

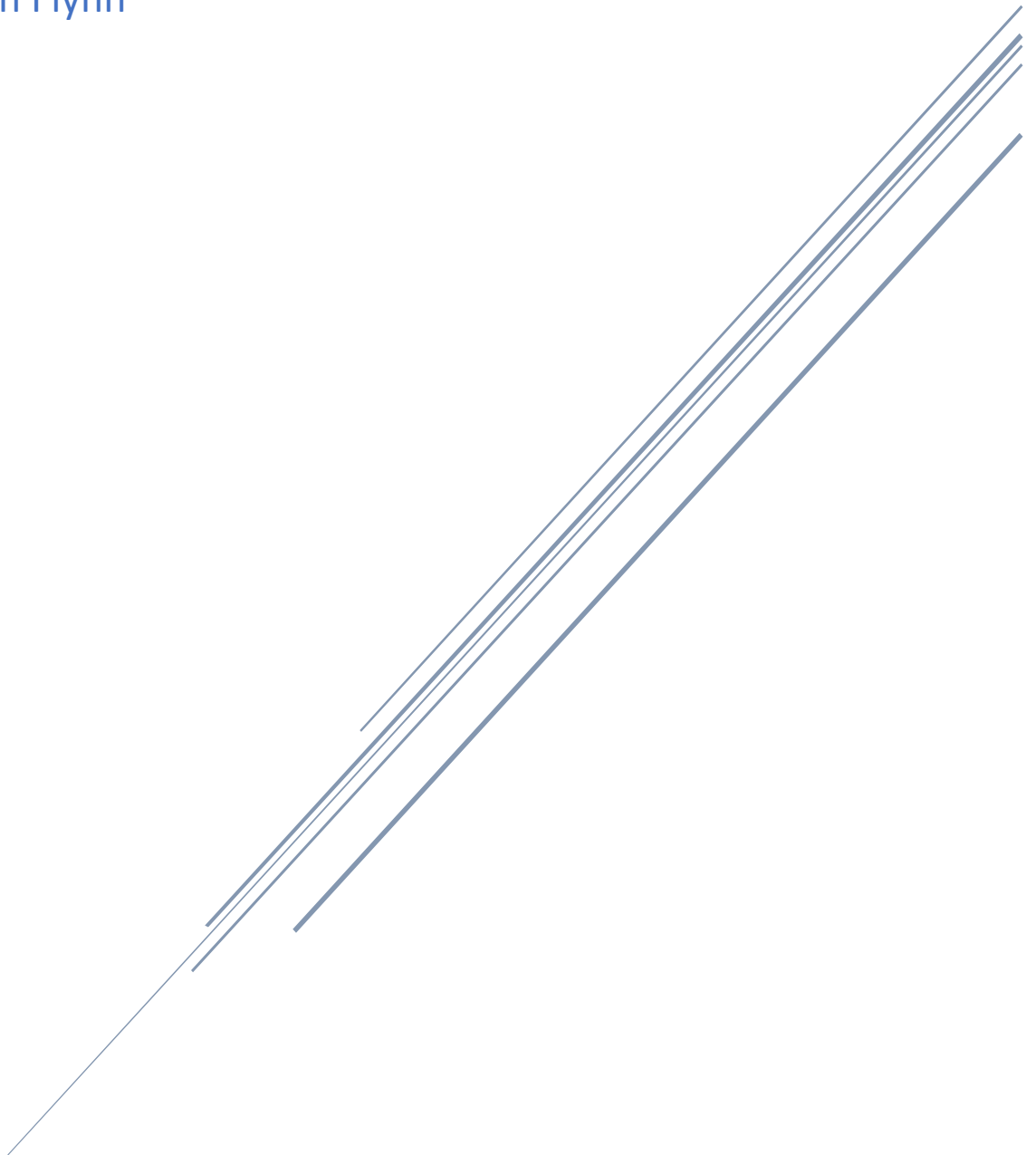


National
College *of*
Ireland

IRELAND'S COST OF LIVING CRISIS INFORMATION SERVICE APP

Siobhán Flynn

X19392146



National College of Ireland
BSHTM4 - Business Analysis

Declaration Cover Sheet for BSHTM4 Project Submission

SECTION 1

Final Project – Ireland’s Cost of Living Crisis Information Service App

Author(s)	Siobhán Flynn
Document Type	Requirement Specification Document
Version	Mid-Point Submission
Supervisor(s)	John Kelly

SECTION 2 Confirmation of Authorship

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I confirm that I have read the College statement on plagiarism (summarized overleaf and printed in full in the Student Handbook) and that the work I have submitted for this assessment is entirely my own work.

Signature: Siobhán Flynn

Date: 14th May 2023

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- The imposition of a fine.
- The requirement that a student to attend additional or other lectures or courses or undertake additional academic work

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1. Executive Summary

The following document is a requirements specification created for an application that holds information regarding the cost of living crisis in Ireland and tips on saving money for Irish Households. This document will detail all of the key requirements needed for the business case and techniques for identifying these requirements. All results will be turned into IEEE specification standards detailing the requirements for developing the application database, front end and back end, to make a system that is helpful, easy to navigate, can handle a high volume of customers and can be updated with new information regularly with minimal disruptions to the app.

2. Business Need

Like the rest of Europe and the world, there is a current cost of living crisis rising in the Republic of Ireland. From research this crisis has been ongoing throughout 2022 and will continue to progressively get worse with inflation and also other factors like the war in Ukraine. Due to this, many households in Ireland are struggling with the rising cost of fuel, heating, electricity, groceries, rent etc... and they are having to make difficult decisions between turning on heating or putting a meal on the table. I have identified a business opportunity to develop an application that provides households with the vital information on how they can cut the costs of bills or how to avail of any supports like grants to help ease this burden. This app could also have information on price increases of fuel for example or if the government is providing support i.e., the €200 given to households for electricity bills etc..., so everyone is aware of any changes happening and can compensate for them.

3. Business Case

From my research I have seen there is a high demand for an application like this for households. As this issue has only come about in the last year there is no central source that holds all of this information in one place. Online there are some news articles about this crisis, but they hold little information on how to help households in the long run apart from basic tips. Having this centralized source would save a lot of time and effort for households with regards to researching ways to ease the burden of rising costs, time that they may not have due to family, employment, children etc...

I have also seen that combining a solution that also keeps households up to date on any price increases/reductions on electricity, gas, fuel would be greatly beneficial. This information can allow customers to prepare for any changes as they will have both the vital information on what is happening with their bills and how they can combat this and keep their costs low.

Lastly, from researching I can see that many households are currently struggling so a free application would be greatly beneficial as customers may not want to pay for an app. By combining ads into the app, it is predicted will cover the costs of running and maintaining the app whilst also providing a vital service for free.

On combining all of these capabilities, this application will be a revolutionary product for the Irish people. It will allow households to plan better for all of their costs and needs and hopefully lessen the strain that this issue has caused. This app will result in a highly marketable product and will receive wide recognition for the vital information it provides.

4. Constraints

4.1. Time

This application and all requirements elicitation techniques will be carried out over the next couple of months, due in May 2023. With full time education, part time employment and personal obligations, there may be some issues with the times and due dates of tasks and there may be some limitations with the project as tasks will have to be prioritized if running behind schedule.

Due Date

All information gathered, list of stakeholders and fully completed requirements elicitation techniques and analysis due May 2023.

4.2. Developers

Developers with experience, knowledge and are trusted are required to carry out the main system development of the app for the front and back end.

4.3. Database Administrator

A database administrator with experience, knowledge is required to maintain the database and update any new information found that is relevant to helping households.

4.4. Users

With the predicted high levels of users for the app, no requirements are not being gathered from a group of stakeholders directly. Instead, the app being built will be a simple design that is easy to navigate so most demographics can avail of the service.

4.5. Research Assistant

A research assistant with an excellent knowledge on research techniques and reporting is required to constantly monitor for any new updates that are relevant to the app and households. It is

important that they know where to find credible information and sources to make sure the information being delivered is true and factual.

5. Stakeholder List

5.1. Users/Customers

Role

The customer/users role is to use the mobile app after it has been developed and avail of the information provided.

Responsibility

The users will have no responsibility for the project, they will have to download the app from an available app store to use the service.

5.2. Database Administrator

Role

The role of the database administrator is to maintain the database of the application and ensure any information in the database is relevant and true. They will likely sourced from outside, as for this application we don't currently have the knowledge to execute this. The database administrator will also update the app with any new information that is found to be relevant and helpful and ensure any outdated information is removed so users do not get confused.

Responsibility

For the success of the project, database administrators are vital part of the team. if there is a failure on their end to deliver it will mean that information on the app will not be updated as it should, meaning customers/users will not be able to avail of the important information they need.

5.3. Application Developers

Role

The application developers role is to create/develop the app for the user/customer to use.

Responsibility

It is vital that the developers deliver an application that meets the standards of the team and customers to ensure everyone has a pleasant experience. The application needs to be easy to navigate and functional so all demographics can use the service.

5.4. Project Manager

Role

The project managers role is to plan and monitor the progress of the project and ensure it is delivered within the time frame provided.

Responsibility

The project manager is an important part of the project as they are responsible for developing the project plan, defining the scope and assigning and managing tasks to the team.

5.5. Marketing Assistant

Role

The role of the marketing assistant is to create a campaign to promote the app to the public and gather feedback on the app so it can be improved further.

Responsibility

The marketing assistant is responsible for the ongoing marketing campaigns, collecting feedback for the app and showing results in charts, tables etc... to better understand our target audience and improve the app service.

5.6. Social Media Assistant

Role

The role of the social media assistant is to over see all social media accounts i.e., Facebook, Instagram, Twitter, and engage/communicate with the public to promote the app.

Responsibility

The social media assistant is an important part to the success of the app as most of the population in Ireland has at least one of the main social media platforms, so it is vital to spread the application on these platforms. They are also responsible for creating social media posts and working with the marketing assistant to report feedback through charts graphs etc... so the app can be improved.

5.7. Research Assistant

Role

The role of the research assistant is to monitor any new changes or information on price increases of bills or for example, if there are new grants or supports for customers, and report them to the administrators to update the application.

Responsibility

The research assistant will be responsible for making sure the information found is credible and true by researching and referencing their work. This ensures that the application is providing helpful information to users.

5.8. Project Supervisor

Role

The role of the project supervisor to act as a communication liaison and provide guidance throughout the project.

Responsibility

The responsibility of the project supervisor is to help and give guidance on planning with deadlines and tasks, helping to organize and prioritize tasks and give constructive feedback and coaching for the project.

6. Technologies Used

6.1. MS Word

MS word is what is known as a 'word-processing program' and it allows a user to create simple documents along with more complex ones. Word also helps with spelling and grammar issues, referencing, layout & templates and much more (Microsoft, 2023).

For the project I will be using MS Word for the documentation of the requirements gathering techniques and other parts of the project.

6.2. MS Excel

MS Excel is a program that allows users to organize and format data in a spreadsheet. By organizing your data in MS Excel, it can make information easier to see and understand. MS Excel allows the user to enter their data into boxes or cells that are laid out in rows and columns (Gillis, 2021).

For this project, I used MS Excel to create a Gantt chart to visualize all of the tasks needed to be completed by the deadline (as seen in the document).

6.3. MS Teams

MS Teams is a program that allows messaging, collaboration and communication between individuals. Meeting can be hosted using the program and files can also be stored and shared using this (Microsoft, 2023).

For this project, I used MS Teams to record my presentation, communicate with other students and associates for support throughout the project and to store files.

6.4. MS PowerPoint

MS PowerPoint is a program used to create slide show presentations. PowerPoint offers different layouts and themes to present and convey the information needed (*Microsoft PowerPoint 2023*).

For this project MS PowerPoint was used to create the presentation for the recording.

6.5. Canva

Canva is used to create designs, video editing, posters, presentation and much more (Canva, 2023).

For this project, Canva was used to create the poster design.

6.6. Lucid Chart

Lucid Chart is a program used to create charts and diagrams. It provides many different templates and designs for inspiration for diagrams (LucidChart, 2023).

For this project, Lucid Chart was used to create the user stories for the Interface Analysis techniques.

6.7. Wireframe.cc

Wireframe.cc is a program that is used to make basic wireframes, similar to Balsamiq. Wireframe.cc also provides many templates and other tools to build the wireframes in a clean and uncomplicated way (Ketterman, 2019).

For this project, Wireframe.cc was used to make the wireframes for the prototype.

6.8. WordPress

WordPress is a CMS or content management system that allows users to build websites and host them online. WordPress has a template system that allows users to get inspiration and customize their webpages to the best fit for their business venture or portfolio (Baker, 2022).

For this project, WordPress was used to create the website required.

6.9. Google Forms

Google Forms is a program that allows you to create different types of forms and documents.

For this project, Google Forms was used to create the survey.

7. Requirement Elicitation

The following section contains the details of the requirement elicitation techniques that I chose to conduct.

7.1. Brainstorming

7.1.1. Overview:

The brainstorming session will be conducted with a groups of stakeholders so ideas and other factors and issues can be discussed and that are associated with the application. Each member participating in the session has been contacted and given a detailed overview of what is expected of them during the session. The brainstorming session will be recorded by the moderator in notes and will document all of the ideas put forward.

7.1.2. Participants:

No Names, Ages etc... so participants privacy is protected

1. Homeowner – Has owned home over 30 years
2. Student Renting in Dublin – Renting 3 years in Dublin for studies
3. Renter in Dublin – Privately Renting home with partner for their family for over 10 years
4. First Time Buyer – Bought first home in Dublin in 2022
5. Renter in Dublin – Renting social & local authority home in Dublin 10+ years.

7.1.3. Guidelines for Session:

- Be online 10 minutes before start of session
- No mobile phones for the duration of the session
- Do not discuss any ideas before the start
- There will be a 15 minute time limit for each participant to express ideas
- Please stay silent while other participants are expressing their ideas
- We will have a 15 minute discussion at the end for discussion of any other ideas
- Participants may be removed from the session if there is any unacceptable behaviour or language

7.1.4. Location of Session

MS Teams – Invitation Link will be sent to participants to access meeting

7.1.5. Date & Time

Saturday 17th December 2021 @ 12pm

7.2. Prototyping

7.2.1. Objective of Prototype:

The main goal in creating a non-functional prototype using both wireframes and other tools is to show a detailed visual representation of the application to the stakeholders and show them how the finished product may look. By using the brainstorming session to create the first draft of the wireframe, it showed that I may have some requirements missing from the application or some requirements that may not have worked. The first wireframe created will be a rough sketch by hand and the second will be using an online tool to create a better visual representation.

