data, trip info, preferences, calorie information.

6.2 OUT OF SCOPE

Currently the app is in the English language.

This could be translated into European and international languages in the future.

Local information on the state of cycle lanes, hazard warnings - this could be developed on a shared platform for users.

Accessories:

Rider /DublinBikes mount for your mobile device while cycling.

Partner with safety accessories company to promote helmet with built-in speaker system with wireless connection.

City information (historical sites, places of interest) for CityBike tour with audio.

6.3 OBJECTIVES

Ref	Description	Priority
DO-0001	Provide Bike station data in real time	1
DO-0002	Route mapping to Stations	2
DO-0003	Voice interactions and control	1
DO-0004	Calorie data	3
DO-0005	Permanent log in	2
DO-0006	User history, ie routes travelled, calories consumed	3

DO = Delivery Objectives

6.4 MINIMUM VIABLE PRODUCT

Ref	Description	Priority
MFS-0001	Provide Bike station data in real time	1
MFS -0002	Route mapping to Stations	2
MFS -0003	Voice interactions and control	1

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

6.5 SECURITY AND PRIVACY REQUIREMENTS

All data is stored and encrypted in accordance with industry best practice standards and data protection guidelines. Compliant to all EU Data laws.

6.6 AUDIT REQUIREMENTS

Anonymised user data will be analysed to improve CityBike station parking and bike availability and application prediction algorithms.

Usage statistics broken down by demographic, area, usage times. For advertising and application development.

US English to be the seed language for the user interfaces. It will be possible to localise all strings to a language and a variance of the language. (Written and Voice)

6.7 ACCESSIBILITY REQUIREMENTS

Our app would have limited scope for disabled users. The app functions require that the user is able, ie. DublinBikes does not provide support for disabled users.

Our website will be built using Web Accessibility Standards.

Reference: <https://www.w3.org/WAI/intro/people-use-web/principles>

6.8 REPORT REQUIREMENTS

Reports will be automated at set times/periods, especially during peak times (commuters) and holidays (tourists) to inform and improve the app and also DublinBike and parking stands/stations numbers.

6.9 MONITORING REQUIREMENTS

On going monitoring not required, we will have a contact us section on our application and any correspondence will be actioned within 24 hours



6. SYSTEM REQUIREMENTS

7.1 HIGH LEVEL OVERVIEW

Based on our team's data gathering and resulting requirements gathering and analysis phases, the following describes the unique and identifiable user actions required, providing a high level overview of our app's functional modules:

1. Store and access User Data
2. View real time information on dublinbikes stations
3. View maps for route planning
4. Store Fitness Data
5. Hear voice assistance

7.2 FUNCTIONAL MODULES

Ref	Name	Description
FM-0001	User Module	Login credentials and user data
FM-0002	Bike Station API	Provides current info on DublinBikes stations
FM-0003	Google Mapping API	Mapping, station locations
FM-0004	Fitness module	User fitness data
FM-0005	Voice Assistance API	Provide voice assistance and interaction

7.3 FUNCTIONAL MODULE BREAKDOWN

7.3.1 Login Module - Functionality

Login credentials and user data

A more detailed listing of these requirements is provided below:

Ref	Description	CrossRef.
FR-1.010	Register user, Setting up account	FM-0001
FR-1.020	User Name	FM-0001
FR-1.030	User details for calorie calculation, ie height, weight, sex, age	FM-0001 FM-0004
FR-1.040	Sign In/Sign out	FM-0001
FR-1.050	Store data in database for individual users	FM-0001
FR-1.060	Optional Skip user details process	FM-0001

7.3.1 Login Module - Asset Requirements

Ref	Description	CrossRef.
AR-1.010	App icon/logo artwork	FM-0001
AR-1.020	Sign in/Register Screen artwork including buttons	FM-0001
AR-1.030	Successful Sign in/Register sound, bicycle bell 'ring ring'	FM-0001
AR-1.040	Account Set Up Screen artwork including buttons	FM-0001

7.3.1 Login Module - Complexity

Complexity rating = Low

Login module is given a low complexity rating because it is dependent on straight forward login to **Rider** app database. Once data connection is available and data centre is on line user will be able to use the login module. If data connection is unavailable, the app will still function without login but user data will not be stored.

