

KEEPSAFEONLINE.IE

James Balfe

NATIONAL COLLEGE OF IRELAND X13114182

Keepsafeonline.ie

Ieee Requirements Specification Document

Student Name: James Balfe

Student Number: X13114182

Student Email: X13114182@student.ncirl.ie

Course Name: BSc (Hons) Technology Management

Course Specialisation: Business Analysis

Project Supervisor: Ron Elliott

Declaration Cover Sheet for Project Submission

SECTION 1 Student to complete

Name: James Balfe
Student ID: X13114182
Supervisor: Ron Elliott

SECTION 2 Confirmation of Authorship

The acceptance of your work is subject to your signature on the following declaration:

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

Signature: James Balfe

Date: 10/05/2017

NB. If it is suspected that your assignment contains the work of others falsely represented as your own, it will be referred to the College's Disciplinary Committee. Should the Committee be satisfied that plagiarism has occurred this is likely to lead to your failing the module and possibly to your being suspended or expelled from college.

Complete the sections above and attach it to the front of one of the copies of your assignment,

What constitutes plagiarism or cheating?

The following is extracted from the college's formal statement on plagiarism as quoted in the Student Handbooks. References to "assignments" should be taken to include any piece of work submitted for assessment.

Paraphrasing refers to taking the ideas, words or work of another, putting it into your own words and crediting the source. This is acceptable academic practice provided you ensure that credit is given to the author. Plagiarism refers to copying the ideas and work of another and misrepresenting it as your own. This is completely unacceptable and is prohibited in all academic institutions. It is a serious offence and may result in a fail grade and/or disciplinary action. All sources that you use in your writing must be acknowledged and included in the reference or bibliography section. If a particular piece of writing proves difficult to paraphrase, or you want to include it in its original form, it must be enclosed in quotation marks

and credit given to the author.

When referring to the work of another author within the text of your project you must give the author's surname and the date the work was published. Full details for each source must then be given in the bibliography at the end of the project

Penalties for Plagiarism

If it is suspected that your assignment contains the work of others falsely represented as your own, it will be referred to the college's Disciplinary Committee. Where the Disciplinary Committee makes a finding that there has been plagiarism, the Disciplinary Committee may recommend

- that a student's marks shall be reduced
- that the student be deemed not to have passed the assignment
- that other forms of assessment undertaken in that academic year by the same student be declared void
- that other examinations sat by the same student at the same sitting be declared void

Further penalties are also possible including

- suspending a student college for a specified time,
- expelling a student from college,
- prohibiting a student from sitting any examination or assessment.,
- the imposition of a fine and
- the requirement that a student to attend additional or other lectures or courses or undertake additional academic work.

1 Executive Summary

The concept of this project is to produce a website catering to the needs of the Irish public on information on safe online usage. The website will specifically provide information on a vast number of topics related to safe online usage such as cybercrime, cyber bullying and how to protect yourself while using the internet. The main goals of the website are to prevent cybercrime by educating the public on their needs to stay protected online, to assist and help victims who have already been affected by cybercrime. To offer help and assistance to victims of cyberbully adults and children and the parents of children who are affected by cyber bullying. The website will also be updating the public on the latest news in relation to cyber crime.

For this project, I conducted a variety of different business analysis techniques to gather requirements from stakeholders of the project. The techniques I used to conduct this project are recommended by the Business Body of Business Analysts (BABOK). They are Brain Storming session, Survey, Interviews with stakeholders, Meetings with stakeholders and interface analysis using wireframes and a use case diagram. After all the stakeholders of the project were verified I used the techniques on the different groups of stakeholders Project Sponsor, Project Manager, Content Manager, potential users of the website, Web developer and web designer to elicit requirements from.

I then documented all the requirements and prioritised these requirements using a Moscow Analysis which was very beneficial as I could then categorise the requirements to put together for the IEEE requirements Specification. This IEEE document specifies all the functional and non-functional requirements needed to put the keepsafeonline.ie website together by the developer and designer of the website

2 Planning Requirements Elicitation and analysis

Introduction

For this project I have conducted a variety of business analysis techniques to gather requirements from stakeholders. I first began to gather requirements using a brainstorming session conducted by myself and an assistant to record the brainstorming session by taking notes and recording them on a laptop. The Brainstorming session attendees were a variety of the different stakeholder groups who would have an interest in the website. After a successful brainstorming session to gather requirements and ideas for the website I then took some of the requirements gathered and used them in the survey. I conducted this survey to a wide variety of different potential users of the website of all ages, gender, and had some specific questions to parents. The Aim of the survey was to measure the interest in the topics which would be on the website to get an insight to which type of topics would be most beneficial to the users and also which topics would be most beneficial to parents on keeping their children safeonline. The survey also gave participants an opportunity to add any requirements which had not already been covered.

Continuing on with the requirements gathering I then conducted a meeting with the project sponsor and project manager to reflect on the results of the survey and gather non functional, design and development requirements. This would then prepare myself for the interviews with the designer and developer of the website. As I would have a clear set of requirements and understanding of the project and what the sponsor wanted. With this clear understanding of what was required I could then go to the professionals who would be building and designing the website with a specific list of requirements expected to be met.

The interviews with the Web designer and web developer then gave me different requirements which would be needed for the development and design process and backend of the website. Which I could then create a Moscow analysis and prioritise the requirements. The interviews also gave me an opportunity to provide clarity on what the website would do and would not do.

Business Need

The rise in both cyber-Crime and cyber-bullying every year, shows us that there is a need for this type of website in Ireland catering to the needs of the citizens of Ireland. There are websites which would be similar to keepsafeonline.ie which are Irish but do not have the same scope as keepsafeonline.ie other Irish websites on these issues are more segmented to different users such as cyber bullying for under 18's reachout.ie

“80% of parents surveyed felt that online resources should cater for adults working with young people and young people themselves thus indicating their preference for an all-inclusive resource that addresses multiple needs” (Bridging the digital disconnect 2013, p. 2)

“69.8% of parents stated that they were likely/ very likely to look for help on the internet if their child was going through a tough time” (Bridging the digital disconnect 2013, p.2)

The site may be a first point of call for a victim of cyber-crime, cyber-bullying, or a family member/ friend of a victim of these crimes. The website will provide support to all the members of society who may need assistance in the wide range of dangers which can affect people from using the internet. The website will provide detailed content on topics related to cybercrime and cyberbullying, up dated news on a daily to weekly basis of related topics to the information provided on the website. Weekly blogs from experts in the field of cybercrime/bullying. The website will also upload videos as a way of explaining topics or as a way of shown these topics from another perspective to raise awareness of how the topics can affect people in different ways.

The website plans to create a major marketing campaign on the issues of cyber/crime cyber bullying with online videos like drink driving adds where the effects of victims are highlighted. As technology advances the use of devices which have access to the internet is constantly increasing, as a result people are spending increased amounts of time using services such as Facebook, online gaming, dating apps, online shopping, online banking. These services have made life easy and fun to use for the community but there are dangers involved in these services and people can easily become the victim of bullying, fraud, online stalking etc.... Keepsafeonline.ie aims to highlight these issues and prevent it happen to its users

Requirements Elicitation Techniques and Analysis Results

Brainstorming

Survey

Interviews

Stakeholder List

Business Analyst

Project Sponsor

Project Manager

Content Manger

Web Developer

Web Designer

Support Staff

End users of Website (Public)

Brain storming session

The first meeting of stake holders for keepsafeonline.ie took place on the 26th of January 2017. The business analyst conducted this session. The purpose of the brain storming session was to gather the first initial user requirements for the website and to come up with a name for the website. The stakeholders chosen for the brain storming session were individuals who would have an impact, influence and interest in the over-all project providing useful requirements for the project.

Participants of Brainstorming Meeting:

The Business Analyst

Project Sponsor

Content Manager

Lecturer from a college

2 Members of the Public

1 college student

1 teacher from a secondary school

2 parents

Meeting Location: Conference Room in the Spencer Hotel Dublin 1

Time of Meeting: 7 PM 26th January 2017

Brain Storming Session Rules:

Mobile phones must be switched off during the brain storming session.

All participants must respect the views of other stakeholders

Each stakeholder will get an allotted time to express their view and input ideas to the meeting.

Participants who are disruptive during the meeting will be removed without any prior notification

Each stakeholder is expected to attend 30 mins prior to the brain storming session commencing for light refreshments and to help settle all stakeholders before the meeting commences.

The business analyst host the brainstorming session while writing the ideas down on a white board and contribute ideas and inputs. An assistant of the business analyst will also be present to record the meeting onto a word document on a laptop this assistant will not participate in the brain storming session.

All ideas are welcome and will not be judged the more ideas the better. Each participant is expected to listen to all ideas raised.

No participants are expected to leave until the meeting has ended.

Requirements from Brain storming session

1. Passwords
2. Contactless Payments
3. Searching the internet
4. Ransomware
5. Online Gambling
6. Smart TV's
7. The Internet of things
8. Scam Emails
9. Job Hunting
10. Dating Online
11. Social Media
12. Online Radicalisation
13. Online Shopping
14. Smart Phones and Tablets
15. Using Wi-Fi in public places
16. Online Banking
17. Subscription Traps
18. Privacy and Identity theft
19. Cyber Bullying
20. Online Gaming
21. Parental control Software
22. Safe Browsing
23. Viruses
24. Information on the age group of your child
25. Texting and sexting
26. Internet addiction
27. Pornography
28. Strangers Online
29. Jargon Buster
30. E-Videos to help use the site
31. Filter to help narrow down the information needed
32. Search Tool
33. Links to other websites which may be helpful
34. Option to enlarge the text to personal preference
35. Audio facility for visually impaired
36. News section
37. Direct chat feature
38. Blog
39. Language converter
40. Social media pages for Keepsafeonline.ie
41. What we are about
42. Sponsors and partners
43. Get safe top 10 tips
44. A quiz to test knowledge of online safety

- 45. Keepsafeonline.ie App
- 46. How to use a PC

The Survey

This survey will be used to gather requirements from potential users for a website keepsafeonline.ie. The aim of this website is to help provide information to the public on using the internet safely. By providing information on the potential risks while using the internet to everyone of all ages. All the information collected in this survey is fully confidential and will only be used for the purpose of a 4th year college project currently been conducted by James Balfe at the National College of Ireland.