The main non-functional prototype I have added was made using WordPress. WordPress allowed me to create both online, web versions of the app and a mobile/tablet version to get a good look of how it might look.

7.2.2. Tools Used:

- For Wireframes – Wireframe.cc
- For Prototype – Wordpress.com

7.3. Survey/Questionnaire

7.3.1. Objectives:

The objective for the survey is to get an insight on how a wider spectrum of the general public would feel about an app like this and what sort of information they would like to see on it. The survey is designed to see what sort of issues households are struggling with the most currently so the advice can be presented in the app. The survey will take information from different age brackets and locations to get a wider spectrum of results to give a better representation of Ireland. This survey will also allow positive relations between stakeholders.

7.3.2. Distribution:

The survey will be distributed to through various different ways in order to get a wide variety of people.

1. Send survey through email to acquaintances and other connections to get an insight on what they would like to see.
2. Another method is to share the survey on social media platforms like Facebook, twitter, Instagram and LinkedIn to reach a bigger audience and get more feedback.
3. Distribute the survey through NCI and asking students to fill out the survey if it is relevant to them.
4. The last Method of distribution is to share it in my current employment and receive feedback as there is a wide demographic that have agreed to participate in the survey.

All responses will be anonymous for the survey so no data is breached of the participant.

7.3.3. Participants:

The participants are as follows:

- Homeowners
- Renters (private & social)
- Individuals struggling with bills
- Students living from home

Between ages of 18-65

7.3.4. Questions:

Q1: What age demographic are you?

- 18 - 24 years old
- 25 – 30 years old
- 31 – 38 years old
- 39 – 45 years old
- 46 – 54 years old
- 55 – 60 years old
- 60 – 65 years old

Q2: What is your working status?

- Employed Full Time
- Employed Part Time
- Student

- Unemployed
- Self Employed
- Other
- Prefer not to say

Q3: What is your Marital Status?

- Single
- Married
- Civil Partnership
- Other
- Prefer not to say

Q4: Are you the highest earner in your house?

- Yes
- No
- Prefer not to say

Q5: What living arrangements do you have?

- Homeowner
- Renting (private)
- Renting (social)
- Living with parents/guardians

Q6: Do you find generally that bills and other household expenses have increased in price?

- Definitely
- Very Probably
- Possibly
- Probably Not
- Definitely Not

Q7: Would you say your household is struggling with bills and other expenses at the moment?

- Definitely
- Very Probably
- Possibly
- Probably Not

- Definitely Not

Q8: on a scale of 1 -5 would this app benefit you in saving money?

- 1
- 2
- 3
- 4
- 5

Q9: How would you rate the process of finding information online about this topic?

- Very Good
- Good
- Acceptable
- Poor
- Very Poor
- Can't find any Information

Q10: Please elaborate on the above question (9).

.....

Q11: How interested would you be in using this app?

- Definitely
- Very Probably
- Possibly
- Probably Not
- Definitely Not

Q12: Would this app be of interest to anyone you know?

- Definitely
- Very Probably
- Possibly
- Probably Not
- Definitely Not

Q13: Would you use this app if it was available now?

- Yes
- No
- Maybe

Q14: What Information would you like to see on the app?

- How to save money on Electricity Bills
- How to save money on Gas Bills
- How to Save money on Groceries
- How to Budget efficiently
- What Grants are currently available for homes
- Tips and changes you can make in your house to cut costs
- Updates on new price increases on bills
- Updates of any new government schemes or payments
- Updates news regarding this topic

Q15: How important do you feel a that an app like this should exist for the average Irish person?

- Very Important
- Important
- Moderately Important
- Of little importance
- Unimportant

Q16: How important do you think a notification system/ Newsletter subscription would be for this app?

- Very Important
- Important
- Moderately Important
- Of little importance
- Unimportant

Q17: Would you be interested in an integration this app and other social medias where updates can be shared?

- Yes
- No
- Maybe

Survey:

Ireland's Cost of Living Crisis Information App

This is an information gathering survey for a potential application that revolves around providing money saving tips for Irish households as the costs of bills and other household necessities have greatly increased in price.

What age demographic are you? *

- 18-24
- 25-30
- 31-38
- 39-45
- 46-54
- 55-60
- 61-66

What is your marital status? *

- Married
 - Single
 - Civil Partnership
 - Other
 - Prefer Not to Say
-

Are you the highest earner in your household? *

- Yes
 - No
 - Prefer Not to Say
-
- Self Employed
 - Student
 - Other
 - Prefer Not to Say

What living arrangements do you have? *

- Homeowner
- Renter (Private)
- Renter (Social)
- Living with parent/guardian
- Other...

Do you find generally that bills and other household expenses have increased in price? *

B *I* U ↻ ✕

- Definitely
- Very Probably
- Possibly
- Probably Not
- Definitely Not

Would you say your household is struggling with bills and other expenses at the moment? *

- Definitely
 - Very Probably
 - Possibly
 - Probably Not
 - Definitely Not
-

On a scale of 1 - 5 would an application with money saving tips help you/your household? *

- 1
- 2
- 3
- 4
- 5

How would you rate the process of finding information online on money saving tips? *

- Very Good
 - Good
 - Acceptable
 - Poor
 - Very Poor
 - Can't find any information
-

How interested would you be in using this app? *

- Definitely
 - Very Probably
 - Possibility
 - Probably Not
 - Definitely Not
-

Would this app be of interest to anyone you know? *

- Yes
- No
- Maybe

Would you use this app if it was available now?

- Yes
- No
- Maybe

What Information would you like to see on the app? *

- How to save money on electric bills
- How to save money on Gas bills
- How to save money on groceries
- How to budget efficiently
- What grants are available for homes
- Tips and changes you can make to your house to cut costs
- Updates on new price increases on bills
- Updates of any new government schemes and payments
- News updates regarding rising costs

How important do you feel that an app like this should exist for the average Irish person/household? *

- Very Important
- Important
- Moderately Important
- Of Little Importance
- Unimportant

How important do you think a notification system/newsletter subscription would be for this app? *

- Very Important
- Important
- Moderately Important
- Of little importance
- Unimportant

Would you be interested in an integration of this app with other social media platforms where updates can be shared? *

- Yes
- No
- Maybe

7.4. Interviews

7.4.1. Interview 1

Participant:

A Homeowner that is self employed, Age 55-60

Date & Time:

February 15th 2023 14:00 – 14:15

Location:

MS Teams

Overview/Objective of the Interview:

The aim of this interview with the homeowner is to gather an insight into their financial status and how they spend their income. The purpose of interviewing the homeowner is to see how their spending and income differs from people in other living situations i.e., renting. I will be explaining the app concept to the interviewee along with the benefits then proceed with interview questions.

Interview Questions:

1. What do you think about the concept of the app?
2. In your opinion, can you see how this app can benefit the Irish people?
3. In your opinion, do you find the prices of bills and other essentials have increased recently?
4. Do you find yourself challenged or struggling at times with the cost of daily necessities?
5. How do you budget/control your spending?
6. What benefits could this app provide you?
7. Would you recommend this app to anyone you know?
8. In your opinion, do you think a notification system/news letter would benefit this app?
9. In your opinion, would a social media intergration feature work for this app so users can see if any new information is posted through a social media platform?

7.4.2. Interview 2

Participant:

A renter working full time, Age 39-45

Date & Time:

February 15th 2023 18:00 -18:15

Location:

MS Teams

Overview/Objective of the Interview:

The aim of this interview with the renting participant is again to gather an insight into their financial status and how they spend their income. The purpose of interviewing the renter is to see how their spending and income differs from people in other living situations i.e. homeowner. I will be explaining the app concept to the interviewee along with the benefits then proceed with interview questions.

Interview Questions:

1. What do you think about the concept of the app?
2. In your opinion, can you see how this app can benefit the Irish people?
3. In your opinion, do you find the prices of bills and other essentials have increased recently?
4. Do you find yourself challenged or struggling at times with the cost of daily necessities?
5. How do you budget/control your spending?
6. What benefits could this app provide you?
7. Would you recommend this app to anyone you know?
8. In your opinion, do you think a notification system/news letter would benefit this app?
9. In your opinion, would a social media intergration feature work for this app so users can see if any new information is posted through a social media platform?

7.4.3. Interview 3

Participant:

A student not living at home (student accommodation in Dublin) and working part time, Age 18-24

Date & Time:

February 16th 2023 12:00-12:15

Location:

MS Teams

Overview/Objective of the Interview:

The aim of this interview with the Student participant with the part time job is again to gather an insight into their financial status and how they spend their income. The purpose of interviewing the student is to see how their spending and income differs from people in other living situations i.e. Renter/homeowner with full time job. I will be explaining the app concept to the interviewee along with the benefits then proceed with interview questions.

Interview Questions:

1. What do you think about the concept of the app?
2. In your opinion, can you see how this app can benefit the Irish people?
3. In your opinion, do you find the prices of bills and other essentials have increased recently?
4. Do you find yourself challenged or struggling at times with the cost of daily necessities?
5. How do you budget/control your spending?
6. What benefits could this app provide you?
7. Would you recommend this app to anyone you know?
8. In your opinion, do you think a notification system/news letter would benefit this app?
9. In your opinion, would a social media intergration feature work for this app so users can see if any new information is posted through a social media platform?

7.4.4. Interview 4

Participant:

Developer

Date & Time:

February 16th 2023 17:30-17:45

Location:

MS Teams

Overview/Objective of the Interview:

The aim of the interview with the developer participant is to gather an insight on what is needed for developing the app from a developers point of view. The purpose for this interview with the developer is to help to identify what tools are needed and issues that could arise when making the application and how they can be avoided. I will be explaining the app concept to the interviewee along with the benefits then proceed with interview questions.

Interview Questions:

1. In your opinion, do you think this application and concept is worth developing?
2. In your opinion, what is the best way to store any sensitive information that may be needed for the app?
3. In your opinion, how long would an application like this take to develop?
4. In your opinion, how much would an application like this cost to develop?
5. Do you yourself have any experience with similar applications to this one, if so please elaborate?
6. What is your advice going forward with this application?

7.5. Interface Analysis

The interface analysis technique will be used to show how the user will interact with the application. For this particular application, the technique will be done using use case diagrams. As currently there are no similar existing applications like Ireland's Cost of Living Crisis App, I will be developing the use cases with the requirements that are needed in the development of the app. By looking at and outlining the requirements early, it will show any potential risks that may occur. This technique will be done by using use cases and also incorporating the wireframes of the app.

7.6. MoSCoW Analysis

The MoSCoW Analysis technique will be used to help to prioritize the requirements identified. It is used to help the stakeholders understand the common acceptance criteria for the project. MoSCoW prioritizes tasks/requirements in a format of:

- Must Have
- Should Have
- Could Have
- Would Have

This analysis can also cause conflict between stakeholders due to different views, priorities and perspective. For the development of this particular app, the owner has the final say for the order and priority of the requirements/tasks, so it is important to meet regularly with stakeholders and work together to ensure all requirements are satisfactory with the order.

7.7. Risks Identified

For every project there are many risks that could potentially happen which is why identifying risks and other issue is vital in the development of an app to ensure it all runs smoothly.

Here are some of the risks identified as part of this project:

- Requirements Gathering Risks – The risk of requirements gathering with stakeholders not happening at the time outlined. This can lead to push backs and the project not being completed within the deadline.
- Scope Creep – The risk that the stakeholder's expectations and requirements can venture from the original scope of the project making it bigger, more time consuming and over budget.

8. Results of Requirements Gathering

8.1. Brainstorming

Overall, the brainstorm that was conducted was greatly beneficial in gathering requirements for this service. The requirements gathered were from people of different backgrounds and situations within Dublin. These participants were able so shed some light on their individual struggles and what tips they would like to see in the application. As this was an open and judgement free session, participants felt they could openly express their ideas and really took on board other's ideas and built on them.

During the brainstorm I had two main phases, first the actual brainstorm that gave all participants the opportunity to speak on what ideas they liked/disliked for the app. And part 2 involved them individually speaking about what parts of the service they thought was good/bad.

8.1.1. Participant 1:

This first participant provided a list of pros and cons of the app, and a list of items he feels would greatly benefit the application.

Pros:

- Good app idea and would definitely help in saving money.
- Gives people information on any bills going up which they might not know about.
- The app gives the list of government grants and how to access them which is an excellent feature and will give people the opportunity to see if they qualify and give them the access to get them.

Cons:

- Although the information is very good for cutting costs with bills, it would be good to include some other information like saving money on groceries and in other areas.
- No budgeting tips feature - would be very good as many people don't know how to budget properly.
- The information page is a bit cluttered.

Recommendations:

- Spread the app out more and don't just use 2 pages.
- Include contact information on the app.

8.1.2. Participant 2

The second participant – student renting in Dublin, provided likes and dislikes again with some recommendations.

Pros:

- Good idea for an app and easily available.
- As rent and bills are the biggest expense currently, it would definitely be utilized to save money by them.
- Homepage looks like 1 page with no scrolling and looks clear.

Cons

- There should be a bit more information on the home page than just 2 posts as shown to give people a better idea of what this is about.
- Again, more tips on groceries and budgeting would be great as they are two big problems as well.

Recommendations:

- Maybe add a support contact page so people can get more details if they are not provided.
- Only 2 main sections/pages on the app, should be bigger.

8.1.3. Participant 3

Private Renter in Dublin provided their pros and cons for the application

Pros:

- App provides good insight into the state of the country and economy and how to combat this
- A one stop shop for all information regarding the cost of living.

Cons:

- No search bar to search for articles so you don't have to go looking in the app.
- No FAQ page for important questions.

Recommendations:

- FAQ Page would be very helpful for people stumbling on the app to give them a clear idea of what it is about.

8.1.4. Participant 4

Participant 4 – First time byer with mortgage – Detailed list of pros and cons.

Pros:

- With buying a home for the first time it is greatly beneficial to have these tips and other tips not known about.
- No personal details are needed to use the app.
- It is a free app which is very good as some people may not be able to afford to buy an app.

Cons:

- There is no sign up or subscription feature to alert users of any new information added to the app.
- Again there should be more tips and information than just having tips on saving on bills for example groceries TV subscriptions and tips on how to save money and budget.