7.3.2 Bike Station Module - Functionality

Provides current info on DublinBikes stations

A more detailed listing of these requirements is provided below:

Ref	Description	CrossRef.
FR-2.010	Connect to JC Decaux developer API confirm access if not available display error	FM-0002 FM-0003
FR-2.020	Display Static data providing information like station position, number of bike stands, payment terminal availability	FM-0002 FM-0003
FR-2.030	Retrieve up to date dynamic data providing station state, number of available bikes, number of free bike stands	FM-0002 FM-0003
FR-2.040	Link with Mapping module to display station data on google map	FM-0002 FM-0003
FR-2.050	Link with voice module to convert station data to voice notifications	FM-0002 FM-0005



7. REQUIREMENTS DEFINITION

7.3.3 Google Mapping API Module - Functionality

Provides route mapping, displays station locations, current info on dublinbikes stations, distances for calorie calculations. A more detailed listing of these requirements is provided below:

Ref	Description	CrossRef.
FR-3.010	Connect to and retrieve and update data from the following google map APIs: Google Maps Android API Google Maps Javascript API Google Maps Geocoding API Google Maps Directions API Google Places API Web Service If unavailable display error	FM-0003
FR-3.020	Update user location data and display on mapping	FM-0003
FR-3.030	Display station locations and up to date dynamic data from jcdecaux developer api	FM-0003
FR-3.040	Input for trip and directions	FM-0003
FR-3.050	Relay voice guidance	FM-0003
FR-3.060	Link to fitness module providing trip data, eg distance and duration	FM-0003

7.3.3 Google Mapping API Module - Asset Requirements

Ref	Description	CrossRef.
AR-3.010	Google Maps	FM-0003 FM-0002
AR-3.020	Split screen menu overlay (swipeable)	FM-002 FM-003 FM-0004 FM-0005
AR-3.030	Location marker artwork	FM-0002 FM-0003
AR-3.040	Enter destination button artwork	FM-0002 FM-0003
AR-3.050	Destination marker artwork	FM-0002
AR-3.060	Voice assisted directions	FM-0002 FM-0005

7.3.3 Google Mapping API Module - Complexity

Complexity rating = High

Google maps integration and functionality is critical to the successful User Experience, therefore we have given a rating of high to this module.

7.3.4 Fitness Module - Functionality

Provides data on fitness, eg profile, distance, calories

A more detailed listing of these requirements is provided below:

Ref	Description	CrossRef.
FR-4.010	Access Registered user data	FM-0001 FM-0004
FR-4.020	Display user Data - Height, weight and sex	FM-0001 FM-0004
FR-4.030	Allow user to edit their data which was input on account creation	FM-0001 FM-0004
FR-4.040	Access trip data from mapping module and display trip data	FM-0003 FM-0003
FR-4.050	Allow user to edit/delete trip data	FM-0004
FR-5.060	Calculate calorie used based on user data and trip data	FM-0004

7.3.4 Fitness Module - Asset Requirements

Ref	Description	CrossRef.
AR-4.010	Split screen menu overlay (swipeable)	FM-0002 FM-0003 FM-0004 FM-0005
AR-4.020	Personal Fitness Profile Screen artwork (user data)	FM-0004
AR-4.030	Progress artwork (data /infographics)	FM-0004
AR-4.040	Edit/Delete data button	FM-0004

7.3.4 Fitness Module - Complexity

Complexity rating = Low

The calorie calculator functional does not depend on external application programming interface to be usable therefore the complexity rating is considered low for this module.

7.3.5 Voice Assistance API Module - Functionality

Provides voice assisted directions and status updates on bikes and parking.