Question 1

Which age Category would you be in? please choose

13 to 18	1	1.3%
18 to 25	25	32.1%
25 to 35	32	41%
35 to 45	14	17.9%
45 to 60	5	6.4%
Over 60	1	1.3%

Question 2

What is your Gender

Male	27	34.6%
Female	51	65.4%

Question 3

Which category would you be in? More than one can be selected

Student	22	28.2%
Employed	62	79.5%
Unemployed	6	7.7%
Parent	13	16.7%
Grand Parent	1	1.3%

Secondary School Student	1	1.3%
Retired	0	0%
Self Employed	2	2.6%
Business Owner	2	2.6%

Question 4

When Online Which Devices would you use to browse the internet?

Laptop	39	50%
Smart Phone	73	93.6%
Tablet	29	37.2%
Desktop PC	18	23.1%
Smart TV	9	11.5%
Other (Option to Specify)	0	0%

Question 5

When searching the internet which search engine would you use the most?

Google Chrome	55	70.5%
Windows Edge	1	1.3%
Internet Explorer	6	7.7%
Firefox	2	2.6%
Safari	14	17.9%
Other (Option to Specify)	0	0%

The Following questions contain number scales from 1 to 4. 1 being most important to you, 2 of some interest, 3 Neutral, 4 no interest at all

Question 6 From the following list of topics please indicate using the number scale your interest in these topics on keeping yourself safe and protected online

Topic	1	%	2	%	3	%	4	%
Contactless Payments	34	43.5%	14	17.9%	20	25.6%	10	12.8%
Searching the internet	40	51.2%	5	6.4%	10	12.8%	13	16.6%
Ransomware	45	57.6%	8	10.2%	7	8.9%	8	10.2%
Online Gambling	30	38.4%	15	19.2%	20	25.6%	13	16.6%
Smart TV's	20	25.6%	18	23.7%	16	20.5%	14	17.9%
The Internet of things	43	55.1%	25	32.5%	3	3.8%	7	8.9%
Scam Emails	45	57.6%	15	19.2%	8	10.2%	10	12.8%
Job Hunting	15	19.2%	8	10.2%	45	57.6%	10	12.8%
Dating Online	25	32.5%	30	38.4%	10	12.8%	13	16.6%
Social Media	50	64.1%	3	3.8%	5	6.4%	20	25.6%

Online Radicalisation	18	23.7%	30	38.4%	10	12.8%	10	12.8%
Shopping Online	55	70.5%	15	19.2%	5	6.4%	3	3.8%
Smart Phones and Tablets	33	42.3%	25	32.5%	8	10.25%	12	15.3%
Using Wi-Fi in Public Places	23	29.4%	35	44.8%	1	1.2%	19	24.3%
Online Banking	43	55.1%	25	32.05%	8	10.2%	2	2.5%
Subscription Traps	37	47.4%	10	12.8%	13	16.6%	18	23.07%
Privacy and Identity theft	55	70.5%	8	10.25%	5	6.4%	10	12.8%
Passwords	36	46.1%	8	10.2%	18	23.7%	16	20.5%

Question 7

Are you a parent?

Yes	28	35.9%
No	50	64.1%

Question 8

The following questions contain number scales from 1 to 4. 1 being most important to you, 2 of some interest, 3 Neutral, 4 No interest at all

If you are a parent which of the following would benefit most as a parent if the website offered information on the following topics to help keep your children safe online

Topic	1	%	2	%	3	%	4	%
Cyber-Bullying	15	51.7%	3	10.3%	5	17.2%	6	20.7%
Online Gaming	5	22.7%	4	18.2%	7	31.8%	6	27.3%
Parental Control Software	13	50%	7	26.9%	2	7.7%	4	15.4%
Safe Browsing	11	44%	7	28%	3	12%	4	16%
Viruses and Malware	13	52%	4	16%	2	8%	6	24%
Online Radicalisation	5	21.7%	6	26.1%	6	26.1%	6	26.1%
Information on the age group of your child	12	50%	5	20.8%	2	8.3%	5	20.8%
Texting and Sexting	11	47.8%	4	17.4%	3	13%	5	21.7%
Social Media	9	36%	4	16%	7	28%	5	20%

Internet Addiction	11	45.8%	2	8.3%	6	25%	5	20.8%
--------------------	----	-------	---	------	---	-----	---	-------

Question 9

Any others Please Specify

Facebook Live

Question 10

To help us create a website which is fully user friendly, helpful, welcoming which can be used as an information resource. Please select the following which you feel would attract you to the site and would encourage repeat usage of the website. (Tick all that Apply)

Jargon Buster to help define technical words	35	44.9%
E-videos to help use the site to your advantage	33	42.3%
Filter (To help narrow down the information you need)	49	62.8%
Search Tool	37	47.4%
Links to other websites which may be helpful	31	39.7%
Option to enlarge the size of text to your personal preference	15	19.2%
Audio facility (for visually impaired)	14	17.9%

Question 11

If the website was to contain a news section on news such as major hacks, data breaches, cyber-attacks and research conducted by genuine agencies would this attract you to come back to the site?

Yes	43	55.1%
No	7	9%
Maybe	28	35.9%

2.1.1

2.1.2

2.1.3

2.1.4

2.1.5

Question 12

If keepsafeonline.ie contained a direct chat feature with a member of the team to help about questions regarding safe online usage, Cyber-Crime, Cyber-Bullying would this be a helpful feature?

Yes	70	89.7%
No	3	3.8%
Maybe	5	6.4%

Question 13

If you use social media which sites do you use? (More than one option can be picked)

Facebook	75	96.2%
Twitter	19	24.4%
Snapchat	45	57.7%
Instagram	44	56.4%
Boards.ie	13	16.7%
Blogs	4	5.1%
YouTube	58	74.4%
Dating Sites	0	0%
None	0	0%
Other	0	0%

Question 14

Do you think there is enough being done about cyber-bullying to prevent it happening?

Yes	7	9%
No	71	91%

Question 15

If English or Irish is not your first language please choose your first language in the list below or specify your first language

Polish	1	25%
Spanish	1	25%
Italian	0	0%
French	0	0%
German	0	0%
Russian	1	25%
Other	1	25%

Indian

Question 16

If keepsafeonline.ie used social media to update users of recent news and activities would you find this a useful feature?

Yes	62	79.5%
No	1	1.3%
Maybe	15	19.2%

Question 17

Would the following features benefit you while using the site? (Thick all that apply)

What we are about	55	70.5%
Sponsors and Partners	10	12.8%
Blog	15	19.2%
Get safe top 10 tips	49	62.8%
A quiz to test your knowledge	34	43.6%

Question 18

Would you consider downloading if available in the future an app for getsafeonline.ie?

Yes	46	59.7%
No	3	3.9%
Maybe	18	36.4%

2.2

2.3 Survey Summary

This survey was taken by potential users of keepsafeonline.ie, the stakeholders were a mixture in age, gender, parents, and students. The wide variety of different stakeholders provided us with information on the types of devices that users of the website will use to access keepsafeonline.ie and the amount of time they would spend browsing the internet on certain devices, also the search engines used to browse the site which will help in the development and design of the website. The survey had a list of end user requirements of topics which would be covered by the site and a number scale of 1 to 4 was used so stakeholders could indicate which topics they would find useful to help keep themselves safe online. The number scale was used as a tool which could help with prioritising requirements for the Moscow analysis.

Participants were asked if they were a parent and if yes two questions were then asked in relation to parents first was to state the number of children they had and the ages of their children. Second a list of topics related to the safety of children and a number scale also 1 to 4 to indicate the interest of the topics provided to keeping their children safe online. Parents had the option to add in any other topics that they would benefit from that were not already suggested in the question. Only one suggestion was made in relation to Facebook live a feature of the social media platform which enables users to post live videos. This will be added as a sub category of Facebook under the social media information on keepsafeonline.ie

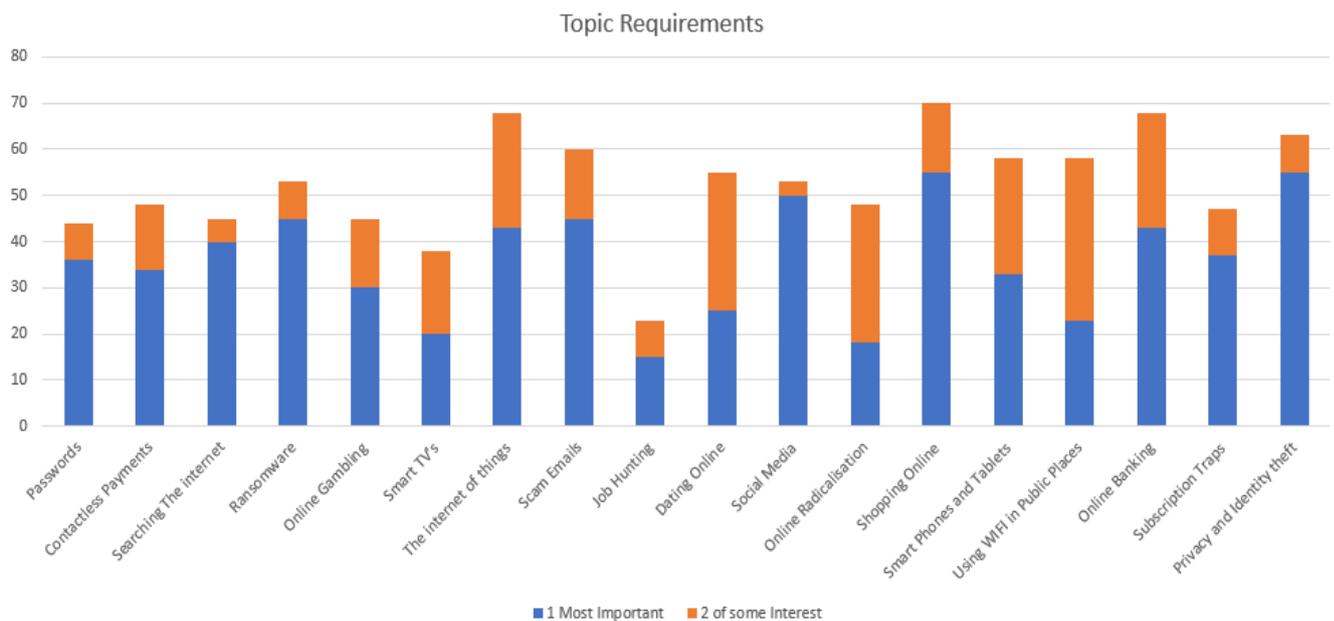
To help gather functional requirements from stakeholders a question was given with a list of functional requirements. Participants of the survey were asked which of these requirements from the list would they find beneficial to them if they were featured on the site this question also contributed to the prioritisation of requirements for the Moscow analysis.