Recommendations:

- Implement a subscription or sign-up feature that alerts users if there is a new article up or any new information on the app
- A budgeting guide should be implemented on the app for users to follow and improve their budgeting skills.

8.1.5. Participant 5

Renter in Dublin – Renting social & local authority home – pros and cons list:

Pros:

- Clear and concise home page
- Functional pages that are all different
- Pages are not cluttered and easy to read

Cons:

- Does not seem to be any contact information provided to contact the creators of the app
- Again no search feature which would save a lot of time when looking through the app for a particular piece of information
- Although the apps pages are not cluttered the design of the app is a bit unattractive and needs to be reworked.

Recommendations:

- Add the contact information and address of where the app is from into the pages so people can contact us
- Create a better layout of all the pages to make it more appealing.

8.1.6. Results from the Brainstorm:

The completion of the brainstorm resulted in identifying new features that would be valuable in the app. from the actual brainstorm as seen above, the requirements that have been gathered from this session are as follows:

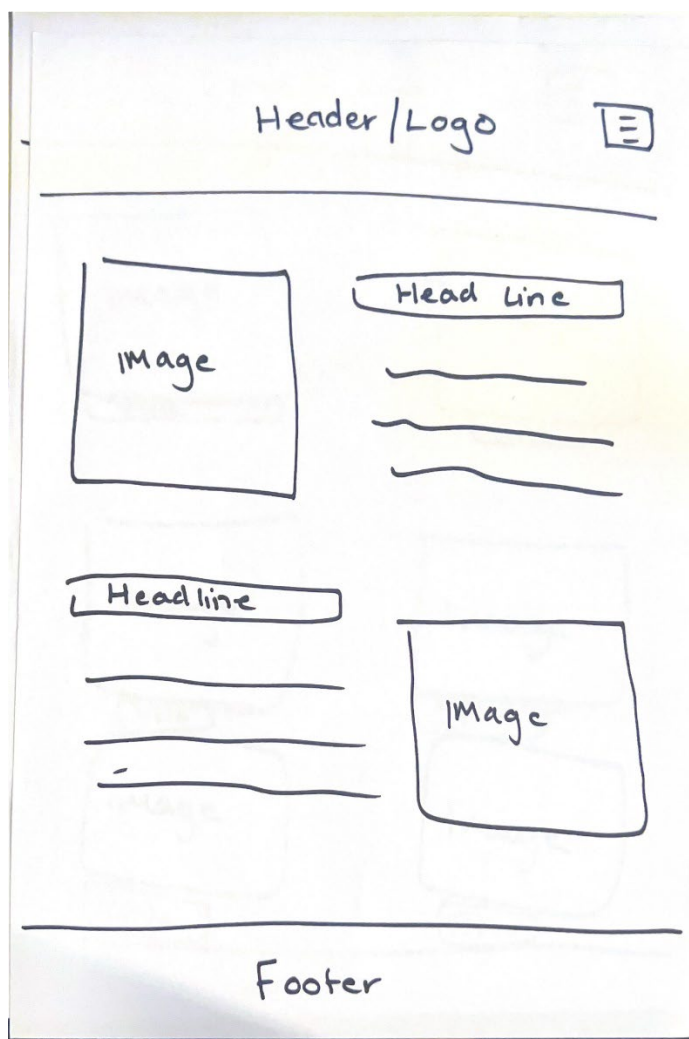
- A new layout of the app
- A sign up or subscription feature is to be added to the app to notify of any new information that is posted
- Contact information is to be added onto the app for customers to contact with any issues
- The app has more than two pages
- The app should be appealing to the eye

- The app should be easy to navigate
- the app should have a search bar
- The app should have an FAQ page
- The article page needs a less cluttered layout
- The home page should have more information.

8.2. Prototyping

8.2.1. Wireframe Draft 1:

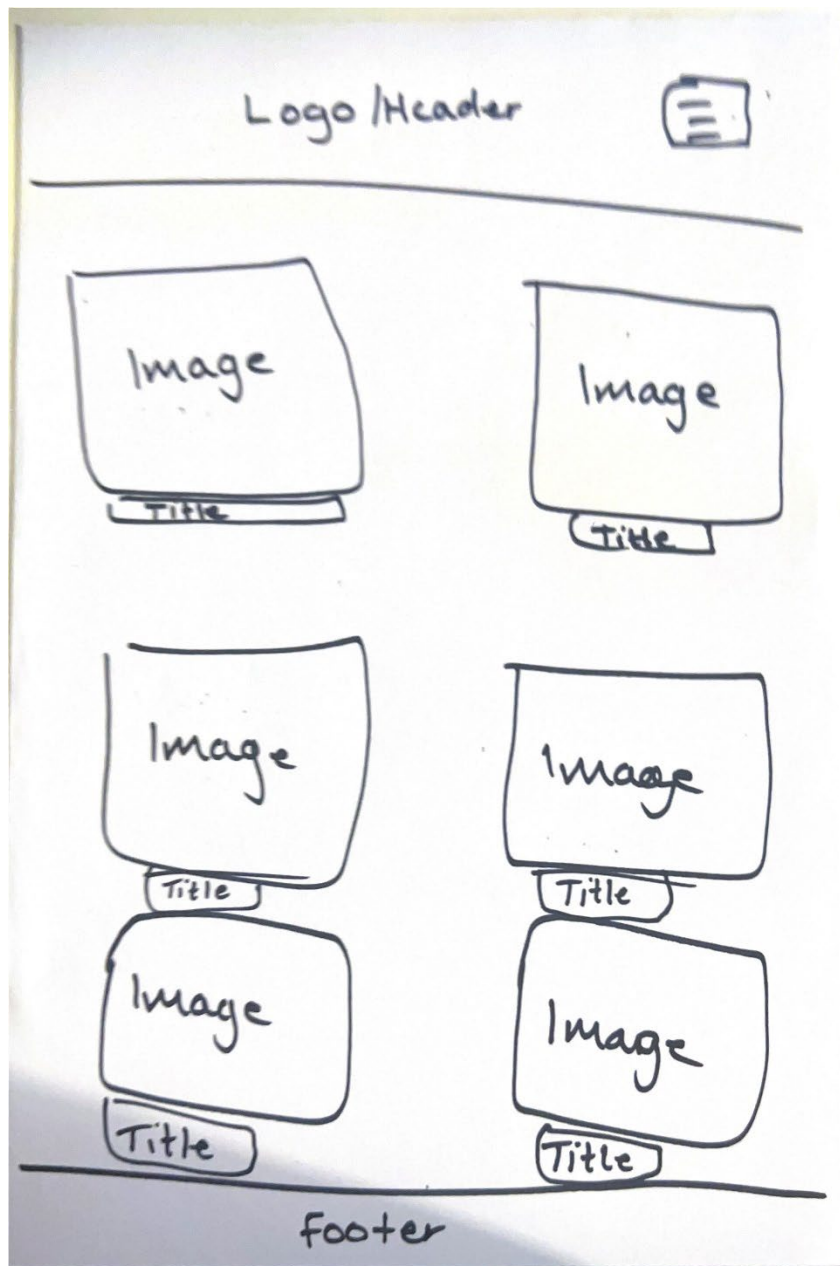
Homepage:



For the homepage, I have designed it to have the logo/header at the top with a navigation pull down bar.

I have added the most recent updates onto the home screen for users to immediately click onto when they first access the page.

I have added a Footer at the bottom of the page that will hold any important links and information that users may need to access.



For the Article Page, I have designed it to have the logo/header at the top with the navigation pull down bar again.

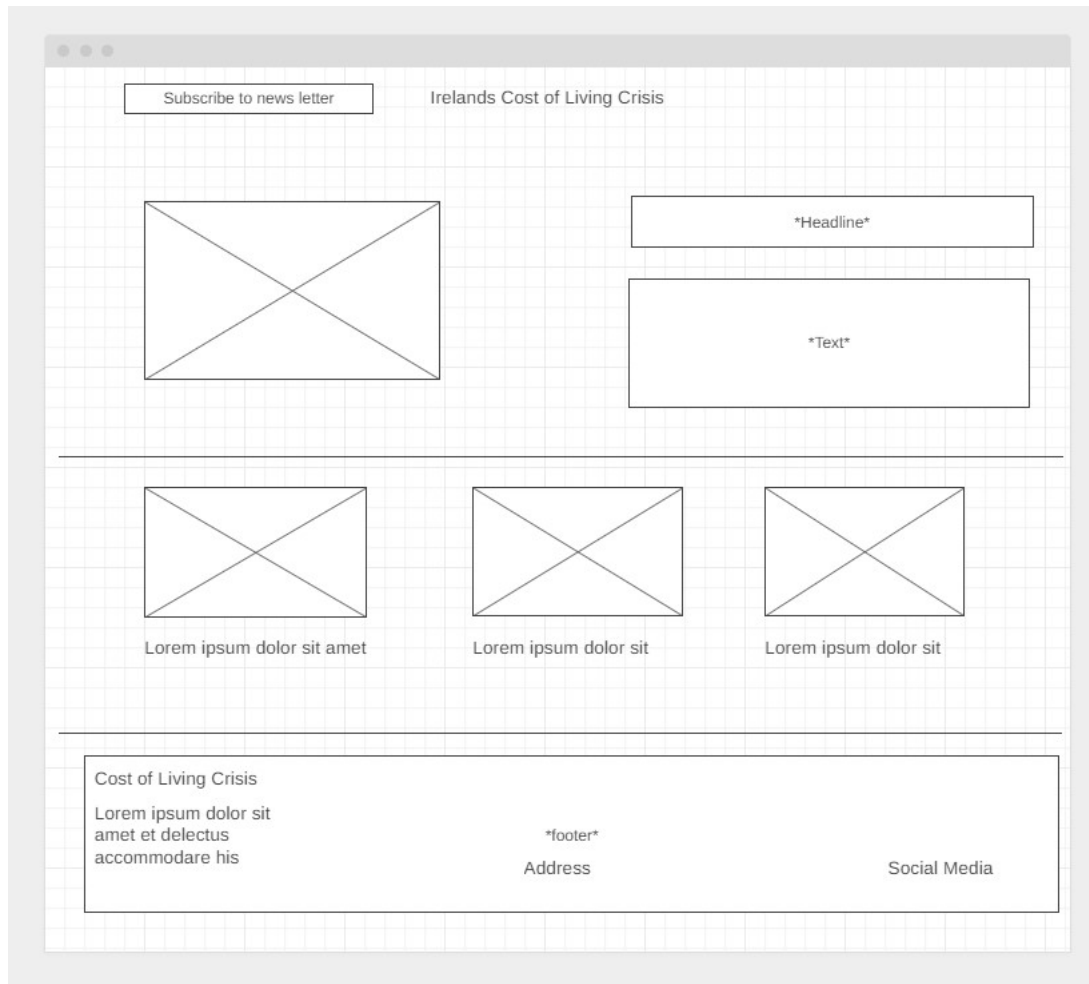
I have laid out the articles in two columns on the page with images and titles so users can select which one they would like to read.

The Footer will again be at the bottom of the page that will hold any important links and information that users may need to access.

8.2.2. Wireframe Draft 2:

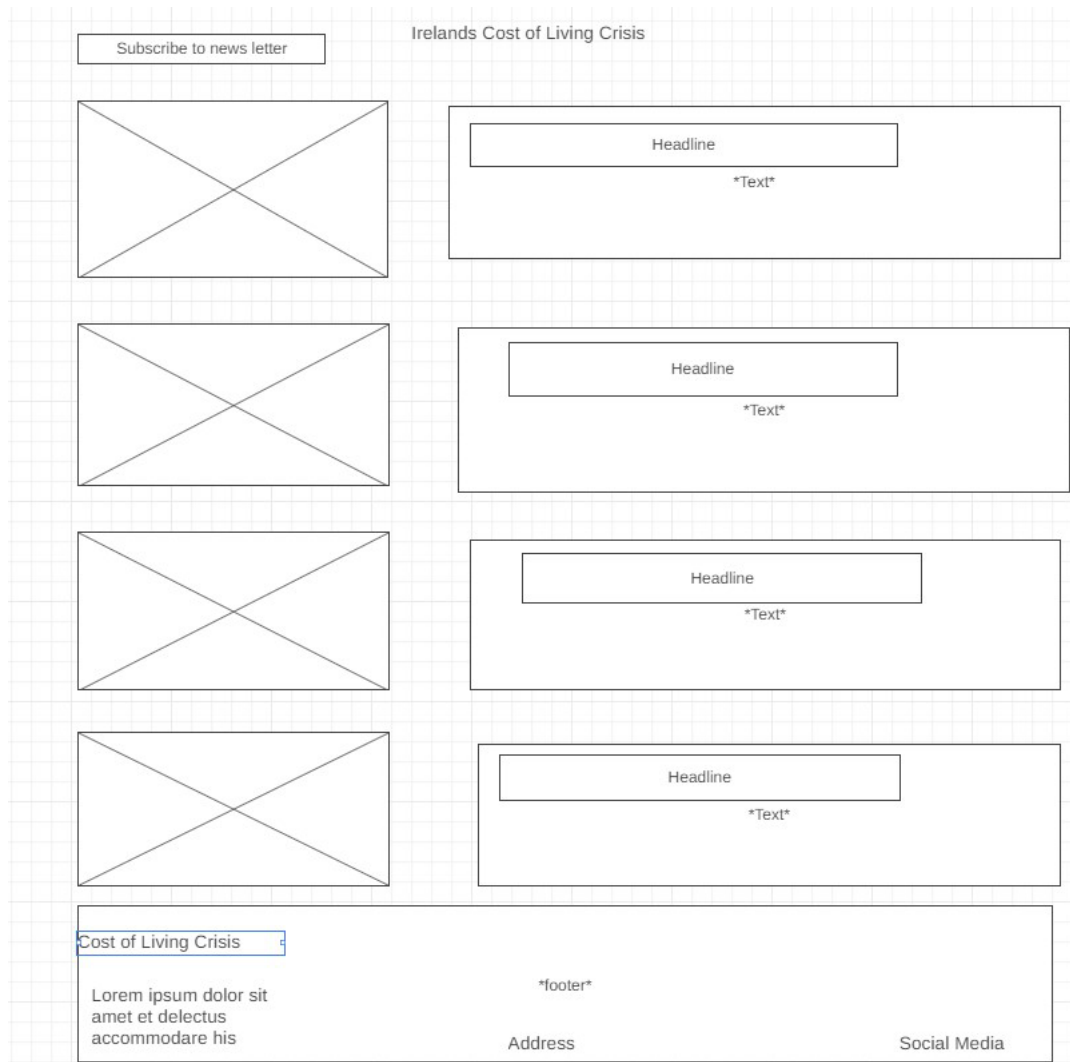
This wireframe draft includes any recommendations/ideas generated from the brainstorm.