A more detailed listing of these requirements is provided below:

Ref	Description	CrossRef.
FR-5.010	Connect to and retrieve and update data from the Cloud Speech API if unavailable display error	FM-0005 FM-0002 FM-0003
FR-5.020	Setting menu with Choice of voices (male/female)	FM-0005

7.3.5 Voice Assistance API Module - Asset Requirements

Ref	Description	CrossRef.
AR-5.010	Virtual Assistant for log in	FM-0001 FM-0005
AR-5.020	Voice Assisted directions	FM-0005 FM-0003
AR-5.030	Alert Sounds	FM-0005 FM-0003

7.3.5 Voice Assistance API Module - Complexity

Complexity rating = High

The voice assistance module relies on the Google Maps API for directions and route planning. Real time traffic alerts (via Google Maps API) also inform the user. This heavy dependence on this external API is the reason the voice assistance module is given a high complexity rating. Also, voice assistance is a primary USP for the app, promoting hands free safe cycling.

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8. REFERENCES

9.1 APPENDIX 1: INTERVIEW (DISCOVERY PHASE) *(Please view videos in folder)*

Conaill O'Dwyer

Q1: Introduction: Name, profession and age

Conaill, stylist, 25

Q2: How often do you use DublinBikes?

Not very often.

Q3: What would be the main reason for you to use DublinBikes for?

Well, I used to use it for a college, so I guess it would have been for work.

Q4: While cycling did you ever had a need for additional help with directions? (e.g. Google Maps)

I would in general getting to new places, but not very often.

Q5: Do you use voice assistance on your smart phone? (Siri or similar)

No.

Q6: How useful would be voice assisted app that would guide you through your bike journey?

I suppose it would be pretty useful.

Q7: How useful would you find voice controlled app that would be able instantly to provide you with information about available bikes and bike stands?

I think that would be really good, because that was a problem in the mornings.

Thabi Nkoala

Q1: Introduction: Name, profession and age

Thabi, stylist, 24

Q2: How often do you use DublinBikes?

I would say I use it twice a week.

Q3: What would be the main reason for you to use DublinBikes for?

Probably to get around town, if I get a bus into town. Bus doesn't stop everywhere especially now with Luas works happening. It's handy to have a bus to get around town.

Q4: While cycling did you ever had a need for additional help with directions? (e.g. Google Maps)

Yes, there have been occasions if I was looking for certain things around town and you are not use to driving or cycling around town it would be of benefit to have system like Google Maps.

Q5: Do you use voice assistance on your smart phone? (Siri or similar)

The voice assisted would be better just not to look at your phone, just for safety reasons.

Q6: How useful would be voice assisted app that would guide you through your bike journey?

It would be useful beneficial for people, a lot of tourist I know would like to use dublinbikes. So, it would be useful for them for people who are not familiar with Dublin or their first time visiting.

Q7: How useful would you find voice controlled app that would be able instantly to provide you with information about available

bikes and bike stands?

Something if you are need to know if you are going to certain location area if there is bike station to leave bike or sometimes I don't feel safe leaving the bike locked around somewhere. I'll rather leave it at the bike station and know that there is bike station in the area that I'm going to.

(Did you have an occasion when you arrived at the bike station and there were no spaces left?)

Yes, that happened occasionally, especially rush hour when I used to get bike from my bus stop to my job. During rush hour in the morning and the evening you would have to be cycling around to find spot. So, it would be good to have some to help locate.

(So do you think that the voice controlled option would be beneficial for safety reason, so you could control hands free?)

Yes, that would be beneficial, for sure.

Caroline Murphy

Q1: Introduction: Name, profession and age

Caroline Murphy, teacher, 39

Q2: How often do you use DublinBikes?

I would've used dublinbikes probably once a week

Q3: What would be the main reason for you to use DublinBikes for?

Short Journey, literally if I was late for something actually and I had 10 minutes to spare I would hop on the bike. It would be convenient if there was one available

Q4: While cycling did you ever had a need for additional help with directions? (e.g. Google Maps)

No, I didn't.

Q5: Do you use voice assistance on your smart phone? (Siri or similar)

No, I never used the voice assistant.

Q6: How useful would be voice assisted app that would guide you through your bike journey?

Would have been useful... ah depends! Is there a holder for your phone on the bikes? (if there was) possibly, I know my way around Dublin pretty well.