The question regarding the news feature was asked separately as this feature would be a main feature of the site to encourage repeat usage of the website. The news section would consist of employing a SME to take control of this feature so the interest of stakeholders on this question was important. The question on the chat feature was also intended for the same reasons as the news question to measure the interest in the feature.

The Social media question was asked to measure which social media platforms were most popular with the stakeholders as creating profiles and pages on these platforms to create awareness of keepsafeonline.ie and as a channel of communications between keepsafeonline.ie and its stakeholders. Participants of the survey were then asked if they felt enough had been done about preventing cyber bullying from happening. This question was important for two reasons one was to measure the interest of stakeholders on the topic. The second reason was in relation to the business case of the project as the sponsor and his effort for the funding of the project.

Finally, stakeholders were asked if they would consider downloading an App for keepsafeonline.ie if it were available in the future. This question was asked to gain an insight if the website is successful how popular would an App become. It could also be interpreted that an App could have been more suited to the business case than a website as in relation to results of question 4 on the survey 93.6% of stakeholders browse the internet on a smartphone compared to 50% on a laptop and 23.1% on a PC. A question on this matter will be put to the project sponsor.

2.4 Survey Results



The above chart illustrates the interest in topics that the website will cover in relation to online safety. The results of the interest in these topics was used to prioritise these user requirements for the Moscow analysis. If 40 or more stakeholders selected most important for a topic requirement the requirement then became a **Must** in the Moscow analysis. The remaining topics which were selected as most important and of some interest by 40 or more stakeholders were then prioritised as a **Should** in the Moscow analysis. The remaining topics that got selected by less than 40 people were then prioritised as a **Could**.

2.4.1 Survey Feedback

Overall, that's a good solid job on the survey. Just a few small comments...

Do you accept friend requests from strangers on social media?

I do on some and absolutely don't on others because the use case for each network is very different. LinkedIn for example I have over 900 connections and I know about 50 of them! So I answered "maybe" here but I'm not sure what James wants to get from this question. It might be better to list out the networks and have a yes, no, depends on each one or alternatively an input area to free type.

On languages there is "Option 7" as one of the languages.

I would maybe consider rewording this question...

"Would you be interested in links to social media pages if featured on the site to get updates of what is happening to appear in your news feed on social media? *"

...it took me a while to grasp the meaning.

Would the following features "on" benefit you while using the site?

^ Remove the "on"

I'd also remove Disclaimer, Contact Page and Cookies here are they are not really benefits to the user. Disclaimer and Cookies are just the nuts and bolts that are required for all websites along with T&Cs. I'd keep this list as site features that translate into benefits for the user.

Happy to help further via phone/skype chat to discuss what James wants to get from the survey. A survey should always start with what data do I need back from this survey and then architect the questions around that. Always ask yourself "if I have these answers can I action work on them?"

(Survey feedback provided by Tony O'Donohoe Product Designer/Manager Paddy Power)

I had the same comments with regards to the question on accepting friend requests on social media. There would be more of a chance I would accept a friend request from a stranger on LinkedIn because of work but at the same time I would be weary and look at their profile and see where they work first. If they work outside of Ireland I would decline the invite so this would be on a case by case basis.

The below question could probably be reworded to make it a little clearer:

"Would you be interested in links to social media pages if featured on the site to get updates of what is happening to appear in your news feed on social media? *"

to

"Would you be interested in links to social media to receive news updates in your social news feeds? *"

But everything else too me looked great to me :)
(Survey Feedback provided by Carly Mooney Events planner and Administrator at Chambers Ireland)

2.5 Project Sponsor and Project Manager Meeting

1st March 2017

Minutes of Meeting

The Survey

Security

Pages on the website

Design of the website

Administrators of website

Requirements

Main functions of the website

Useful Links

The Business Analyst arranged for a meeting after the survey of stakeholders to discuss the results of the survey and to gather further requirements from the sponsor and project manager. This meeting would also be an opportunity for both attendees to raise any concerns that they would have at this point. The meeting took place before the developer and designer were interviewed as this would give the business analyst sufficient time to have clarity on the requirements from potential users, the sponsor, and the business case.

The first issue raised about the survey to the project sponsor was about the question regarding if an app was developed for keepsafeonline.ie would users consider downloading the App as almost 60% confirmed they would consider downloading the app and another 36.4% choose the maybe option. I wanted to know the project sponsor's thoughts on this result. The project sponsor was happy with the result of this question and the survey. The sponsor's view on a mobile app for the site is something that will be considered soon once the website gets out of its infancy stage and is more established online and has a strong enough brand awareness with the public.

The project sponsor was then asked about the main requirements he wants the site to contain prior to the launch date. The project sponsor insists the site needs to be easy to navigate for users in need of information on the topics the website caters for so **Usability** is a high priority. **Security** of the website on the backend is a requirement also of high priority for the project sponsor as the main driver for the website is to get the public to be aware of the dangers online the website needs to be robust against any kind of dangers such as hacking.

Measures to be put in place to ensure keepsafeonline.ie is at the top of the list when searched for on search engines. Both sponsor and project manager understand that the design of the website is a contributor to how search engines specifically google rate website's on how they are designed and usability. The project manager raised the suggestion about the website loading times as websites with poor loading times get bad rating also.

During the meeting it was decided that the design of the front end of the website would be done by a designer using bootstrap. The developer of the website's backend would need to ensure that it is secure as bootstrap is used for a high percentage of websites on the internet by small and large organisations. This does not guarantee good security so the developer must be highly experienced in dealing with security features on the backend.

The administrators of the website were also discussed and the importance of employees who are giving administrator access to the website will have different types of access relevant to the section of the website they are responsible for. Different administrator access accounts need to be set up but also need to be thought of in the design of the website to ensure a continuous flow between sections of the website.

The home page was put to the project sponsor and what he envisions it looking like. The sponsor has done some research on how he wants the site to look and wants the homepage to have a welcoming image and some welcoming text. On the homepage, he wants tabs under the image on top of the page the tabs are all links to the different sections of the website. The tabs are as follows, Cyber-Bullying, Cyber-Crime, News, Blog, what we are about, Contact us, Useful Links.

The cyber bullying page will have an introduction on cyber-bullying and will have a list of sub categories which are all links to a page specifically on the sub category for example Cyber-Bullying>Social Media. The cybercrime section will also be categorised into sub sections Cyber-Crime>Online Banking.

The news section of the website consists of articles, images, and videos related to news on the topics which the website covers. Users should be able to scroll down the news section of the website the latest news articles will always be at the top of the page. The blog page will also have the latest posts at the top of the page and users can scroll down the page looking at previous blogs. What we are about page is an introduction of what keepsafeonline.ie aims and goals are on keeping the public safe online who the site is run by and a summary of the team behind the project.

The contact us page the project sponsor wants this page to include contact details of keepsafeonline.ie email address, geographic address, and contact number. This is also a requirement by law to provide this information. The useful links page is a priority for the project sponsor as this page will contain links to other services that may be more beneficial and direct to certain victims of crimes that have already taken place. These links will be Garda.ie, Pietahouse.ie, Childline.ie, and the HSE.ie contact numbers for these services will also be provided on the useful links page.

The issue of all requirements not been met before launch date was mentioned during the meeting. Both project manager and project sponsor understand that all requirements may not be met before launch date as time is a constraint. They both agree that the priorities set on the Moscow analysis at this point of the project are a fair understanding of what is required to get the project launched to a tight schedule and the requirements that potentially may not be met before the launch the Could's and Should's. They agree that the project can launch with the musts but stress that quality must be a priority in design and development so after launch date if some requirements are not met they will be met soon after launch.

2.6 Interview with Developer

20th February 2017

Items Discussed

Development Tools

Languages which will be used

Hosting

Optimizing Code

Optimizing of images

Search engine optimization

Key word report

Possibility of requirements changing in development stage

Measuring of results

Security

Databases

Auto scaling

Designer: Mina Gaid

The interview of the developer helped the business analyst to gather different types of requirements in relation to the backend of the website. The development tools which will be used to develop the website were first discussed in the interview. The developer was informed that the project sponsor supported the idea of the website front end being developed using bootstrap the web developer agreed with the use of bootstrap and suggested that Larval be used for PHP or Django for python for back end development. Both languages Mina has plenty of experience using for this project he will use python.

The issue of high amounts of traffic to the website at different times was raised as the website will be new we do not have any records to prepare for high amounts of traffic to the website. Mina assured me that optimized code and optimized images will help but mainly a good host for the website will prevent the website from crashing due to high amounts of traffic. Different web hosts were discussed during the interview and it was decided that Amazon AWS would be used for hosting the website as Amazon provide an excellent quality of service and the traffic to the site at peak times will never be problem as auto scaling will be used. As amazon allow developers to use any language for development, database and the server's will be in the cloud so the need for a server room is not a problem.

The project sponsor has concerns about how the website will be found on search engines will it be top of the list? Search engine optimisation will be used to find the website a simple Robot.txt and a few key words in the header will attract more traffic to the website. All web standards will be followed to ensure that the website is compatible with different web browsers. To measure usage of the website Amazon will supply good usage monitoring tools.

As the project is only in the design process I asked Mina how would he be prepared for changes in requirements if the happen further into the project. The use of frame works on the project will make it easy to deal with changes in requirements as frameworks allow for changes to be implemented with ease.

The concerns surrounding the security of the website were put to mina and security features were discussed to ensure the website will be as robust against dangers as possible.

Dependencies will need to be managed and kept up to date

To protect against SQL injection attacks parameterised queries will always be used.

Error messages to users will contain as little information as possible all detailed error logs will be kept in server logs this will also protect against SQL injection attacks.