Homepage:



- The logo/header will still remain at the top of the page
- A new subscription option box has been added as per idea generated in brainstorm.
- Newest/Most popular Information on main page.
- Have decided to include more articles on homepage to give users a good idea of what the website is about and what is included.
- Footer at bottom with social media links, Address and contact info.

Information/Article Page:



- Articles listed with relevant pictures
- The 2 column idea seemed too cluttered according to the brainstorming participants so a listed layout that clearly shows each article with a description has been adopted.
- Articles are laid out clearly and separate to distinguish between them.
- Header at the top of page with subscription options again
- Footer at bottom with social media links, Address and contact info.

***New* Subscription to Newsletter/Update Page:**

Subscribe to news letter

Irelands Cost of Living Crisis

Name

Text box

Email

Text Box

Ts&Cs

Subscribe for updates

Cost of Living Crisis

footer

Lorem ipsum dolor sit
amet et delectus
accommodare his

Address

Social Media

- Header included at the top of page
- Footer at bottom with social media links, Address and contact info.
- A new page to sign up and receive updates if there is any new information posted was generated in the brainstorming session.
- Comment box for user to enter their name and email – no further information required from customers
- Terms and conditions clearly available to view and accept.

***New* FAQ Page**

Subscribe to news letter

Irelands Cost of Living Crisis

question

Lorem ipsum dolor sit amet et

question

Lorem ipsum dolor sit amet et

question

Lorem ipsum dolor sit amet et

question

Lorem ipsum dolor sit amet et

Cost of Living Crisis

footer

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accommodare his

Address

Social Media

- Header and subscription box included at top of the page
- Footer at bottom with social media links, Address and contact info.
- An FAQ page was once again suggested in the brainstorming session so users would have a clear idea of what the information and app is about.
- Questions provided in boxes with answers underneath to clearly distinguish between them

8.2.3. Prototype

This prototype is a more detailed depiction of the wireframes above showing how the service will look.

Homepage:

Read more of this content when you subscribe today.

Subscribe



Changes You Can Make to Save Money This Winter

Read here About these Money Saving Tips to Keep the Costs Down this Winter



GOVERNMENT GRANTS

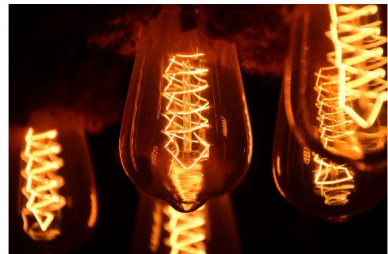
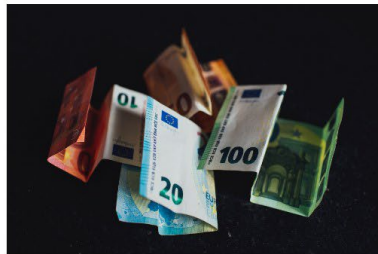
Read Here About Government Grants to Update Your Home and Make It More Energy Efficient

SMALL CHANGES YOU CAN MAKE

Read Here About Small Changes You Can Make to Lower the Cost of Your Bills by up to 30%

DAY AND NIGHT ELECTRICITY RATES

Read Here About the Day and Night Electricity Rates and How You can Benefit From Them.



More Articles You Can Read

How Changing Your Regular Light Bulbs to LEDs Can Save You Up to 11% on Lighting Costs

Read here about all the benefits of LEDs and where to get them for a bargain! This cheap and quick solution can save your house lots of money in the long run.



How Running your Washing Machine and Dishwasher at Night Benefits Your Pocket

Read here about how saving your dirty clothes and dishes for night time between 10pm and 5am and save you over 20% on your washing costs!



Subscription Page:

Subscribe Here

Subscribe Now

Sign up now to be notified for any new updates and information

Name (required)

Email (required)

Please Accept the Terms and Conditions to Subscribe for Updates.

Submit

siscom.wordpress.com

FAQs Page:

Frequently Asked Questions

Is This Information Accurate?

Neque porro quisquam est qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit...

Where do you source it from?

Neque porro quisquam est qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit...

Can I really save money by following this advice?

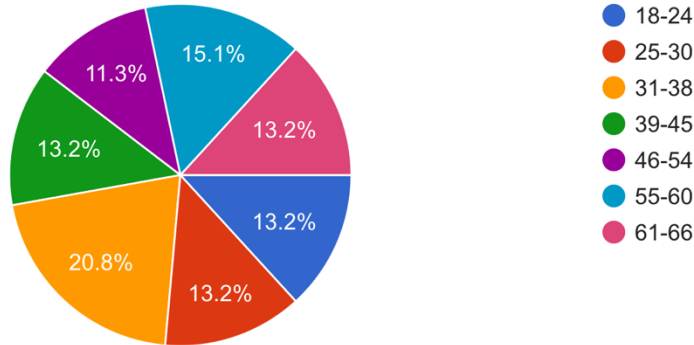
Neque porro quisquam est qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit...

8.3. Survey/Questionnaire

8.3.1. Results

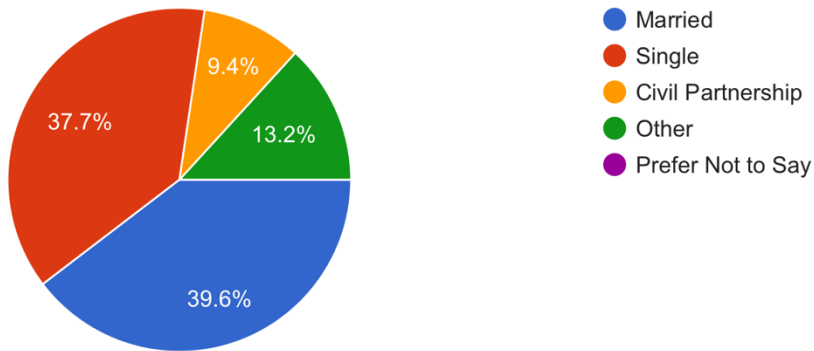
What age demographic are you?

53 responses



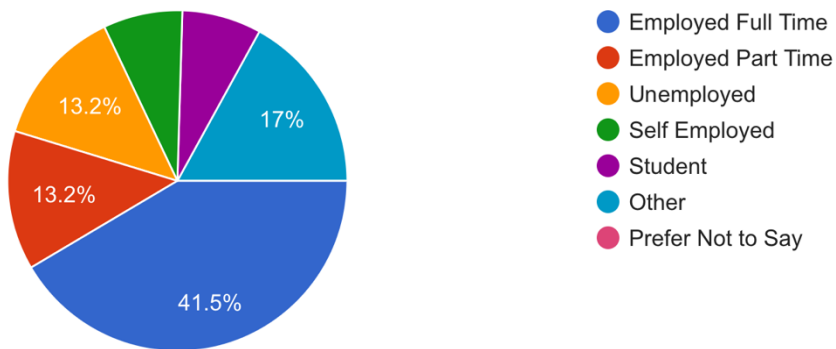
What is your marital status?

53 responses



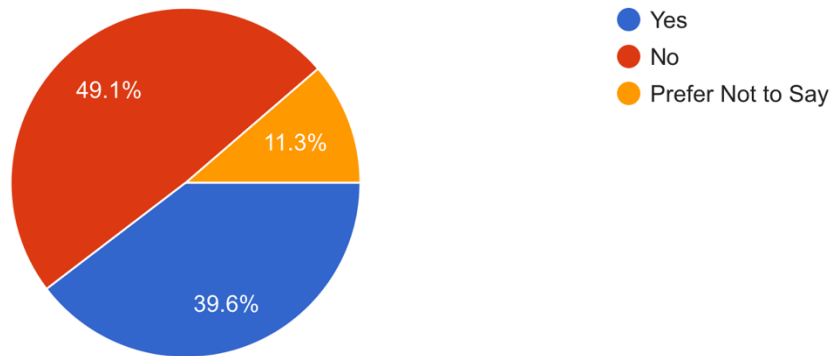
What is your working status?

53 responses



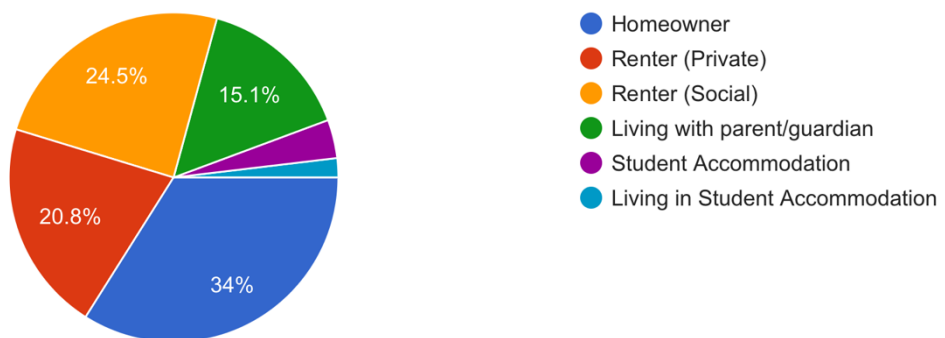
Are you the highest earner in your household?

53 responses



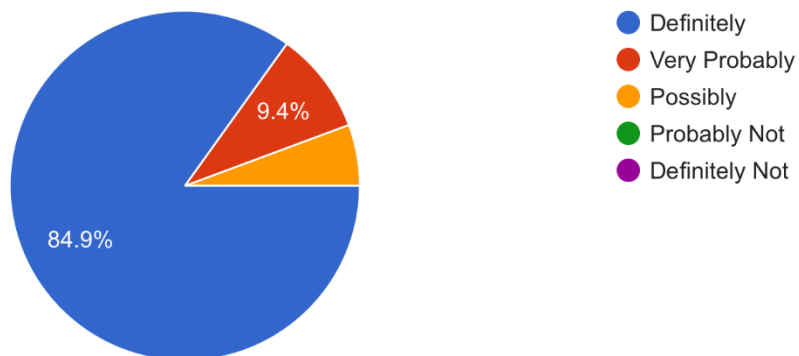
What living arrangements do you have?

53 responses



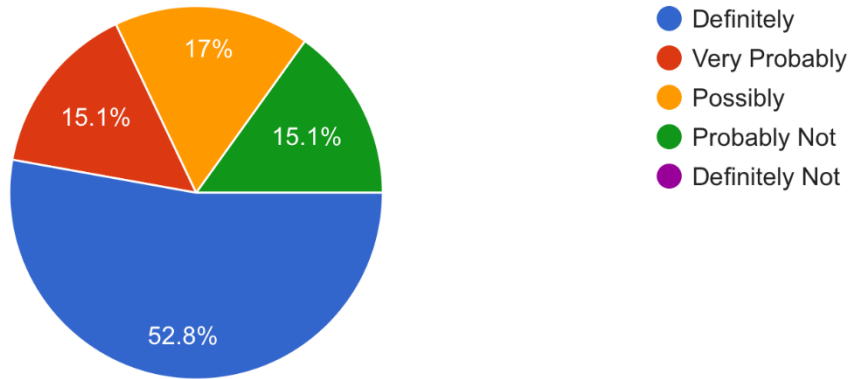
Do you find generally that bills and other household expenses have increased in price?

53 responses



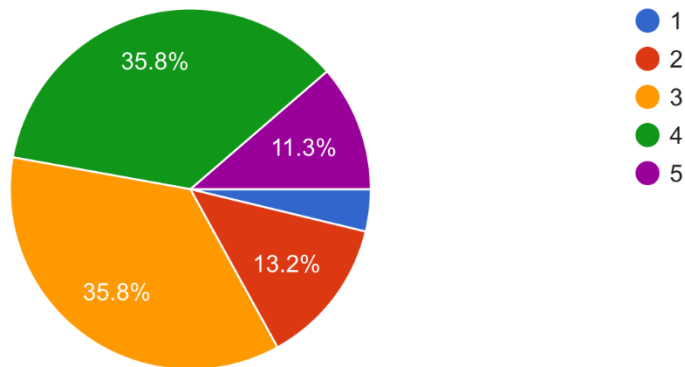
Would you say your household is struggling with bills and other expenses at the moment?

53 responses



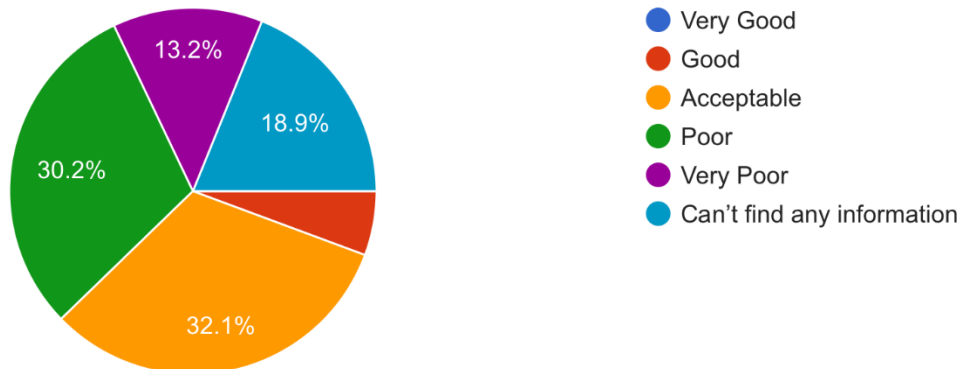
On a scale of 1 - 5 would an application with money saving tips help you/your household?

53 responses



How would you rate the process of finding information online on money saving tips?

53 responses



Please elaborate on the above question (9).

26 responses

Some brief information available but scattered on many different websites

Not a lot of valid things online

Can't find any relevant stuff online

Don't really look for that sort of information so not sure

Some information online

No helpful information online

Not a lot of good info out online

Have found some helpful stuff online

No much online for my situation

Have not looked online for information

Not a lot of good info

Not enough information

Not much information out there

There is no information online with proper figures and numbers. I am finding information like 'using dishwasher at night is cheaper' but I would really like to know what is the difference in rates and how much I can save by doing that!!! Real figures to show how much cheaper these tips are is needed.