Q7: How useful would you find voice controlled app that would be able instantly to provide you with information about available bikes and bike stands?



...ally if I had wanted to use one there are not in the area

...d say.

Q3: What would be the main reason for you to use DublinBikes for?

When I did use it, I would work predominately in city centre and I don't drive, so it would be handy to get between places. But generally, now I'm a bit lazier so I use Luas or bus.

Q4: While cycling did you ever had a need for additional help with directions? (e.g. Google Maps)

No, generally I would look up directions before I start cycling. Because I would be fearful of while I'm cycling to be looking at my phone. I wouldn't be able to deal with doing two things at once, I think.

Q5: Do you use voice assistance on your smart phone? (Siri or similar)

Not on a regular basis.

Q6: How useful would be voice assisted app that would guide you through your bike journey?

Yeah, I guess that would negate what I was saying about fearfulness of cycling and looking at Google Maps.

Q7: How useful would you find voice controlled app that would be able instantly to provide you with information about available bikes and bike stands?

I wouldn't necessarily need the voice controlled element of that, but something that would give me... oh well I guess actually if you are on the bike and you need to drop it off somewhere.

Claire Lynch

Q1: Introduction: Name, profession and age



my own bike so I haven't just it much recently.

ionally at weekends to go a bit further than what I would

Q4: While cycling did you ever had a need for additional help with directions? (e.g. Google Maps)

No so much, because I don't know if my trip ever would've been further than... It would've taken not much more than 20-30 minute ride and I would be familiar with centre Dublin, so I haven't needed it myself.

Q5: Do you use voice assistance on your smart phone? (Siri or similar)

No, I haven't apart from Google Maps for navigational purposes.

Q6: How useful would be voice assisted app that would guide you through your bike journey?

Maybe not so much, because I would go distances that I wouldn't know around Dublin.

Q7: How useful would you find voice controlled app that would be able instantly to provide you with information about available bikes and bike stands?

That would probably be more useful to me than directions, because I've often wondered while waiting for a free bike stands how far away one of bike stations with free bike stands might be.

Teodora Sutra

Q1: Introduction: Name, profession and age

Teodora Sutra, model, 26

Q2: How often do you use DublinBikes?

I use dublinbikes three times a week.

Q3: What would be the main reason for you to use DublinBikes for?

Usually to get myself to work, that would be my main reason why I use dublinbikes.

Q4: While cycling did you ever had a need for additional help with directions? (e.g. Google Maps)

No, I never needed additional help with direction, because usually I'm cycling only around city centre and I know it very well.

Q5: Do you use voice assistance on your smart phone? (Siri or similar)

No, I never use voice assistance on my smart phone, usually I turn it off on Google Maps.

Q6: How useful would be voice assisted app that would guide you through your bike journey?

For me wouldn't be very useful to guide me through the bike journey, because I only cycle around city centre. But I guess it would be if I was going somewhere I didn't know.

Q7: How useful would you find voice controlled app that would be able instantly to provide you with information about available bikes and bike stands?

I think it would be amazing to have voice controlled app that would instantly provide me information about available bikes and bike stands. That is the one thing I never, you have to stop to find it on your phone and search and usually they are full. So, I think that would be one thing that dublinbikes should have.

Vincent O'Byrne

Q1: Introduction: Name, profession and age

Vincent O'Byrne, architect, 25

Q2: How often do you use DublinBikes?

At least once a week. I used to use way more often when I lived in Dublin, I use to use it nearly every day.

Q3: What would be the main reason for you to use DublinBikes for?

Getting from the one side of the city to the other. I use to used it for picking up my shopping, basket was really handy.

Q4: While cycling did you ever had a need for additional help with directions? (e.g. Google Maps)

Once or twice. But it's really dangerous, I couldn't really look at the maps and cycle at the same time, I had to pull in.

Q5: Do you use voice assistance on your smart phone? (Siri or similar)

I did use Siri when I had little white headphones, that was really helpful. But I didn't use it very often, only when I was going to place that I wasn't familiar with.