A 404 page can be set up in the case the site is down. Normally, the site host will email or text the site admin automatically to let them know when their site is down.

Form validation and server side validation shall be used to protect against malicious code being inserted into the database or other issues to the website

Passwords will always be stored as encrypted files to add an extra layer of security they will also be salted and password requirements will be put in place that passwords must be at least 8 characters in length using at least one digit and one capital letter

HTTPS will be used for all webpages on the site

Rigorous testing will be done on the website before it is launched to find any potential vulnerabilities

What type of database(s) will be required to store all data for the website?

The most commonly used database is that of MySQL. Its popularity makes it almost the standard for developers. This insures support, documentation and development tools available to us. More so, it's developer friendly and does not require much to maintain.

89% of potential website users have stated they would find a live chat feature with keepsafeonline.ie employees what are the requirements to include this feature on the website?

Plug in code will be embedded into the code for the website this is not a major task to do and the same security procedures will protect this feature.

This can be done using a free JavaScript plugin such as Zopim

55.% of potential users of the website said they would be interested in a news section on the website this would entail the content manager of the website uploading articles on a regular basis can this functionality be added to the website but require extra security and be user friendly for editing purposes? Yes, server side validation and the security requirements for administrators should cover any immediate issues the data base will be on a different sever to the web server. I would recommend that the administrators who have access to upload these news articles can only do so when on the keepsafeonline.ie domain and that this cannot be done remotely.

2.7 Designer Interview

3rd of March 2017

Designer: Tony Donohoe

Previous work experience: Web Designer/Manager Paddy Power

The Business Analyst interviewed Tony who has a long history of web design over 17 years in the industry his previous project to work on was Paddy Powers the betting agent's website which has become very popular in the last few years. The purpose of this interview was to gather requirements from tony, inform him of the progress and developments which have been made on the project to date. First I informed tony that the other stakeholders on the project who have a high influence the project Sponsor and the Developer agree that the website front end will be designed using bootstrap. Tony fully agreed with this decision as he has plenty of experience using bootstrap when designing websites. Tony informed the BA that bootstrap is a very good software to use as it is excellent for responsive web design (The website will adapt to any screen on any device). Responsive web design is very crucial for the website as the results from the survey carried out indicate that the potential users of the website use many different types of devices to browse the internet.

I also asked tony about the universal design guidance for online public services. He informed me that he has done some work on websites in the past where this would also have been a requirement to follow these guidelines. Tony described to the BA some examples from his experience such as Don't use frames, colours need to match a palate to cater for persons who may be colour blind, font size must be a minimum of 14, Use style sheets to control all formatting and layout where possible.

To make the website compatible with screen readers Tony will ensure that the HTML is tidy as untidy HTML code creates issues for these screen readers. The BA then asked Tony what requirements would he need to complete his day to day tasks working on the website.

Hardware: Mac or PC most developers these days use Macs but when he began in the industry he used windows PC's so switch between both.

Software: Bootstrap, photoshop, WordPress, Dropbox, illustrator, Axure

2.8 Legal Requirements

As keepsafeonline.ie is been funded by the department of communications the website will be part of a public-sector organisation. The website will be used to communicate to the public, this requires certain laws to be followed such as the disability act. To ensure that the website is easily accessible for every member of society. The disability act has specific requirements which need to be followed by public sector organisations this directly relates to keepsafeonline.ie as accessible ICT is a priority. *“Where public body communicates in electronic form with one or more persons, the head of the body shall ensure, that as far as practible, the contents of the communication are accessible to persons with a visual impairment to whom adoptive technology is available”*

(Disability Act, section 28, 2005, source nda.ie)

An access officer needs to be included in the development and design process of the website to review and ensure the website meets the AA conformance rating in relation to the web content accessibility guidelines. 23 (2) *“In awarding a public contract, a contracting authority shall, as far as practible, ensure that the technical specifications for the contract take account of the need to prescribe accessibility criteria for all persons who are likely to use the relevant works products or service, particularly those who have disabilities”* (Procurement regulations, 2006, source nda.ie)

To ensure that keepsafeonline.ie is following the requirements necessary by law on both a national and international level. The design and development of keepsafeonline.ie will be following the universal design guidance for online public services. These guidelines were put together by the National Disability Authority with laws, policies and regulations considered.

To ensure all stakeholders who have a direct influence on the development and design process of the website are fully aware of these requirements. A meeting was held, the agenda was the guidelines for universal design and other legal requirements. The purpose of this meeting was to indicate how the universal design of the website can directly have an impact on each department within keepsafeonline.ie. How the guidelines will be implemented into the development, design, and content of the website.

The website also needs to contain other requirements to be compliant with the law. Company Registration number, registered address and place of registration need to be featured on the website. A privacy statement is a required to be compliant as the website will collect information using cookies and a contact us form which requires accepting contact details from the user.

Those in attendance at the meeting

The Business Analyst
Web Designer
Manager

The Project Sponsor
Access Officer

Web Developer
Content

Minutes of Meeting:

Privacy Statement

Policy Statement

The use of cookies

Terms and Conditions

The Universal Design of the website

Contact Details

Links to other websites

Content of website

Meeting Summary

The meeting of stakeholders in relation to compliance of the legal requirements for keepsafeonline.ie was very productive and an essential way of providing clarity across the different stakeholders related to the project. **The Privacy policy** was discussed and how it will be drawn up consisting of the eight data protection principles and how they fit into our organisation. The privacy policy is required by law but this does not get displayed on the website this policy is required for internal references.

The privacy statement is required to be displayed on the website by law and it describes how the organisation collects the data and uses the eight principles of the data protection privacy policy in a more clear and concise as this is a public statement. The policy statement will have a link on the bottom of every webpage on the site.

The use of cookies was discussed, the reasons why they are going to be used for measurability purposes such as how a user found the website, what pages they accessed, and what the different preferences the user selected while using the website. The user will be informed on each visit to the website that keepsafeonline.ie use cookies and the user will have the option to accept the use of cookies or decline for cookies to be used on each visit to the website. A cookie policy will be available to the user outlining the reasons cookies are used on the website.

Terms and conditions: are not required by law to have on the website but they will assist in the case of predefining the rules and terms of use of the website before any such legal action occurs. This can act as a legally binding contract between the website and its users. The reasons to include terms and conditions were discussed and agreed upon such as to prevent abuse, to inform of the ownership of content on the website, to limit liability, to provide information on the governing law. A link to the terms and conditions of the website was agreed to be available on the home page.

The universal design of the website

How the universal design of the website will be approached was discussed and with the help of the access officer present at the meeting this gave clarity on some grey areas that other stakeholders had concern about.



(source: Universal design and guidance for online public services nda.ie)

Contact Details: Were discussed on how users of the website can contact the website directly it was agreed that the contact details of the website will have a page specifically detailing the contact details such as company name, Email address, geographic location address and a phone number. Displaying contact details is a legal requirement so this is a priority.

Links to other websites: The website will contain a useful links page to other relevant websites. This is a requirement from the project sponsor and is also a priority because the sensitive topics that the website features in some cases may require emergency assistance from other services. The services which will feature on this link page are public and genuine services such as the Garda, ChildLine, pieta house, and the HSE. The featured services support keepsafeonline.ie goals and have been informed that these links will be set up to their sites. When keepsafeonline.ie is launched, it has been agreed with these agencies that their websites will include keepsafeonline.ie in their useful links pages.

Content of website: All permissions will be sought from original owners of third party information, videos, pictures, and music that may be used on keepsafeonline.ie. Policies and procedures will be put in place regarding the source of news features on keepsafeonline.ie and permissions will be granted before any information is displayed on the website. Also discussed was how the content will be displayed on the website ensuring it will be following the design guidelines of the website. The Quality of the content the website will host is also an important factor in the success of the website, Quality checks will become standard ensuring that content is relevant and up to date, no misspelling, or inconsistency. The Content Manager will be responsible for the signing off any content prior to it been uploaded to the website.

Moscow Analysis

Function ID	Requirements	Moscow
F15	Social Media (Share)	Could
F16	404 Page	Must
F17	Quiz	Should
FR1	Logo Link	Must
FR10	News Section	Should
FR11	Blog	Could
FR12	Language Converter	Would
FR13	Cookies	Must
FR14	Social Media (Follow Buttons)	Must
FR18	Contact us form	Must
FR19	Cyber Bullying	Must
FR2	Search Tool	Must
FR20	Cyber Crime	Must
FR21	Searching the internet	Must
FR22	Ransomware	Must
FR23	Online Gambling	Should
FR24	Smart TV's	Could
FR25	The Internet of things	Must
FR26	Scam Emails	Must
FR27	Job Hunting	Could