Don't look for it online

Found some good information online, it is just very scattered so you have to do a lot of Searching on different pages to find it which takes time. Would be great to have it all in one place

Haven't really been looking for that information online

Found som info online

Haven't really looked

No information relevant to my situation

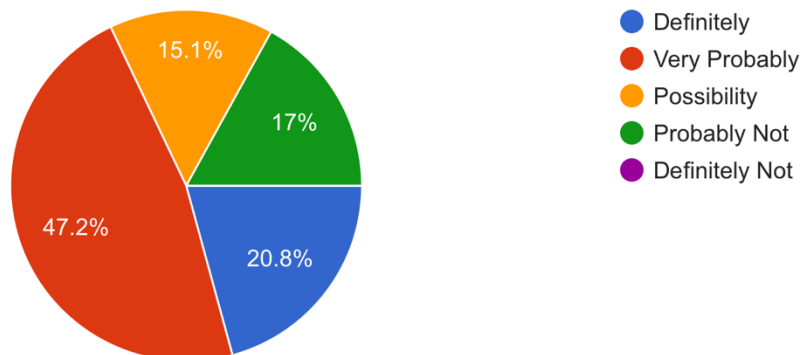
Information is not great online

Found some good information online

Not much good stuff out there

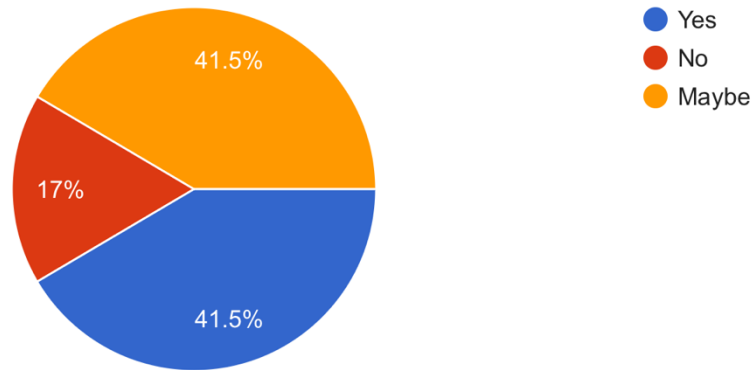
How interested would you be in using this app?

53 responses



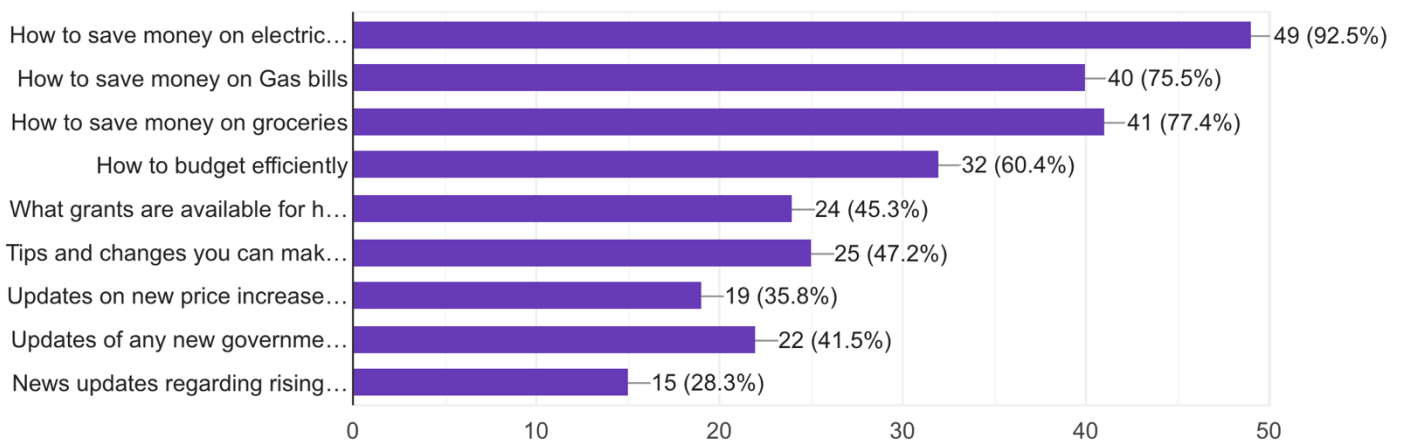
Would you use this app if it was available now?

53 responses



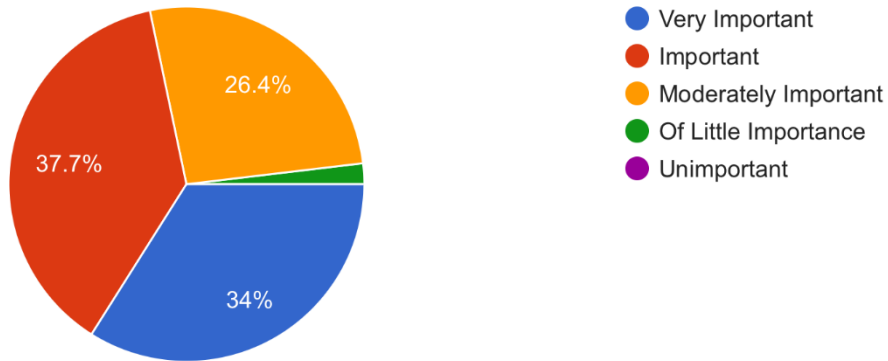
What Information would you like to see on the app?

53 responses



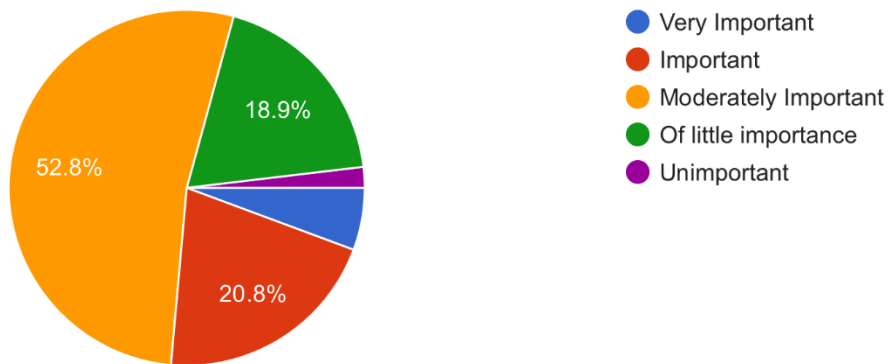
How important do you feel that an app like this should exist for the average Irish person/household?

53 responses



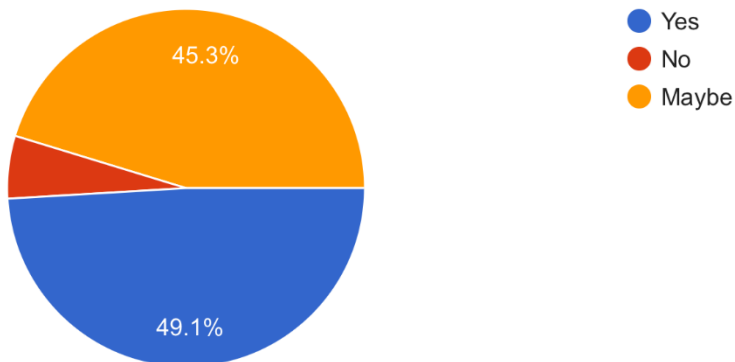
How important do you think a notification system/newsletter subscription would be for this app?

53 responses



Would you be interested in an intergration of this app with other social media platforms where updates can be shared?

53 responses



6.3.2. Survey Conclusion

By asking family members and posting on social media I was able to get a relatively good return of surveys within a short period of time, in total there were 53 responses. The overall goal of the survey was to help identify requirements and also gather feedback on other requirements already gathered from previous techniques. Majority of the survey questions were multiple choice with only long answer as it is widely known that there is typically a higher return rate if there are less long typed questions. All of the results have been recorded and will be included in detail in the MoSCoW analysis.

- The survey participants were aged between 18-66 with the age group of 31-38 having the largest response at 20.8%. This age bracket was done as the majority of Irish citizens start working at around age 18 and retiring age is 66.
- From the survey, the biggest number of responses, 41.5%, came from participants that are employed full time. After the full time responses, next was participants that did not disclose their status at 17%, then participant responses of part time employment and unemployed were equal at 13.2% for both sectors. Lastly 7.5% of participants were self employed and 7.5% were students.
- Of the responses from the survey, 49.1% stated they were not the highest earner in their household while 39.6% said they were the highest earner. This question was in the survey to identify what the status of income is like of the participants.
- 34% of the participant responses were homeowners meaning that they likely pay a mortgage payment every month or own their homes with no further payments. 24.5% of the participants were social renters meaning they likely rent off of Dublin City Council or a housing society and their rent is at a much lower rate. In contrast to 20.8% of participants were renting privately which indicates that they likely are paying a very high rate of rent. 15.1% of the participants still live with parents or guardians and a small portion of participants are living in student accommodation which typically has a rate of 200+ a week (Student accommodation dublin, 2023).
- In the survey 84.9% of participants agree that the cost of living has increased drastically in Dublin. Whether the participants work full/part time, is a student, self employed or in unemployed, all of them feel this increase.
- Over 50% of participants agree they are definitely struggling with their bills and expenses at the moment which indicated that these people need help and guidance to help manage their costs.

- 11.3% of participants rated 5 on a scale of 1-5 (1 being it wont help at all and 5 being it will definitely help) that this app would help their house. While 35.8% of participants rated 4 on the scale meaning that there is definitely demand for the app.
- 18.9% of participants agree that they can find any informantion online, while 43.4% of participants agree that the information is poor/very poor.
- 47.2% of people would very probably use the app and 20.8% said they would definitely use it
- 79.2% of participants agreed that this app would be of interest of someone they know
- Only 17% of participants said they would not use this app meaning 83% potentially would
- 52.8% of participants agree that the subscription feature would be of some importance.
- 49.1% of the participants agree that the social media intergration would be a good feature.

In conclusion, the responses for the survey has been very positive and has helped to gain an insight into the users needs and expectations. The responses from all participants will be used to out line the requirements of the project going forward.

8.4. Interviews

8.4.1. Interview 1 – Answers & Conclusion

What do you think about the concept of the app?

Participant 1 thought the app was a good idea. They stated with inflation and other costs gone through the roof, this app could help people that are struggling.

In your opinion, can you see how this app can benefit the Irish people?

Participant 1 does agree and can see how the app can benefit the public. They stated that is could really help families that they even personally know and that it is also a great idea to help people learn how to save money that don't know where to start and cut costs.

In your opinion, do you find the prices of bills and other essentials have increased recently?

The participant agrees 100% that household bills and other costs have greatly increased. They state compared to last year their electricity bill has tripled in price and the gas bill has gone up quite a bit too. They also speak about how their grocery shopping has also gone up and they are spending way more on a weekly shop than last year.

Do you find yourself challenged or struggling at times with the cost of daily necessities?

Participant 1 finds that their family does not really struggle that much with the costs of the daily necessities. They state that they only find it tough is when they are out of work as the participant is self employed, meaning if they don't work they don't get paid.

How do you budget/control your spending?

Participant 1's wife mainly takes over with spending. They state their wife mainly deals with paying for the bills and doing the grocery shopping so they do not get involved with the budget side of things.

What benefits could this app provide you?

Participant 1 thinks that the updates of the government payment schemes and grants would greatly benefit them. They also think that learning what changes they can make in their daily life to save money would be helpful.

Would you recommend this app to anyone you know?

Participant 1 states that he thinks the app would be great for family and friends that are struggling and would recommend if it is a free application.

In your opinion, do you think a notification system/news letter would benefit this app?

Participant 1 thinks that it would be great to be notified of any new information.

In your opinion, would a social media intergration feature work for this app so users can see if any new information is posted through a social media platform?

Participant 1 thinks the social media intergration would be a great addition. They state that their wife and kids personally use the internet and social media 24/7 so it would be good to see it on them.

Conclusion:

In conclusion, this interview provided by participant 1 verified some of the other requirements gathered. This interview confirmed the importance of the notification system and the social media intergration. Participant 1 also brought into consideration the th out of having a free app as this app is about saving money.

8.4.2. Interveiw 2 – Answers & Conclusion

What do you think about the concept of the app?

Participant 2 thinks that the app concept is great and thinks it would greatly help families and others that need help.

In your opinion, can you see how this app can benefit the Irish people?

Participant 2 agrees and can see how the app can benefit the Irish society. They also can see how this app can even benefit them with their financial state.

In your opinion, do you find the prices of bills and other essentials have increased recently?

Participant 2 definitely agrees that bills and other essentials have gone up. They have found that bills, rent and groceries have all increased in price.

Do you find yourself challenged or struggling at times with the cost of daily necessities?

Participant 2 agrees they sometimes find themselves struggling with the cost of essentials. They state that especially with renting they find it financially hard. They find that at the end of the month they are typically left with very little at the end of each month.

How do you budget/control your spending?

Participant 2 finds the easiest way to budget is to split their pay into different accounts for specific things like groceries, bills, rent, savings, to know where their money is spent every month.

What benefits could this app provide you?

Participant 2 is hoping the app can help them with saving money on groceries and bills as they are trying to save all the money they can for a house deposit.

Would you recommend this app to anyone you know?

Participant 2 would recommend this app to others including many colleagues and family that can greatly benefit from the application.

In your opinion, do you think a notification system/newsletter would benefit this app?

Participant 2 agrees that a notification feature would be great for the app. They think that getting updates of any new changes happening or information would be good.

In your opinion, would a social media intergration feature work for this app so users can see if any new information is posted through a social media platform?

Participant 2 thinks that this is a great idea to have the social media feature. They state the first app they usually open on their mobile is a social media one so with this any app updates can be seen sooner.

Conclusion:

Interview 2 again confirmed the already established requirements also T with others not addressed. Participant 2 did stress the importance of the social media feature as typically when people first open their phone, they usually pick a social media app first to open so it is a great way to immediately see updates on these platforms.

8.4.3. Interview 3 – Answers & Conclusion

What do you think about the concept of the app?

Participant 3 thinks that this application is a very innovative idea. They stated it was an idea that they have never seen before that looks very interesting and good to use.

In your opinion, can you see how this app can benefit the Irish people?

Participant 3 says how they can definitely see how this application could benefit Irish people. They think that it would be great for many people and could help a lot.

In your opinion, do you find the prices of bills and other essentials have increased recently?

Participant 3 says how they noticed how bills and costs have definitely increased. They spoke about how the bills at their parents house have increased like crazy and how their parents are paying a lot. They also feel that groceries have gone up a lot too.