Q6: How useful would be voice assisted app that would guide you through your bike journey?

I would find it very helpful, if there was one. Because you don't have time and it's quite dangerous to keep looking at your phone, obviously.

Q7: How useful would you find voice controlled app that would be able instantly to provide you with information about available bikes and bike stands?

Oh, that would be so handy! And if it provided information whether the stand was full that would be great.

9.2 APPENDIX 2: SURVEY MONKEY FINDINGS

An online survey was created and circulated to over 50 people of varied background, age, fitness level and gender. A brief outline of the concept was described following by 10 multiple choice questions with option to leave feedback comments. We received 19 responses to our questions:

Q1 What is your first reaction to the concept?

Very positive	14
Somewhat positive	3
Neutral	2
Somewhat negative	0
Very negative	0

Q2 How would you rate the quality of the service?

Very positive	3
Somewhat positive	12
Neutral	4
Somewhat negative	0
Very negative	0

Q3 How innovative is the product?

Very positive	2
Somewhat positive	11
Neutral	6
Somewhat negative	0
Very negative	0

Q4 When you think about the product, do you think of it as something you need or don't need?

Definitely need	4
Probably need	7
Neutral	3
Probably don't need	3
Definitely don't need	2

Q9 In your own words, what are the things that you like most about this new product?

real-time proximity updates

2/10/2017 8:36 PM

makes sense, but I have a bike and don't have a smartphone.

2/8/2017 4:53 PM

The availability of Dublin bikes as I know what a pain it is searching each bike stand to try and get to work or go home.

2/8/2017 7:23 AM

I think the biggest frustration I have is arriving at a bike station only to find that there are no stands available, meaning I have to figure out where the next station is and hope that there is one available when I get there. What I like about this product is that it removes the guesswork by telling me where I need to go, saving me precious time and allowing me to plan my journey much more accurately.

2/7/2017 11:48 AM

How multi-functional it is.

2/6/2017 5:04 PM

The fact that it can be used hands free.

2/6/2017 3:19 PM

Hands free with verbal assist great idea

2/6/2017 12:21 PM

voice application

2/6/2017 10:48 AM

I guess customer ease

2/6/2017 10:32 AM

definatel;y needed.

2/6/2017 10:29 AM

It makes the process of finding bikes and spaces very efficient I would also like the idea of calorie counting on the app.

2/6/2017 9:54 AM

Identifying bike location nearest to me, having previous info from past journeys

2/6/2017 9:48 AM

It saves time and makes the whole experience more enjoyable. The app if free.

2/6/2017 9:22 AM

For Cyclists the ability to find a bike park

2/6/2017 7:49 AM

Generally I don't use dublin bikes during peak hours, because of the issues with parking, so this would definitely be helpful

tackling that. It's free.

2/5/2017 4:13 PM

I do not have the app yet, my impression about the app is formed by what I read as introduction to this survey. I like the hands-free safety aspect.
2/5/2017 3:04 PM
The convenience of it
2/5/2017 11:28 AM

Q10 In your own words, what are the things that you would most like to improve in this new product?

I would just be curious how fast it updates as I know Dublin bikes are so busy in the morning that availability constantly changes.
2/8/2017 7:23 AM
accuracy of information
2/6/2017 10:48 AM

Excellent	11
Above average	3
Average	2
Below average	0
Poor	0

Q5 How would you rate the value for money of the product?

Have it as part of another service App. Why not supply it to Google Maps?
2/6/2017 10:29 AM

Q6 If the product were available today, how likely would you be to buy the product?

I would include a payment option for the payment of the bikes and further integrate the app into the local authority payment system.
2/6/2017 9:54 AM
Could be something I'd be more inclined to use abroad with similar bike schemes, as for Dublin I have a good idea already of existing parking spots. It could be something that dublin bikes would be interested in as an add on to their own app, if they have one.
2/5/2017 4:13 PM

Extremely likely	7
Very likely	3
Somewhat likely	3
Not so likely	3
Not likely at all	3

I did not understand if the app provides also a map of cycling roads of Dublin. I would like to see where I can safely cycle.
2/5/2017 3:04 PM

Q7 How likely are you to replace your current product with the product?