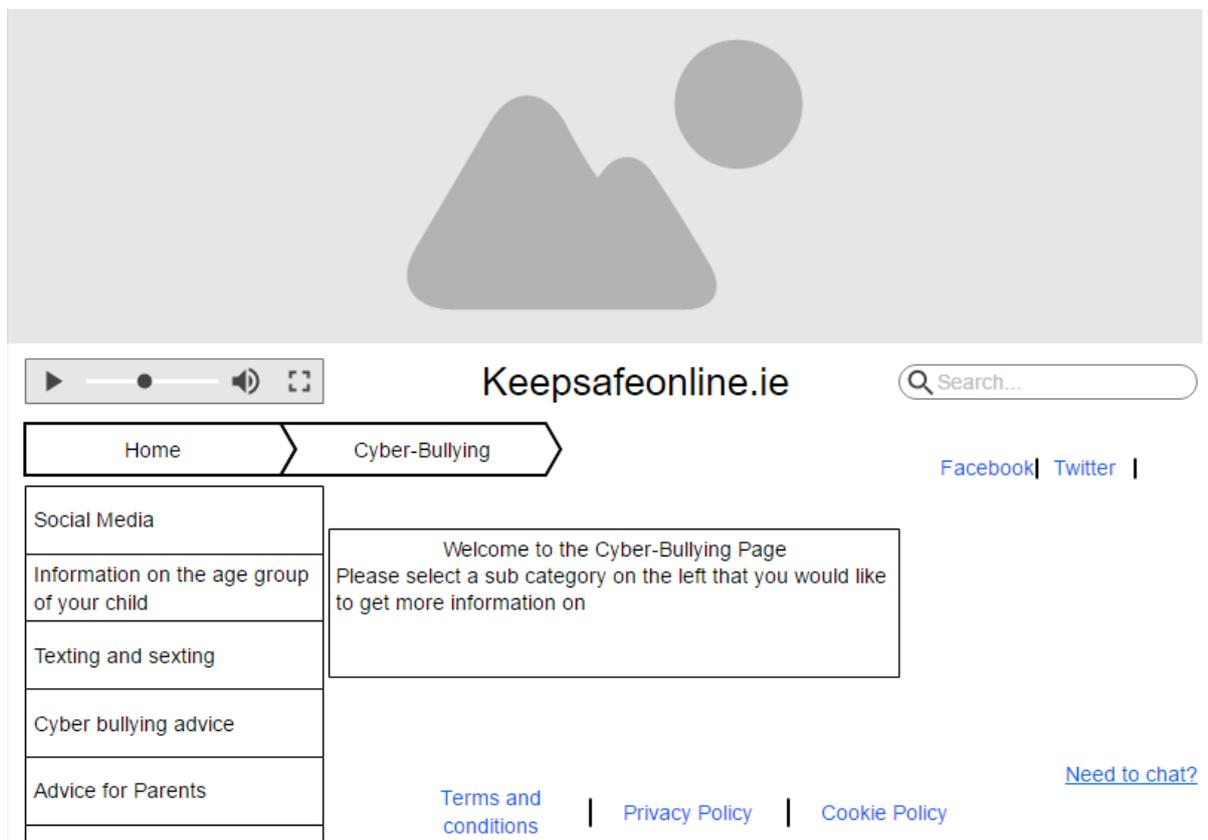
FR28	Dating Online	Should
FR29	Social Media Advice	Must
FR3	E-Videos	Should
FR30	Online Radicalisation	Could
FR31	Online shopping	Must
FR32	Online Gaming	Should
FR33	Passwords	Must
FR34	Contactless Payments	Should
FR35	Parental Control Software	Must
FR36	Safe Browsing	Should
FR37	Viruses	Must
FR38	Information on the age group of your child	Must
FR39	Texting and Sexting	Should
FR4	Links to useful web pages	Must
FR40	Internet addiction	Should
FR41	Sponsors and Partners	Should
FR42	Get safe top 10	Should
FR5	Search results Page	Must
FR51	Jargon Buster	Could

FR53	Social Media Presence	Must
FR54	Smart Phones and Tablets	Should
FR55	Using WIFI in Public	Should
FR56	Online Banking	Must
FR57	Subscription Traps	Should
FR58	Privacy and Identity theft	Must
FR59	What We are About	Must
FR6	Filter	Could
FR60	App	Would
FR7	Enlarge Text Option	Must
FR8	Audio Facility	Should
FR9	Direct Chat	Should
NF2.12	Auto scaling	Must
NF2.13	HTTPS	Must
NF2.14	Dependencies Updates	Must
NF2.15	Error Messages	Must
NFR2.1	Login	Must
NFR2.10	Time stamps	MUST
NFR2.11	Storage	Must
NFR2.4	Terms and Conditions	Must

NFR2.5	Cookie Policy	Must
NFR2.6	Encryption	MUST
NFR2.7	CRUD	MUST
NFR2.8	System Data	MUST
NFR2.9	Data Classification	MUST
NFR52	The use of cookies statement	Must
NFR61	Privacy policy	Must
NFR62	Privacy Statement	Must
NFR69	Universal Design Guidelines	Must