Do you find yourself challenged or struggling at times with the cost of daily necessities?

Participant 3 finds it very challenging with the cost of daily necessities. As they live in student accommodation in Dublin for college, they state they are responsible for their groceries, but their parents do help a bit with the student accommodation costs. They state that without the help of their parents they would financially not be able to live in Dublin.

How do you budget/control your spending?

Participant 3 finds it easiest to distribute their pay into different revolut vaults. They said they have vaults for food, accommodation costs, savings and others.

What benefits could this app provide you?

Participant 3 hopes that this app could help with saving money on their groceries as they can be quite expensive and also increase their savings.

Would you recommend this app to anyone you know?

Participant 3 thinks that their family and other people they know would benefit from the application.

In your opinion, do you think a notification system/news letter would benefit this app?

Participant 3 does think it would be very beneficial to have the notification system for the application.

In your opinion, would a social media intergration feature work for this app so users can see if any new information is posted through a social media platform?

Participant 3 also again thinks the social media intergration is a good idea as the majority of people have one or more social media apps on their phones.

Conclusion:

From participant 3's interview, we were able to get the point of view of a student recently moved from home and their first experiences with living alone/providing for themselves. Participant 3 was able to again confirm previous requirements along with new requirements not yet addressed. Participant 3 stressed the importance of building savings and saving money tips would be very beneficial in the app.

8.4.4. Interview 4 – Answers & Conclusion

In your opinion, do you think this application and concept is worth developing?

Participant 4 likes the concept of the application. They have stated that an app like this has not yet been developed so it would be overall worth pursuing as many people could use and benefit from it.

In your opinion, what is the best way to store any sensitive information that may be needed for the app?

Participant 4 thinks that the best way to store the sensitive information of the likes of email, names etc. would either be to use a cloud storage solution, which would require and additional

administrator, or using a MySQL secure database. It was explained to the participant that sensitive details like card payments, DOB, PPSN, Passport/ID information would not be required from the user for this app.

In your opinion, how long would an application like this take to develop?

Participant 4 states that from their experience and working on similar projects like this in the past, the development time can take anywhere from 12-24 weeks depending on what features are needed/wanted and what the requirements are.

In your opinion, how much would an application like this cost to develop?

Participant 4 states that the costs of creating an app like this can vary drastically depending on things like the overall number of hours, days and weeks the app takes to be developed. Price can also vary with things like where the information is stored and whether it is on cloud v on prem. If on cloud an additional admin is required for the cloud solution. Overall, participant 4 cannot give an accurate figure until all requirements are gathered.

Do you yourself have any experience with similar applications to this one, if so please elaborate?

Participant 4 has worked on blog style applications before which he believes is quite similar to the concept of this website from the description at the start of the interview. From working on a similar style app, they have mentioned that it is important to create an app that works and looks professional on any different devices as it can be a slight issue. Participant 4 also mentioned to host the app on a reliable platform that is easy to update as with this sort of application that may need to be updated frequently, it is important the administrator is able to do so.

What is your advice going forward with this application?

Participant 4's advice moving forward is to first finish all of the requirements and look around for different developers that have worked on similar projects to get ideas of prices. They also advise to take a look at development interns that have experience as the website can be created at a much cheaper cost this way. Lastly, they have advised to make sure the security of the app is good and bad security and data breaches can be damaging.

Conclusion:

From interview 4, new requirements were definitely established. The developer was able to recommend solutions for security to ensure any customer data is safe. The developer also mentioned that it is important the app is reliable on all devices and should be visually

professional. He made recommendations to host the app on a platform that can allow easy updates to save time on more complicated platforms. All of the recommendations and observations for this interview helped drastically in establishing requirements.

8.5. MoSCoW

Once the requirements have been gathered from the brainstorming technique, survey and interviews, they were then presented to the stakeholders to determine the urgency of each requirement. From reviewing all of the results generated, the stakeholders selected what requirements should be a necessity or non-negotiable (Must Have), the requirements that the project should have but are not a necessity, requirements that the project would like to have but there may not be enough time to complete or other circumstances so they will not be there initially and lastly the items the project will not have.

As per the discussion with the stakeholders, a MoSCoW analysis was completed to prioritise the requirements as seen below:



M

MUST HAVE

- Secure Database for sensitive user information.
- Solid program/development & no bugs
- Reliable host platform & easy to update posts.
- Ads for revenue (free app)
- Content: Electricity & Gas bill helpful information (Most wanted top 3 from feedback)
- Content: Saving money on groceries tips (Most wanted top 3 from feedback)
- Sharing feature to share with friend/family or others that may be interested.

S

SHOULD HAVE

- Fast app
- Good professional design
- Notifications by email
- Social media integration
- Images/illustrations relating to content.
- Figures/numbers/facts to back up information.
- Content: budgeting, savings, cutting costs tips (many wanted from feedback)
- More than 2 pages on app.

C

COULD HAVE

- Comment section
- Recommendation box
- Search bar.
- FAQ Page
- Uncluttered layout

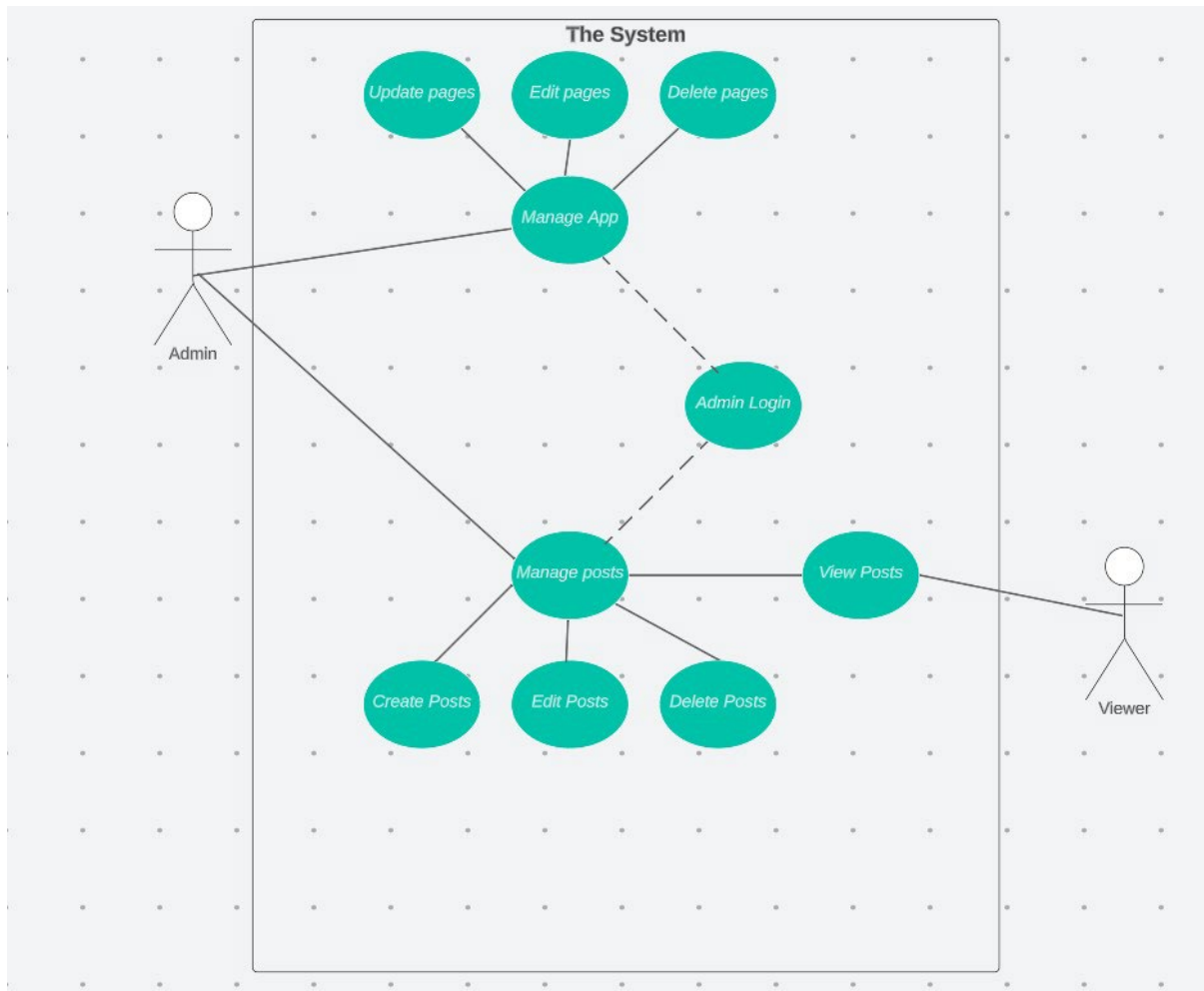
W

WILL NOT HAVE

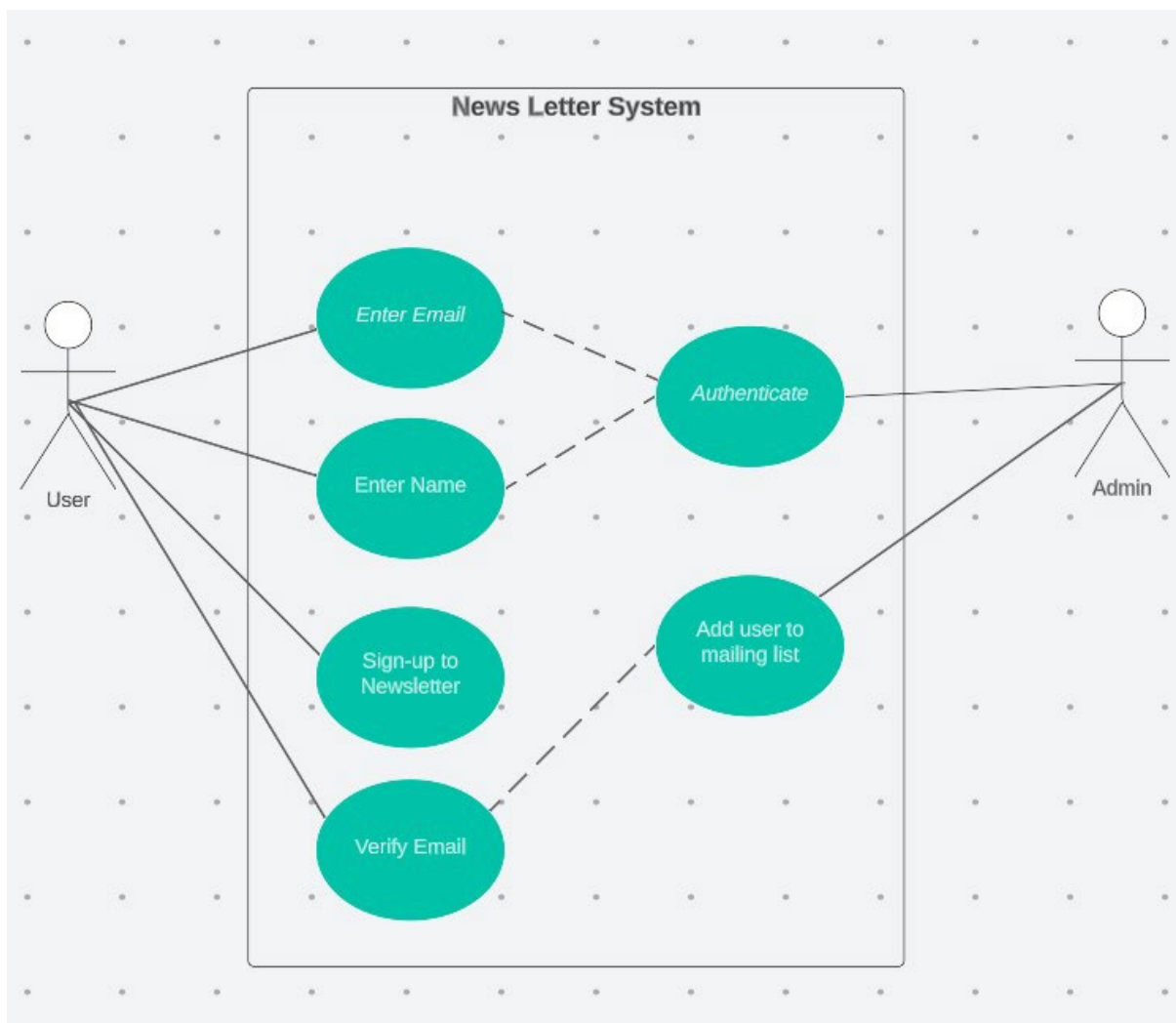
- Paid content
- Customer subscription payments (free for all)
- Unappealing Layout
- Incorrect, not factually checked & backed up information.

8.6. Interface Analysis

8.6.1. Use Case Diagram 1



This use case diagram represents the interactions of the administrator and user with the system. In the usecase we can see how the admin person interacts with managing the pages and posts on the website, while the user/viewer only has viewing access. This usecase was created based on the wireframes above.



This use case represents the process of the user signing up to the newsletter system. The user must enter their name and email in order to sign up. Admin must authenticate the email to send the verification email. Once the user authenticates their email, they are added to the mailing list. This use case was created based on the wireframes above.

9. IEEE Requirements Specification

9.1. About

The overall purpose of the IEEE document is to show the requirements for the Ireland's Cost of Living Crisis app. For this requirement specification document, agile methodology will be used to convey the requirements. This will consist of many Epics displayed in user stories and acceptance criteria rather than using the traditional method of displaying them in the order of functional and non-functional requirements.

Before this document is sent to the developer and tester, it must first be approved by the owner. If there are any changes needed by the stakeholders they must be requested, approved and updated in the document before the app development commences.

9.2. The Approach

When developing the Irelands Cost of Living Crisis App, an agile method approach will be used. All requirements outlined within the requirement specification document will be broken down into sprints for the development process. All of the requirements and features will be put in the product backlog and prioritised according to their importance to make the user stories. The owner is responsible for prioritising the user stories and the agile project team will be made up of the owner, scrum master and other members of the scrum team. The scrum team and master will then present any requirements completed within a sprint to the owner at the sprint review meetings.

9.3. Abbreviations

Epic: 1 or more user stories that holds the user story and acceptance criteria. This explains the user requirement of the app and how they interact with it.

User Story: The description of the requirement from the perspective of the user.

Acceptance Criteria: These are the conditions that the application must satisfy to consider the user story completed.

User: The users of the app. They can use application features like sign up & reading.