Extremely likely	4
Very likely	4
Somewhat likely	3
Not so likely	3
Not likely at all	4

Q8 How likely is it that you would recommend our new product to a friend or colleague?

Detractors (0-6)	3
Passives (7-8)	8
Promoters (9-10)	7
Net promoter score	22
Skipped	1

9.3 APPENDIX 3: COCACOLA ZERO DUBLINBIKES APP ONLINE REVIEWS

Can't use some machines without card Some machines don't allow you to type in your subscription number to collect a bike if you don't have your card. Pretty frustrating if you don't happen to have it on you. Why is the software not the same across all machines?

- Alan Barry

Love the bikes, not the app Too slow. Also, why is it full screen? See 'Dublin Bikes' for an example of how performance such an app should be.

- Graham Sysko

Native app please It stopped working in Android L, menu does not respond to touch, so it's useless.

- Joao Correia

It kind of works but the UX is terrible, it takes too long to load and you need to leave the app open if you want to use the alerts

- José Antonio Martín Baena

Doesn't work without internet This app refuses to start if you have no internet connection. This makes it largely useless for foreign visitors who just need to know where the nearest bike station is. Use one of the other Dublin Bikes apps instead.

- Drew Parsons

Very useful Use the app regularly but lately it keeps telling me that geolocation is switched off when it isn't.

- Rónán Burke

Worst app i've ever experienced, considering it should be an important one. Generally horrible service, but the app just serves to make it worse. If you don't know where the bike station is, and aren't familiar with the app itself, then you will just be wandering aimlessly looking for the station. There is no link to google maps, so you can't get useful directions. The directions it provides you are actually useless. It doesn't display the station number/actual address, so you can't search that in google maps. Takes ages to load and show current location. The "nearest station" never feels helpful.

- Eoin Payne

Doesn't load therefore useless. Even when it used to work it didn't give real time info and it kept telling me to turn on location when it wasn't ever needed, and was very laggy

- Daire Brady

Good and bad points I like the way it displays all the data about a station in one place, but it is very annoying to have it ask to turn location services on every time you start the application! Can it not remember that I don't want this and retain that setting..?

- Cian Crossen

Doesn't work. No connection. No information. Spinning wheel forever. Unofficial app works still. I'll use that.

- John Edward Hills III

Maps not working Maps are not downloading when I zoom out!

- Vitor Galveia

Needs improvement When i add favorite stations they are no saved when i exit the app.The ability to default to favourites page rather than the map would be great and to stop it asking for location services.

- Antoine Hyland

Slow With new UI app working slow. Lots of clicks to get favourites. Location fix slow. App not better then thie bike service.

- Michal Krolkowski

Utterly useless app This app barely works. Cannot access any options in men and very slow to load map. Running on high end phone there should be no problem.

- Barry Kavanagh

Kinda works Nice try on the app but very buggy. Trying to favourite a station is a nightmare. The alerts don't really work either. The real time map view is pretty slick. Overall I think some of the unofficial apps are better. I'm using a HTC one if that helps.

- Conor Conroy

it used to be good app but after latest upgrade it doesn't even open!!! i have uninstalled it and installed it back but it's still the same. soo disappointed....

- Karina Browne

Ok. Very slow to find location you're in. Also if you mark an alarm to notify you of full/empty stations, it buzzes at weird times. Sometimes days later. No refresh option.

- Mr Atomic

Advertisement over useability Maps load so slow, also everytime starts in city centre and i have to scroll to home... Why i cant just login and it would remember my last location??also what a clever marketing person came with idea to change name of app to "coca cola dublin bikes". Now everytime i cant find it in apps on my phone, because looking for "dublin bikes ..."

- Tomasz Zarebski

Gps doesn't work??? For some reason this app wouldn't work with gps turned on. It just keeps asking me to turn it on :S the other Dublin bike app works fine though

- Dom

Update please. Where is the new stations? I have one near to my place and I can't find it on the map.

- Andreia Carvalho