3 Interface Analysis

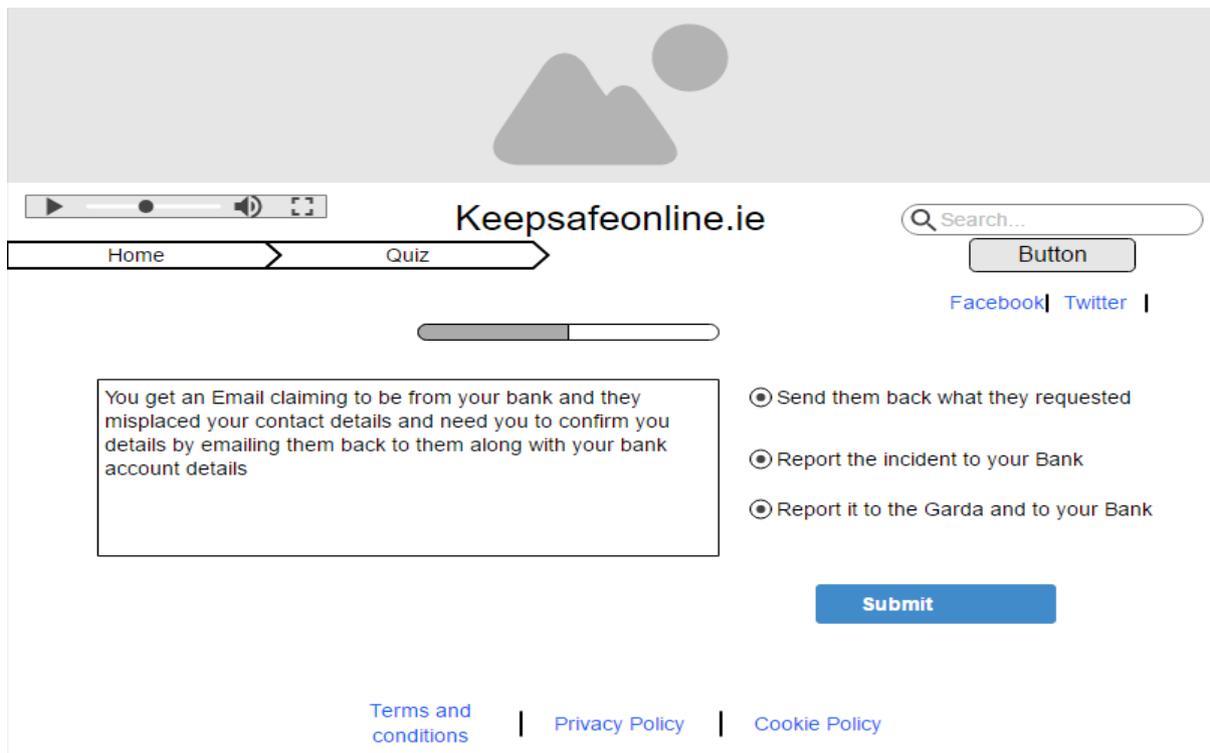
3.1 Wire Frame



Cyber Bullying Page



3.1.1 Cyber Crime Page



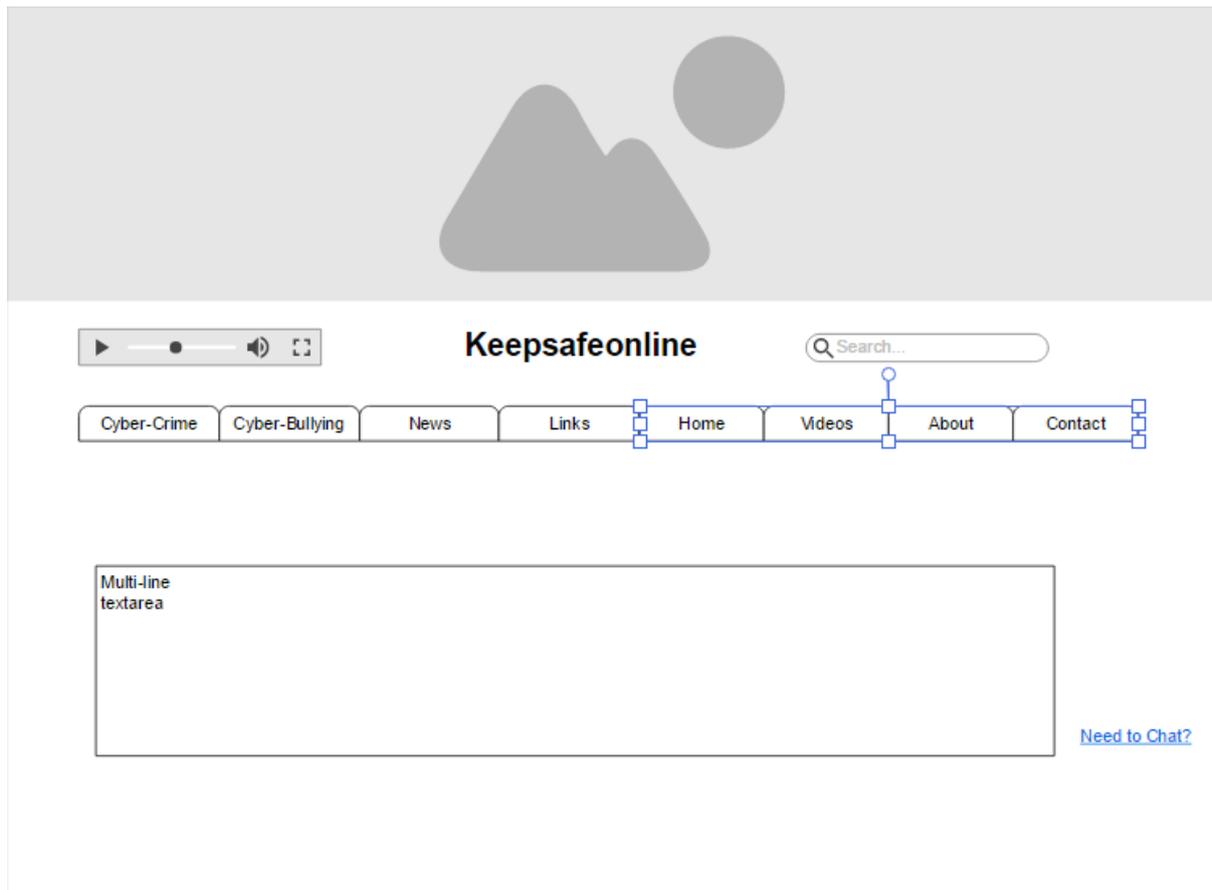
Quiz Page



3.1.2 Useful links Page



3.1.3 What we are about page

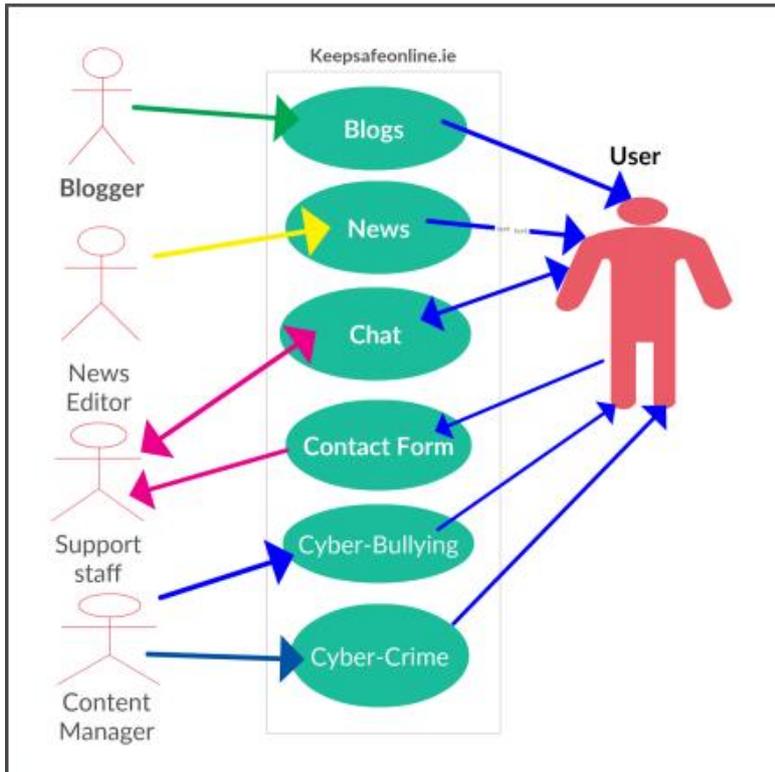


3.1.4 Home Page

3.2 Summary

After looking at the wire frames the project sponsor was happy with the over all design of the website and it was a good prototype to the way he expected the layout of the website to look. One thing that was noticed during the interface analysis phase was that another section should be added named protecting yourself as some of the topics which were popular with stakeholders. Did not go under the heading of cyberbullyin or cybercrime for example online gambling, smart phones and tablets so it was decided after the analysis an extra section of the website would be added specifically to just other

3.3 Use Case Diagram



3.4 Gant Chart



3.5 Work Breakdown Structure

★	Project Proposal	0 hrs	1 day	Mon 19/09/16	Mon 19/09/16
★	Project Proposal Document	0 hrs	6 days	Fri 14/10/16	Fri 21/10/16
★	October Journal	0 hrs	1 day	Fri 04/11/16	Fri 04/11/16
★	Requirements Specification	0 hrs	9 days	Fri 11/11/16	Wed 23/11/16
★	Project Prototype	0 hrs	7 days	Wed 12/04/17	Thu 20/04/17
★	November Journal	0 hrs	1 day	Fri 09/12/16	Fri 09/12/16
★	Mid Point Presentation	0 hrs	1 day	Thu 01/12/16	Thu 01/12/16
★	December Journal	0 hrs	1 day	Fri 06/01/17	Fri 06/01/17
★	Supervisor Meeting	0 hrs	1 day	Fri 11/11/16	Fri 11/11/16
★	Supervisor Meeting	0 hrs	1 day	Fri 02/12/16	Fri 02/12/16
★	Supervisor Meeting	0 hrs	1 day	Wed 14/12/16	Wed 14/12/16
★	supervisor meeting	0 hrs	1 day	Tue 14/02/17	Tue 14/02/17
★	Supervisor Meeting	0 hrs	1 day	Tue 07/03/17	Tue 07/03/17
★	Supervisor Meeting	0 hrs	1 day	Tue 28/03/17	Tue 28/03/17
★	Supervisor Meeting	0 hrs	1 day	Sat 25/03/17	Sat 25/03/17
★	Supervisor Meeting	0 hrs	1 day	Thu 04/05/17	Thu 04/05/17
★	Brainstorming Preparation	0 hrs	3 days	Tue 17/01/17	Thu 19/01/17
★	Brainstorming session	0 hrs	1 day	Thu 26/01/17	Thu 26/01/17
★	Documentation of Brainstormin Requirements	0 hrs	3 days	Fri 27/01/17	Tue 31/01/17
★	Preparation for Survey	0 hrs	7 days	Tue 07/02/17	Wed 15/02/17
	Showcase Materials	0 hrs	1 day	Wed 24/05/17	Wed 24/05/17
	Project hard copy Hand in	0 hrs	15 days	Wed 26/04/17	Tue 16/05/17
	January Journal	0 hrs	1 day	Thu 09/02/17	Thu 09/02/17
	Febuary Journal	0 hrs	1 day	Thu 09/03/17	Thu 09/03/17
	March Journal	0 hrs	1 day	Thu 06/04/17	Thu 06/04/17

4 IEEE Specification Document

4.1 Introduction

The IEEE document is being developed for keepsafeonline.ie a new website. The document we specify the key functional and non-functional requirements required to build the website. This requirements specification must be signed off by the project sponsor before development of the website begins.

4.2 Scope

4.2.1 Definitions, Acronyms, and abbreviations

Administrator: a stakeholder that may log into keepsafeonline.ie to conduct tasks such as upload videos, content, news articles, blogs. An administrator is not a developer.

User: Is a stakeholder who interacts with keepsafeonline.ie on the front end of the website.

Stakeholder: A specific person that may interact with keepsafeonline.ie in some way

4.3 References

IEEE software engineering standards committee “ IEEE std 830-1998, IEEE Recommended practice for software requirements specification” October 20th, 1998

4.4 Functional Requirements

Functional Requirement 1.1

Identification code: FR₁

Title: Logo Link

Description: The logo link will be displayed at the top of every page on the website. When users click on the logo link from any page on the website it must bring users back to the home page of the website.

Location: Every page of keepsafeonline.ie

Reasoning: This is a requirement of the project sponsor and also a recommendation from the access officer to support universal design.

Priority: Must have

Functional Requirement 1.2

Identification code: FR₂

Title: Search tool

Description: The search tool will be used to search the website for any key words entered and narrow down information in relation to the input from the user. This function should be similar to a search engine that users would be used to using allow for misspelling of words.

Location: Top right corner of every page on the website

Reasoning: This function will allow easy navigation of the website for end users to find the information they need in a short time. This function is also a recommendation from the universal design access officer.

Priority: Must Have

4.4.1

Functional Requirement 1.3

Identification code: FR₃

Title: E-Videos

Description: Video uploads functionality to be enabled for administrators. For end users, this feature must work when clicked by the user with 99% start time of video within 3 seconds of the video link been clicked

Location: option to have this feature on any page of website must be implemented into design code. So administrators can decide at a later stage.

Reasoning: Can help users with easy step by step instructions on topics, adds quality to the service provided by the website

Priority: Must

Functional Requirement 1.4

Identification code: FR₄

Title: Links to useful websites page

Description: A page on the website containing links to Garda.ie, Pietahouse.ie, Childline.ie and the HSE.ie these are all genuine agencies. The contact details of each service to be displayed also such as address and phone numbers. When a link of the selected agency is clicked it must bring the user to the homepage of the website link address.

Location: Tab on the homepage called useful links when tab is clicked must take user to links to useful websites page.

Reasoning: This is a requirement from the project sponsor and other stakeholders as this is extending the service of keepsafeonline.ie to other services who provide a 24 hour assistance

Priority: Must Have

Functional Requirement 1.5

Identification code: FR5

Title: Search results page

Description: a page displaying the results of a searched input in the search tool. The results must be numbered on the page, ranked by relevance, and must not contain duplicate results. Results to be displayed similar to the style results would be displayed on a search engine as this would not confuse users.

Location: To load after search button clicked on search tool after input from user

Reasoning: The search function is a requirement from different stakeholders and assists with good navigation of the website for users.

Priority: Must Have

Functional Requirement 1.6

Identification code: FR6

Title: Filter

Description: Filter to help with advanced search of website for information regarding dates, times and authors of information provided by the website.

Location: Next to search tool on every page

Reasoning: This feature will assist in finding specific information to users and add quality to users.

Priority: Could

Functional Requirement 1.7

Identification code: FR7

Title: Enlarge text option Button

Description: users have the option to in large text on the website with an enlarge text button with a drop down of font sizes Regular (font size 14), Medium (font size 20), Large (font size 26) , Extra Large (font size 36) when chosen on the homepage and the text size stays at selected size on all pages of the website until user reduces the size of text.

Location: On home page

Reasoning: Some users with a visual impairment need to be catered for by giving them the option to enlarge the size of text on the website

Priority: Should have

Functional Requirement 1.8

Identification code: FR8

Title: Audio Facility

Description: An audio facility needs to be implemented into the development of the website to play audio features related to the text on screen

Location: Home page

Reasoning: This feature is to aid users who may have limited reading skills

Priority: Must

Functional Requirement 1.9

Identification code: FR9

Title: Direct chat feature

Description: This feature will enable users of the website to interact with keepsafeonline.ie personnel on issues they may have, for advice and assistance. Plug in code to be used such a zopim.

Location: bottom right corner of every page

Reasoning: This is a requirement from stakeholders, potential end users of the survey 89% agreed that this would be a useful feature. The project sponsor also requested this requirement to add quality to the service offered by the website

Priority: Must Have

Functional Requirement 1.10

Identification code: FR10

Title: News section

Description: news section page to be featured where administrators can upload news articles, images and videos.

Location: Tab on homepage linked to news page

Reasoning: This requirement is popular with stakeholders and is expected to increase repeat usage of the website

Priority: Must Have

Functional Requirement 1.11

Identification code: FR11

Title: Blog page

Description: A blog page where members of the keepsafeonline.ie team can post blogs such as tips on security and experiences they have had in relation to content topics the most recent entry must appear first on the page. The blog page needs to be similar to a news feed on a social media platform so users can scroll down between blogs.

Location: Tab on home page linked to blog page

Reasoning: This feature is intended to increase repeat usage of website.

Priority: Could Have

Functional Requirement 1.12

Identification code: FR12

Title: Language Converter

Description: This feature will translate the text on the website to a language which is supported by the website depending on the language only some European languages including Irish, Spanish, French, Russian and Indian. Will be available from the database from launch date.