Admin: Administrators of app that manage all user permissions.

9.4. Epic 1 – News Letter Sign-up

9.4.1. User Story 1 – User

As a User I would like to register on the app to receive notifications/news letter.

Acceptance Criteria:

1. User can enter name and user name to sign up to notifications
2. User can register on app and opt in to notifications through app settings and mobile notification settings

9.4.2. User Story 2 – Admin

As an admin I would like to verify the email of the user and add them to mailing list.

Acceptance Criteria:

1. Once user verifies the email address from validation mail, they are added to mail list
2. Once the user enters a valid working email address they are added to mailing list without validation email.

9.5. Epic 2 – Sharing App

9.5.1. User Story 1 - User

As a user I would like to share this app with friends so they can use the service

Acceptance criteria:

1. Users have the option invite friends/family to app through an invitation email
2. Users can use the share button on app that sends link of app directly to friends/family

9.5.2. User Story 2 – Admin

As an admin I would like to see how many people users share the app with

Acceptance Criteria:

1. System has a counter to see how many times the app has been shared with share feature
2. System has counter for admin to see how many invitations have been sent to other users

9.6. Epic 3 – Social Media Integration

9.6.1. User Story 1 - User

As a user I would like to see posts on social media so I do not miss them on the app

Acceptance Criteria:

1. Users can follow social media pages and see updates if new posts have been shared
2. Users can follow social media page and see the new post through the platform without having to open app.

User Story 2 - Admin

As an admin I would like to be able to post the information on social media quickly and easily.

Acceptance Criteria:

1. Admin can share links to new posts to social media pages so users can be redirected to the app to read them
2. Admin can share the new post on social media without the user having to be redirected to the app.

9.7. Epic 4 – Retaining Users

9.7.1. User Story 1 - Admin

As an admin I would like to access the apps statistics and user numbers to see how many people are using the app.

Acceptance Criteria:

1. System has a counter for the traffic of app and how many clicks it gets
2. System has cookies feature to see what users are looking at most while using the app to see whats most popular.

9.7.2. User Story 2 - Admin

As an admin I would like to be able to access feedback from users to ensure the app is suitable for them and does not become obsolete.

Acceptance Criteria:

1. Users can contact admin directly from app with a contact feature with any feedback
2. Users can contact admin through email to provide feedback for the app

9.8. Epic 5 – Viewing Articles

9.8.1. User Story 1 - User

As a user, I would like to be able to view many articles from one page.

Acceptance Criteria:

1. App has 1 article page where all posts are held in 1 place so users can find them easier
2. App has topics page which breaks articles down by topics and housed under their respective topics. This allows users to not have to go through many different articles to find what they are looking for.

9.8.2. User Story 2 - Admin

As an admin, I would like to be able to post articles in one place for users to see.

Acceptance criteria:

1. Admin can post all articles on on article page
2. Admin can post articles under their respective topics on a topics page

9.9. Epic 6 – Contacting Admin

9.9.1. User Story 1 - User

As a user I would like to be able to contact admin with any concerns or queries I have.

Acceptance Criteria:

1. Users can contact page to contact admin of any queries
2. Users can user business email to contact admin
3. Users can use social media to contact admin

9.9.2. User Story 2 - Admin

As an admin I would like to be able to easily see and respond to queries.\

Acceptance criteria:

1. Admin can direct feedback through contact page that is held in a database
2. Admin can get direct emails from users
3. Admin can get direct messages through social media from users about queries.

9.10. Epic 7 – Good Development/Program

9.10.1. User Story 1 - User

As a user, I would like a reliable application with no bugs or glitches to enjoy the experience.

Acceptance Criteria:

1. User is provided with app on reliable platform that is comparable with their device
2. User is provided with app that may need to be taken down for maintenance every few weeks to prevent glitches, bugs and crashes.

9.10.2. User Story 2 - Admin

As an admin, I would like a reliable app again with no bugs, glitches or the applicant action failing.

Acceptance Criteria:

1. App is built on reliable platform for admin to fix and prevent any bugs or glitches
2. App will need to be taken down for maintenance every few weeks to prevent bugs and glitches.

9.11. Epic 8 – Illustrations and Graphics

9.11.1. User Story 1 - User

As a user I would like to see good illustrations and graphics on the app to make it more visually appealing.

Acceptance Criteria:

1. Colourful and graphic photos and media will be included in app

2. Colourful colour scheme and neat layout will be included in app to make it more visually appealing

9.11.2. User Story 2 - User

As a user I would like to see graphics and illustrations relevant to the topics on the app.

Acceptance Criteria:

1. Copyright free images will be included in app that is relevant to content
2. Illustrations and graphics created by the app will be included with content.

9.12. Epic 9 – Search bar

9.12.1. User Story 1 - User

As a user I would like to be able to search for articles on the website without going through all pages.

Acceptance criteria:

1. Search bar at top of screen to allow users to search for information
2. Filter and sort by buttons included on pages to allow users to find and filter information easier

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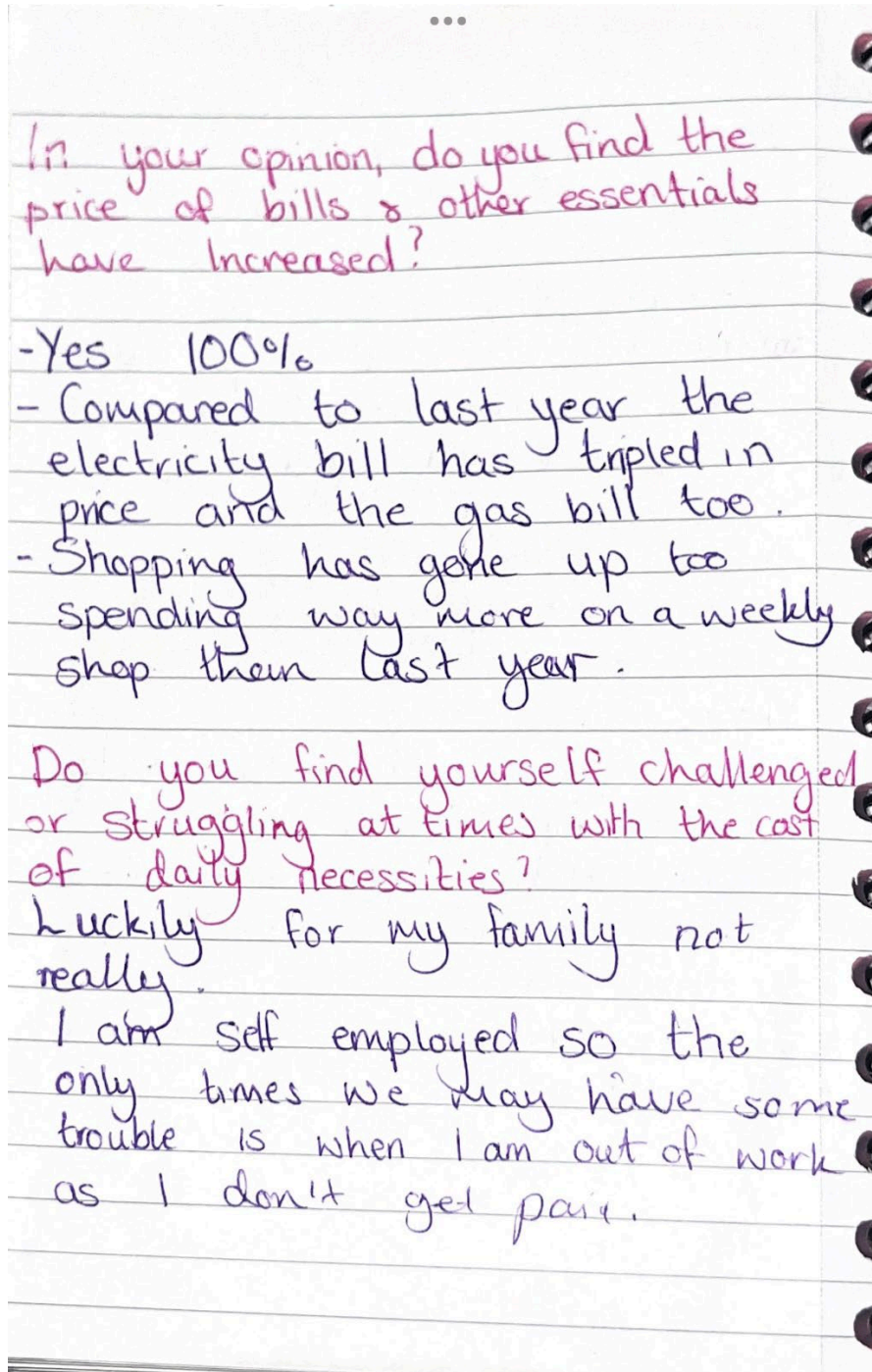
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Appendix

Notes

Interview 1:



Would a notification System / newsletter system benefit this app?

Yes, It would be great to be notified of any new information

Would a social media intergration feature work for the app so users can see if new information is posted through social media

-Yes, it would work great
- I know my wife & kids are on the internet 24/7 so it would be good to see it.

What Do you think about the
Concept of the application?

- Good Idea for an app
- Inflation Gone through the Roof ~ App can help people that are struggling

In your opinion Can you see how this app can benefit Irish people?

- Yes
- The app could really help struggling families, even families that I personally know
- It's a great idea to help people learn how to save money that Dont know where to start.

How do you budget spending?

- The wife mainly takes over with spending.
She pays bills & does shopping

What benefits could this app provide you?

- I think the updates on any government payments would be good and also changes that can be made to save money.

Would you recommend this app to anyone you know.

- Yes, this app would be great for some friends & family that are struggling

Interview 2

- What do you think about the concept of the app

Great concept, it would really help families & others that need it

In your opinion, can you see how this app can benefit Irish people?

Yes, it could benefit many people including myself with their financial state.

In your opinion, do you find the prices of bills & other essentials have increased

Yes definitely, between bills, Rent & food everything has gone up.

Do you find yourself challenged or struggling at times with the cost of daily necessities?

- Yes, with renting especially sometimes it is hard financially.
- Usually left with very little at the end of each month.

How do you budget/control your spending?

Usually split the pay into different accounts so I know where each cent is going every month.

What benefits could this app provide you?

I am hoping the app can help with saving money on groceries & bills as I am trying to save for a deposit.

Would you recommend this app to anyone you know?

Yes, many colleagues & family ~~is~~ could greatly benefit from this.

Do you think a notification system/newsletter would benefit this app?

Yes I think so

Great to be updated about any new changes happening

Would a social media integration feature work for this app so users can see ...

Yes this is a great idea as usually the first app I open on my phone is a social media one.

Interview 3

What do you think of the concept of the app?

I think this app is a very ^{innovative} ~~innovative~~ idea that I haven't seen before. It looks interesting & good to use.

In your opinion, can you see how this app can benefit Irish people?

Yes definitely, I think this idea would be great for many people & could help.

In your opinion do you find the price of bills & other essentials have increased?

Yes bills & costs have definitely increased. Bills from home have increased like crazy, my parents are paying a lot. Food has gone up a lot as well.

Do you find yourself challenged or struggling at times with the cost of daily necessities?

Yes it is very challenging, I live in Student Accommodation in Dublin for college which my parents help as I would not be able to do alone. I cover my groceries which can be dear.

How do you budget/control your spending?

I find it best to distribute my pay into revolute vaults. I have one for food, one for accommodation one for savings. ~~_____~~

What benefits could this app provide you?

Hopefully the app could help ~~_____~~ with saving money on groceries as they are expensive and increase my savings.

Would you Recommend this app to any one you know?

Yes, I think my family and other people I know would greatly benefit from this app.

In your opinion, do you think a notification system would benefit this app?

Yes, I think it would be beneficial to have a notification system

In your opinion, would a social media integration feature work for this App?

Yes again a good idea as many people have social media accounts

Interview 4

In your opinion, do you think this application & concept is worth developing?

Yes, I have not seen an application like this yet and it would be worth pursuing as I think ~~many~~ many people could use it

In your opinion, what is the best way to store any sensitive information that may be needed?

Best way store information for the app with regards to email & names is to use a cloud storage solution or a MySQL secure database

In your opinion, how long would an application like this take to develop?

From my experience, this style of app would take around 12-24 weeks to develop

...

In your opinion, how much would an app like this cost to develop?

- Costs can vary depending on hours/weeks it takes to create
- Where information is stored (cloud v local) Admin needed for Cloud.
- Can't give figure until all requirements are gathered

Do you have any experience with similar apps to this? Elaborate

Yes, I have worked on blog style apps before, which sounds very similar to this app from the description.

It is important to make app professional looking across different devices as it could look bad. Make sure it is a reliable platform that it is hosted on that you can update easily.

...

What is your advice going forward?

- Once all requirements have been gathered look at different developers that have worked on similar projects and compare prices.

Also look at interns that can develop, you can have your website created at a much cheaper rate

- Make sure security is of good quality



National College of Ireland

Project Proposal

Ireland's Cost of Living Crisis Information App

30/10/2022

Programme Name	BSHTM4
Specialisation	Business Analysis
Academic Year	2022/2023
Name	Siobhan Flynn
Student Number	x19392146
Student Email	x19392146@student.ncirl.ie

Objectives

For this project I would like to provide an application (e.g., phone app/web app) that helps households save money with different tips and information included. This app is aimed at the average Irish household that is current struggling with the current cost of living crisis Ireland is facing. The app could also potentially provide tips for commercial businesses on how to save money as there is also a struggle currently with businesses fighting to stay open.

The main information this application will provide is how to save money with different bills (gas, electric etc...). With the rise in bill prices, many households are facing not being able to heat or light their homes and business are facing closures as they cannot afford them. In light of this, I would like to provide an informative app where all information and helpful tips can be found in one place rather than having to do hours of research online for ways to save money.

I would also like to have accurate figures in the app so people can really see how much they can save, rather than tell customers to do these tasks without providing evidence that it will help in the long run.

Background

I chose this idea for my project as I thought the topic was very relevant with the current financial situations that most Irish households are experiencing. I wanted to create something different and something that is helpful to many people with accurate information and can hopefully help ease some of the pressures that are happening right now.

Also from researching, I have found that there is not a “one stop” designated website/app where somebody could access all this information at once. Consumers would have to do a lot of research online which will take time and effort to find solutions to their rising bills so I wanted to create an app that housed all of this so they can access information in one place.