Location: Home Page

Reasoning: To assisted users who do not use English as a first language

Priority: Must Have

Functional Requirement 1.113

Identification code: FR13

Title: Cookies

Description: Cookies to be used to record information on users preferences while using the website, details of how users found the website such as key words they used to search for the website on their browser. Cookies to be used for measurability purpose's also to provide information on users usage of the website for example what pages the user visited and how many times they have visited the website. Cookies files to be encrypted for security reasons. The use of cookies on this website message should appear on entering the site and give users the option to accept or decline this message should also have a link to the use of cookies policy.

Location: Users Hard disk

Reasoning: Cookies to be used for measurability purpose's also to provide information on users usage of the website for example what pages the user visited and how many times they have visited the website. Cookies files to be encrypted for security reasons.

Priority: Must Have

Functional Requirement 1.4

Identification code: FR14

Title: Social Media Links (Follow Buttons)

Description: Social media (follow Buttons) for Facebook, Twitter, and YouTube. When the user clicks on one of each of these buttons the will be taking to a sign in page for the social media platform selected and once the sign in they will be taking to keepsafeonline.ie page on that social media site and will be given the option to follow keepsafeonline.ie.

Location: Home page, About us page, Blog page

Reasoning: This will be an excellent opportunity to promote the website and get our brand recognised by the public.

Priority: Must Have

Functional Requirement 1.15

Identification code: FR15

Title: Social Media (Share Buttons)

Description: These buttons for Facebook and twitter enable users to share information content from the website to the selected social media site.

Location: Blog page, Home Page, Contact Page, Useful links page, about use page, all the content pages (Cybercrime, Cyberbullying, News Page)

Reasoning: To create brand awareness and to expand the reach of our content to new audiences.

Priority: Must Have

Functional Requirement 1.16

Identification code: FR16

Title: 404 error page

Description: In the situation were getsafeonline.ie is gone down from the network the 404 error page will be displayed when users try to access the website or when a page is refreshed if the website is down this page will be displayed to the user of the site. For security reasons minimal information about why the website is down is to be displayed to the user. When this page is displayed to end users administrators need to be contacted immediately about the situation to get the site back up and functioning.

Reasoning: To inform users the website is down and to call back shortly

Priority: Must Have

Functional Requirement 1.17

Identification code: FR17

Title: Quiz

Description: A quiz page where users can be quizzed on their knowledge of internet safety. The quiz will select questions from a database containing hundreds of different quiz questions so now quiz will be the same. Each quiz will be 15 questions of multiple choice and cover all topics of keepsafeonline.ie

Location: Quiz Tab on the home page which links to the quiz page

Reasoning: The quiz requirement was popular with some of the stakeholders in the survey. The purpose is that the quiz may be useful to test users knowledge of what they know and also teach the users of stuff they may not know

Priority: Should

Functional Requirement 1.18

Identification code: FR18

Title: Contact Form

Description: Contact form is to enable the end user of the website to enter in contact details to a form and submit. The contact details the form should require are name, email address, Text input (for inquiry).

Location: Contact page

Reasoning: This will enable the user to contact the website out of office hours and support staff can then contact the user later.

Priority: Must have

Functional Requirement

Identification Code FR19

Title: Cyber Bullying

Description: A content page detailing what cyber bullying is and what it is all about. This page will act like a home page for cyber bullying and will contain a menu on the left of the screen with all sub categories which will be links to pages dedicated to the sub category on cyber bullying for example texting and sexting will be on the menu of links when this is clicked it will take the user to the page on sexting and texting.

Location: Tab on home page of website called cyber bullying which is linked to this page.

Reasoning: Cyber bullying is one of the main sections of the site and contains some sub categories

Priority: Must Have

Functional Requirement

Identification Code FR20

Title: Cyber Crime

Description: A content page containing information on cybercrime the definition of cybercrime and an overall view of cybercrime. This page will act as a home page for cybercrime and will contain a menu of links of subcategories on the left of the screen. Similar to the cyberbullying page with the same design but different content.

Location: Tab on home page of website called cybercrime which is linked to this page.

Reasoning: Cybercrime is also one of the main sections of the website and contains sub categories.

Priority: Must Have

Functional Requirement 21

Identification Code FR21

Title: Searching the Internet

Description: Searching the internet is a content page offering information, tips, and advice on safe browsing on the internet

Location: Tab in Menu of links on cybercrime page linked to the searching internet page

Reasoning: This is a sub category of cybercrime and received some interest from stakeholders in the survey

Priority: Must Have

Functional Requirement 22

Identification Code: FR22

Title: Ransomware:

Description: Content page with detailed information on Ransomware

Location: Tab in Menu of links on cybercrime page linked to ransomware page.

Reasoning: This topic received high interest from stakeholders in the survey

Priority: Must Have

Functional Requirement 23

Identification Code: FR23

Title: Online Gambling

Description: Content page with detailed information about online gambling

Location: Tab in Menu of links on cybercrime page linked to online gambling page.

Reasoning: This topic received some interest from stakeholders

Priority: Should Have

Functional Requirement 24

Identification Code FR24

Title: Smart TV's

Description: Content page on Smart TV's detailing how to browse safely using a smart TV and how to put measures in place protect children using smart TV's from accessing age restricted content.

Location: Tab in Menu of links on cybercrime page linked to smart TV's page

Reasoning:

Priority:

Functional Requirement 25

Identification Code FR25

Title: The internet of things

Description: Content page with detailed information on devices which are connected to the internet and how to manage these devices with children and other useful information.

Location: Tab in menu of cyber bullying page

Reasoning: This topic gained a lot of interest from stakeholders in survey

Priority: Must Have

Functional Requirement 26

Identification Code FR26

Title: Scam Emails

Description: Detailed content page on scam emails providing information on how to spot a scam email, what to do if you think you have received scam email or if you have fallen victim to a scam email and what to do next.

Location: Tab on menu of links on cybercrime page linked to scam emails page

Reasoning: Scam emails are common place and many people fall victims to this type of crime this topic was also very popular with stakeholders in the survey

Priority: Must Have

Functional Requirement 27

Identification Code FR 27

Title: Job hunting

Description: Detailed content page on how to protect your details while job hunting online as it has been reported that frauds are online to try get perspective job hunters details as part of identity theft operations.

Location: Tab in links menu on cybercrime page linked to job hunting page

Reasoning: was not as popular with stakeholders as this is a technique which is not as common as scam emails for example.

Priority: could have

Functional Requirement 28

Identification Code FR28

Title: Dating online

Description: content page on detailed information on dating online using dating websites online and the dangers that can present itself using these services such as fraud were an individual uses the good nature of another to try get money from that person.

Location: tab on menu of cybercrime page linked to dating online page

Reasoning: Dating online can present many different types of dangers to unsuspecting users such as fraud, cyber stalking, fake profiles and many more. This topic received interest from stakeholders in the survey

Priority: Should Have

Functional Requirement 29

Identification Code: FR29

Title: Social Media Advice

Description: Detailed content page with information on good social media practices, Advice for parents and their children using social media services.

Location: tab in menu on cyberbullying page linked to social media advice page

Reasoning: Many dangers of using social media for everyone if not used with caution especially young people

Priority: Must Have

Functional Requirement 30

Identification Code: FR30

Title: Online Radicalisation

Description: Content page with information regarding online radicalisation how extremist's groups use social media and other online services to groom and brainwash vulnerable people to get involved in their organisations.

Location: Tab in menu page on cybercrime linked to online radicalisation page

Reasoning: This form of recruiting by extremist's groups and terrorists has been very popular since the early 2000's. This feature received interest by stakeholders in the survey

Priority: Must Have

Functional Requirement 31

Identification Code: FR31

Title: Online Shopping

Description: Online shopping has many dangers were customers can be vulnerable to fraud, faulty goods, consumer statutory rights not been meet and many more. This content page will provide useful information too users on online shopping

Location: Tab in menu on cybercrime page linked to online shopping page.

Reasoning: Very popular with stakeholders and a very common issue of consumers falling victim to online shopping fraud.

Priority: Must Have

Functional Requirement 32

Identification Code: FR32

Title: Online Gaming

Description: Online gaming is very popular with teens on gaming consoles this can be also a place of online bullying as the use of headsets to communicate and instant messaging on these devices can be a place of online bullying. Advice on safe online gaming will be provided on this page.

Location: Tab in cyberbullying menu and linked to online gaming page

Reasoning: popular with many stakeholders on survey

Priority: Should Have

Functional Requirement 33

Identification Code: FR33

Title: Passwords

Description: Content page with detailed information on how to create a strong password and advice on using different passwords. Also, advice on using a password manager software.

Location: Tab in menu on cybercrime page which links to password page

Reasoning: This topic was popular with stakeholders in the survey

Priority: Must Have

Functional Requirement 34

Identification Code: FR34

Title: Contactless Payments

Description: Content page on information and advice for contact payments advantages of use and how it works also disadvantages and how it can be abused.

Location: Tab in menu on cybercrime page linked to contactless payments page

Reasoning: New form of technology, interest from stakeholders was medium

Priority: Should Have

Functional Requirement 35

Identification Code: FR35

Title: Parental control software

Description: Content page on parental control software which can be used to protect children online advice for parents and recommendations of different software

Location: Tab in menu for Cybercrime and cyberbullying which links to parental control software page

Reasoning: Popular with parents on the survey

Priority: Must Have

Functional Requirement 36

Identification Code: FR36

Title: Safe Browsing (Kids)

Description: Information on how to protect children using devices to browse the internet advice on how to set boundaries in browsers so children cannot access content they should not be accessing.

Location: tab in both menus on cybercrime page and cyberbullying page

Reasoning: popular with parents in survey

Priority: Should Have

Functional Requirement 37

Identification Code: FR37

Title: Viruses

Description: Content page containing information on viruses, anti-virus software, how to install virus protection and how to scan your PC for a virus. Detailed information explaining what different types of viruses are on the internet and how they affect users.

Location: Tab in menu on cybercrime page

Reasoning: Viruses are a problem very common on the internet and was popular with stakeholders.