Also from investigating, I found that there is not many numbers and figures that really show the amount of money that you can save. For example, according to electricity companies like the ESB or Electric Ireland, consumers can save up to 80% if they switch to LED light bulbs – my question is 80% of what? I think these figures don't really represent the true savings that is made and I want to give real life examples, with real figures, of how much can be saved rather than just some percentage figure that we really don't know what it means or how much the savings is.

State of the Art

So far from researching through the web and various app stores and taking into consideration the cost of living crisis that is currently happening in Ireland, there is no application like this that has been developed as of yet. Because the cost of living crisis is something that has followed in the wake of COVID-19, it has only developed recently. There is information out there on different news outlets etc..., but very little collections of centralized information on this.

I believe my project could assist many people from different income levels from the lowest earners right to the highest earners because this cost of living crisis is affecting everybody. This project will provide people with a centralized source of information saving time and effort compiling information from different sources online.

Technical Approach

For this project I plan to use an agile approach. I felt that the agile method was best for this project as it is a very collaborative approach and it is open to changes as the data or other aspects change. In agile I can have short work phases with frequent testing to ensure the project is running smoothly and reassess any problems rather than finding issues at the end that could have been resolved earlier. I predict this project will be liable to changes and stakeholders and clients will be involved at most stages so this is how I came to the decision to use agile management.

I plan to identify stakeholders by first, identifying key stakeholders and their interests, both positive and negative, for this project. I then plan on looking at and identifying stakeholders that will be involved, both directly and indirectly, through various phases of the project and also looking at different solutions like geography for example and identify any other stakeholders. The outcome of this stakeholder analysis will be a stakeholder register. All stakeholders identified will be listed in this register to refer back to throughout the project.

Some elicitation techniques I have identified and considering on using are:

- Interviews
- Use Cases
- Questionnaires/Surveys
- Document Analysis
- Workshops
- Brainstorming
- User Observation
- Interface Analysis
- Focus Groups
- Prototyping

To track project activities, phases and milestones, I plan on using a Gantt chart. This Gantt chart will show the whole project schedule and help to plan around deadlines and properly allocate different resources and tasks out. This Gantt chart will give a birds-eye-view of the project and will properly show the start and end dates of tasks, milestones and phases in the project and the dependency

between different tasks. I plan on using MS Excel to create my Gantt chart so I can easily access it or amend it if needed.

Technical Details

For this project I plan to use word press for the web application. I am planning to make blog style web app with a task bar at the top that allows users to access the different pages available. It will be paired with a MySQL database that will hold all of the information gathered in the requirements gathering stage. The web app will also include technologies like PHP, JavaScript etc..., to link the database and other elements in the web app.

I also plan on using Excel to help with tracking all stages of the project. This will allow me to clearly outline all deadlines for tasks in the project so they can be carried out quickly and efficiently and no task is forgotten. I also plan on using a scheduling tool, for example the MS Outlook Scheduler, too allocate blocks of time in my calendar for the project and completing tasks.

I also plan on using tools like survey monkey or google forms to carryout surveys with stakeholders to gather information. Both of these tools are free to create and send surveys and also offer survey statistics too.

Lastly I plan on using a mock-up technology to build a wireframe of what I would like my application to look like. Tools like Balsamic, Mockflow.com and Lucidchart offer free solutions to create a wireframe and mock up of what the end result of how the web application will appear and it can also be used to gather feedback from stakeholders if there is anything that needs to be changed.

Project Plan

As of yet I do not have a full project plan. Below is a detailed outline on how I plan to create my project plan that will be presented in the midpoint presentation. I will show my Gantt chart with tasks and deadlines and all phases of the project. to develop my project plan I plan on following these 6 steps below as I feel they will help my create the best plan.

Establish Project Scope and Metrics – Although I have outlined the objectives and background to the project, I will first need to write a detailed project scope. This is essential as it will out like the projects goals, purpose and parameters. By clearly defining the project scope it will help to ensure the rest of the project plan moves smoothly and in the direction I want it to go.

Identify Key Stakeholders – After the scope and metrics are outlines and confirmed, my next step is to identify all key stakeholders of the project. It needs to be clear on who will help to bring the

project to life and also who will use and benefit from the project. There will need to be a list of the people who will be impacted by the project and who will be directly involved. When identifying the stakeholders, I plan to create different lists based on the levels of involvement in the project. By being clear on who needs to be involved in the project and how they will be involved it will help guide the rest of the project planning process.

Outline all Deliverables – The next part of the plan is to outline the project deliverables. To make sure the project purpose is fulfilled, all of the projects tasks, deliverables and outcomes will need to be identified and clearly outlined.

Develop tasks – the next step in my project plan is to develop the tasks from the deliverables. When the project deliverables are clearly laid out, I plan on drilling down into those deliverables into actionable tasks so they can be managed easily and highlight any dependencies between tasks.

Assign task deadlines – Once all tasks and dependencies have been defined, I will then set the deadlines of the tasks. To ensure the project moves forward at a steady pace the task deadlines will be set accordingly to this. I want to set realistic achievable task deadlines to ensure milestones and checkpoints are reached on time.

Gather feedback and adjust project plan if necessary – Once all of these tasks for the project plan have been completed and clearly stated above, I plan on going to my project supervisor and some stakeholders to get feedback and amend any issues if necessary to ensure the plan is strong and there is flexibility if things change or evolve.

Project Timeline

Functioning Gantt Chart to see each week:

Ireland's Cost of Living Crisis Information Service App					
National College of Ireland					
Siobhan Flynn		Mon, 9/19/2022			
		Jan-00		Apr 10,	
				10	11 12
TASK	START	END	M	T	W
Ireland's Cost of Living Crisis Information Service App	9/19/22	5/14/23			
Project Pitch	9/19/22	10/9/22			
Project Proposal	10/10/22	10/30/22			
Monthly Reflective Journal 1	9/19/22	11/1/22			
November Reflective Journal	11/1/22	12/1/22			

Breakdown of Gantt Chart Below:

Task Name	Start	Finish
Ireland's Cost of Living Crisis Information Service App	Monday 19/09/2022	Sunday 14/05/22
Project pitch	Mon 19/09/22	Mon 09/10/22
Project Proposal	Tuesday 10/10/22	Sunday 30/10/22

September/October Reflective Journal	Monday 19/09/22	Tuesday 01/11/22
November Reflective Journal	Tuesday 01/11/22	Thursday 01/12/22
Requirements Spec	Tuesday 01/11/22	Monday 14/11/22
Project Prototype	Tuesday 15/11/22	Thursday 01/12/22
December Reflective Journal	Thursday 01/12/22	Sunday 01/01/23
Midpoint presentation	Saturday 17/12/22	Sunday 18/12/22
More detail added to Requirement Spec	Monday 23/01/23	Monday 03/04/23
development of prototype	Monday 23/01/23	Friday 31/03/23
Project Presentation	Thursday 11/05/23	Saturday 13/05/23
Project Online Upload Due	Sunday 14/05/23	Sunday 14/05/23

11. Validation/Verification

Validating the user requirements ensures that the requirements have achieved the objectives of the project and meet the needs of the stakeholders impacted by the project. Validation is a critical step to find any missing requirements and ensuring that the requirements have all of the important characteristics.

To validate my user requirements, I will follow these steps to ensure they meet the project goals:

1. **Scoping of the Project** – By understanding the scope of the project it allows us too to understand the objectives and risks of the project and will give and understanding of the problems, objectives and risks of the project. This will allow us to ensure we are not missing a requirement and also give a true understanding on why we are doing this project
2. **Breakdown the Scope into Business/Project Requirements** – To avoid any misunderstandings and missed requirements, I will need to breakdown the scope further into smaller chunks. This will help organize and make sure there are not requirements missing and all requirements are relevant to the project.
3. **Map and Elicit Functions and needs of the Project** – Next by looking at how we want the project to work and look we need to take a look at what features and functions are needed to make the project successful. This will help fill in any gaps when eliciting requirements and make sure all information gathered is valid and relevant.
4. **Look at prototypes and data gathered** - To make sure no data is missed and all data gathered is valid its good to run through a test case scenarios and prototypes so we can clearly see how the features and information gathered are used. By going through examples and scenarios, I can confirm that all of my requirements I have set out are being met. By carrying out tests throughout the project we can amend and change any requirement to ensure they are valid and

Reflective journals

Month 1 – October

Month: 1 (October 2022)

What?

This month for the project has been a bit tough. I had been struggling to thing of an idea until I came up with the Cost of Living crisis in Ireland idea to help people with this current issue. I also struggled to get my project proposal submitted on time and I also did not get ethics form in on time because of some Moodle server issues, other assignments being due and my commitments in my part time job that I have. Overall, in this month progress has been slow and I am hoping to get the project moving over the next couple of weeks

So What?

In order to progress in my project, I will need to fix the issues with my Ethics Declaration and Application form and get it submitted. Once it is submitted, I can then start preparing all of that data and interview prep to get the ball rolling on that aspect of the project.

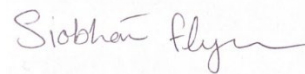
This Month the main successes I has was getting my project pitch accepted so I could start my proposal. I also submitted my proposal on time.

The main challenge I face this month is fixing the issues with the ethics form so I can start on other aspects of the project.

Now What?

I have already contacted the lecturer for the Computing Project module explaining the situation to get it rectified. Once this challenge has been overcome I can then get a start on the project and hopefully progress it much further than it currently is.

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Month 2 – November

Month: 2(November 2022)

What?

During the month of November, the project has had less progress than I would have liked because of other assignments and CAs due during the month. In this month I struggled with finding time to complete tasks for my midpoint presentation as my classes and CAs took up most of my time. I did however complete a Gantt chart outlining the tasks and timelines of the project and when I would like them to be completed by and I have stated the reporting process for the Mid-Point submission. Although this was a slower month than I would have liked, I am looking forward to getting the project moving in December.

So What?

As all of my CAs have now been submitted and I have more free time before the exam period in January, I can now progress on with the project and start the requirements gathering process.

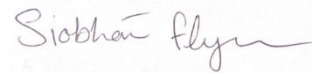
The main success this month was outlining and breaking down all tasks involved in the project and starting on the report.

The current challenge is finding out if my ethics application is approved so I can start with interviews and other requirements.

Now What?

Now I plan to invest any spare time into the project in order to get a good start on it for the midpoint submission as November has been a slower month for me with regards to progress on the project.

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Month 3 – December

Month: 3 (December 2022)

What?

This month for the project has been very busy. I have been working on the midpoint submission trying to complete my elicitation techniques. I did have some trouble with my interviews and was not able to get them done for this submission due to some scheduling issues and other problems with participants. I was also not able to get the survey circulated before this submission either but have completed the prep and all of the questions for it and will be circulating it in the new year. For this month, progress has been good, two elicitation techniques have been completed and all of the prep for 2 more has been carried out so they are ready to be completed soon.

So What?

To progress my project, I will need to complete my other elicitation techniques and start preparing all of the results and document them in the report for the final submission.

This month's main successes was getting the midpoint document and presentation completed and submitted on time.

The main challenges of this month was not being able to complete the interviews and surveys by the midpoint.

Now What?

I have completed the prep work for the interviews and surveys so I will be contacting participants regarding these in the new year as they will not be available over the Christmas/New Year period. I will schedule interview time and also circulate the survey to generate results.

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Month 4 – January

Month: 4 (January 2023)

What?

For the month of January, progress on the project has been slow due to the exam period and starting semester 2. So far this month I have started to circulate the survey and have received some responses back. I have also contacted the interview participants and set times for the interviews to take place in the coming weeks. Unfortunately, this month, I did miss the monthly journal submission at the start of January due to being pre-occupied with exams and assignments but have included the report in this submission. Overall, not much progress has been made this month but some vital parts of the project have been started.

So What?

To progress the project, I will need to receive all of the surveys back to gather the results and add them into the report. I will also need to conduct the interviews with the participants and add all of the results into the report.

The main success of this month was getting the survey circulated and setting interview times so I can gather information for the project.

The main challenges I face are not receiving all of the responses back yet and this part is taking longer than anticipated. Also, the stress of the exam period impacted the progress of the project.

Now What?

I will be sending out reminders for participants to complete the survey so I can gather all of the results for the project. I will also be sending out reminders to the interview participants to remind them of the interview times and ensure they are still available to do the interviews.

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Month 5 – February

Month: 5 (February 2023)

What?

For the month of February, a good chunk of progress has been made. All of the surveys have been circulated and all responses have been received, all interviews have also taken place. All of the data has been generated and examined and both requirements elicitation techniques have been completed. I have not yet started the other requirements elicitation techniques but intend to do so in the next month as the interviews and surveys have taken up a good chunk of time as well as other college work.

So What?

To progress the project, I will need to start and complete the remaining requirements elicitation techniques in order to get the requirements for my application.

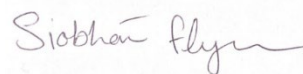
The main success of this month was getting the survey responses and generating all of the results into the document and also holding the interviews and gathering all of the vital information for the project.

The main challenges I face is not completing the remaining techniques in the time left for the project. There is approximately 2.5 months left to finish this project and I am hoping to complete it within this time frame.

Now What?

I will now be starting on the remaining techniques and other parts of the document to progress and complete the project.

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Month 6 – March

Month: 6 (March 2023)

What?

Unfortunately for the month of March, not as much progress as initially intended was made due to a family member passing away and also multiple other assignments in the month due. It has been quite a hard month to find the time to get parts of the project done. I have had the chance to look at the Wordpress website and have designed a mock layout/colour scheme for the final submission.

So What?

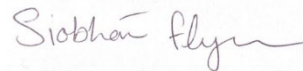
To progress the project, I will be completing the remaining elicitation techniques in the coming weeks.

The main success of this month was starting to look at the website aspects and getting that sorted.

The main challenges I face is not completing the remaining techniques in the time left for the project.

Now What?

I will now be finishing the remaining techniques and other parts of the document.

Student Signature


Month 7 – April

Month: 7 (April 2023)**What?**

For the month of April, I was able to make significant progress on the project due to classes and assignments being finished and devoting all of my time to it. I was able to fully complete all elicitation techniques required and am now working on the finishing touches on the document along with the website. When these steps are finished I will then record the video presentation with demo and submit the project.

So What?

To finish the project, I will need to finish the website and document.

Main success of this month was finishing the elicitation techniques.

Main challenge is not completing the website on time.

Now What?

I will now be Finishing the remaining techniques and other parts of the document, website and recording the presentation.

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Siobhan Flynn