Priority: Must Have

Functional Requirement 38

Identification Code: FR38

Title: Information on the age group of your child

Description: content page providing detailed information on different age categories of children using the internet.

Location: Tab in menu on cyberbullying page linked to information on the age group of your child

Reasoning: Internet safety for children is a priority for the government, Parents, Schools

Priority: Should Have

Functional Requirement 39

Identification Code: FR39

Title: Texting and Sexting

Description: Content page with information on this recent phenomenon of texting and sexting the dangers involved in it will be specifically explained. The aim of this page is to prevent anyone from taking part in this type communication by highlighting the affects and dangers it can cause. This page is also to inform parents of this type of behaviour among young people which is popular.

Location: Tab in menus on cybercrime page and cyberbullying page

Reasoning: Prevention

Priority: Should Have

Functional Requirement 40

Identification Code: FR 40

Title: Internet addiction

Description: Content page with information and advice for people who may have known issues involving compulsive use of the internet for shopping, Gambling, Pornography, online relationships, or online gaming which can have a major impact on a person's daily life.

Location: Tab located in menu on protecting yourself Page linked to internet addiction page.

Reasoning: High interest from stakeholders and a rising problem with the vast amounts of devices people now have access too.

Priority: Should Have

Functional Requirement 41

Identification Code: FR 41

Title: Sponsors and Partners

Description: Page explaining the funding for the getsafeonline.ie project government agencies involved, professionals and business' who contribute to the content which will be available on the website

Location: Link named sponsors and partners located on the home page

Reasoning: An opportunity to provide information on the individuals, agencies and businesses involved

Priority: Must Have

Functional Requirement 42

Identification Code: FR42

Title: Get Safe Top 10

Description: Top 10 tips and advice to protecting yourself online

Location: Protecting yourself page

Reasoning: some interest from stakeholders for this to be on the website will benefit users who first visit to the site as a quick reference guide to the basics of protecting themselves online.

Priority: Should Have

Functional Requirement

Identification Code: FR51

Title: Jargon buster

Description: content page with a list of words used on the website which would not be known to non-tech savvy users such as online radicalisation, Texting and Sexting, Cookies etc.

Location: Tab on home page called jargon buster with linked to jargon buster page

Reasoning: Will be useful for users

Priority: should

Functional Requirement

Identification Code: FR52

Title: Smart Phones and tablets

Description: Content page explaining the importance of using virus protection on these devices

Location: Tab on protecting yourself page linked to Smart phones and tablets

Reasoning: Interest from stakeholders and the high numbers of these devices used are becoming more attractive for hackers to hack into

Priority: Should Have

Functional Requirement

Identification code: FR 53

Title: Using Wi-Fi in public

Description: Content page featuring a video on the dangers of using public Wi-Fi and how easy they are for hackers to use sniffer software to get access to personal details such as a google account.

Location: Tab on menu on protecting yourself page linked to using Wi-Fi in public page

Priority: Should Have

Functional Requirement

Identification code: FR54

Title: Online Banking

Description: Content page with information on online banking

Location: Tab in menu on protecting yourself page linked to Online banking page

Priority: Must Have

Functional Requirement

Identification code: FR55

Title: Subscription Traps

Description: Content page on information and contains a video describing how subscription traps work and how to spot them before it is to late

Location: Tab on menu on protecting yourself page linked to subscription traps page

Priority: Should Have

Functional Requirement

Identification code: FR56

Title: Privacy and identity theft

Description: Video on how to keep your data online private and safe and shows what can happen with a person whose personal details have been stolen

Location: On protecting yourself page

Priority: Must Have

Functional Requirement

Identification Code FR57

Title: What we are about

Description: Content page detailing the aims and goals of keepsafeonline.ie with interesting facts on cyber security, cyber bullying and protecting yourself online. Also contains a video of the project sponsor discussing how the website came together.

Location: Tab on Homepage

Reasoning: Project sponsor requirement

Priority: Must

4.5 Functional Requirement 2.1 User Class Two Administrator

Identification code: FR 2.1

Event: Administrators Login

Dependency: An administrator must enter in login details to gain access to make any changes to the website. These changes may consist of posting a blog, uploading an image, video, chat, news, updating or deleting content of any type to the website. The administrator must provide valid user log in credentials in order to conduct any maintenance of the website.

Outcome: After the successful login credentials are entered the administrator will have access to which ever department of the site the individual administrator has access to for example an administrator who is a member of the news section of the site can only get access to edit that section of the website. If an invalid user credentials are entered to try gain access to the website a message displaying “access denied” must appear.

Non-Functional requirement 2.2

Identification code: FR 2.2

Event: Support to users

Dependency: The use of the chat function to users of the site. This will require administrators permissions to get access to communicate with the public access will be given by the support staff manager.

Outcome: To communicate with the public with the live chat feature

Non-Functional Requirement

Identification Code NFR 2.3

Title Privacy statement

Description is required to be displayed on the website by law and it describes how the organisation collects the data and uses the eight principles of the data protection privacy policy in a more clear and concise as this is a public statement. The policy statement will have a link on the bottom of every webpage on the site.

Non-functional Requirement

Identification code NFR2.4

Title: Terms and conditions

Description: Not required by law but it sets the rules of the website for users

Priority Must Have

Non-Functional Requirement

Identification Code NFR2.5

Title: Cookie Policy

Description: A link will pop up when a user enters the site and inform the user that the website uses cookies. The user will be giving the option to accept, reject cookies been used on this visit and giving an option to click on the link to view the cookie policy. This is required by law.

Location: Pop up on entering the website and a link on the bottom of the home page

Priority: Must Have

Non-Functional Requirement

Identification Code: NFR2.6

Title: Encryption

Description: Encryption will be used for storing of all passwords. All files and webpages of the site will be protected by encryption. Any laptops on the network the hard drives must also be encrypted as laptops are mobile devices if they need to be taking out of the company premises and are miss placed company data will be protected.

Non-Functional Requirement

Identification Code: NFR2.7

Description: CRUD (Create, Read, Update, Delete) web application must be created to interact with the database to allow administrators Create, Read, update, and delete files. The CRUD application will only be accessible to system administrators and must be password protect. Different profiles will be set up for who has access to what to protect sensitive information

Non-Functional Requirement

Identification Code: NFR2.8

Title: System Data

Description Must be backed up every 24 hours start time 00:01 AM when the network is not busy and backed up at an off-site location as part of the disaster recovery plan.

Non-functional Requirement

Identification Code: NF2.9

Title: Data Classification

Description: Microsoft data classification toolkit to be used to protect, Identify, and classify company files on the servers. The function needs to be set up in a way to stop unnecessary duplication of files to reduce storage wastage on the servers. This will also ensure servers are not slowed down and will benefit efficient data retrieval.

Non-functional Requirement

Identification Code: NF2.10

Title: Time Stamps

Description: Timestamps: Unix time stamps to be used to record time so all data can be recorded using time it was entered the system and any changes made. This requirement is necessary for auditing.

Non-functional Requirement

Identification Code: NF2.11

Title: Storage

Description: As amazon AWS will be used to store all data in the cloud this has a major benefit of the scalability of the system as it will grow with the business and it has the major advantage of no servers in the office. MySQL database can be used with amazon services.

Non-functional Requirement

Identification Code: NF2.12

Title: Auto Scaling

Description: An advantage of using amazon AWS is auto scaling for performance. This will ensure availability of the website in spikes in demand from advertising campaigns were a high amount of traffic may suddenly use the website and the capacity will then decrease during a slow-down in traffic saving costs.

Non-Functional Requirement

Identification Code NF2.13

Title: HTTPS

Description: HTTPS will be used on all webpages on keepsafeonline.ie as amazon AWS will be used to host the website the using a dedicated IP address, a Certificate will be purchased to make the website HTTPS compatible the certificate will then need to be activated and installed.

Non-Functional Requirement

Identification Code NF2.14

Title Dependencies

Description: Dependencies must be managed and Kept up to date Amazon AWS will assist with this

Non-Functional Requirement

Identification Code NF2.15

Title Error Messages

Description: Error Messages to users kept to a minimum and on a need to know basis

5 Bibliography

Bridging the digital disconnect Dr A. M. Clarke, T. Kuosmanen, D. Chambers, Pro M. M. Berry, September 2013 Available at <http://ie.reachout.com/2013/10/04/bridging-the-digital-disconnect/>

How to interview the project sponsor available at <http://www.projectconnections.com/articles/011705-decarlo.html>

Guidelines for the contents and use of privacy statements on websites, Accessed on 05/05/17 available at <https://www.dataprotection.ie/docs/PrivStatements/m/290.htm>

4 reasons why internet cookies will rock your world, Accessed on 05/05/17, available at <https://www.thesaleslion.com/4-reasons-why-internet-cookies-will-rock-your-business-world/>

How to meet website legal requirements, Accessed on 04/05/2017, available at <https://aislingfoley.com/website-legal-requirements/>

Five reasons you need terms and conditions on your website, Accessed on 05/05/17, Available at <https://termsfeed.com/blog/5-reasons-need-terms-conditions/>

Third party content on your website best practices, Accessed on 05/05/2017 available at <http://staceydavislaw.com/news/third-party-content-on-your-website-best-practices/>

Guidance for online public services, Accessed on 03/05/2017 available at <http://universaldesign.ie/Technology-ICT/Guidance-for-Online-Public-Services/>

Bridging the digital disconnect, Accessed on 03/05/2017 available at <http://universaldesign.ie/Technology-ICT/Guidance-for-Online-Public-Services/>
Iba, I. and international institute of business analysis (2009) a guide to the business analysis body of knowledge (BABOK guide). Edited by Kevin Brennan. 20th edition Toronto: International institute of Business Analysis

6 Appendix

6.1 Reflective Journal

6.1.1 September 2016

James Balfe

X13114182

This month is the first month of my final year studying BSC in Technology Management in NCI. The first day back we were told we would have to come up with a Technology based project for our final year project. I choose to do the business analysis stream for my course as coding was not one of my favourite modules in the course up till now, I always felt more comfortable with the business modules.

I wanted to do something for my project that I could have a good interest in and be proud of when it is finished at the end of the college year. Also, keeping in mind that the final year project would be what will surely come up in interviews for jobs when I have my degree.

My project is going to be a website that specialises in online security. The website's target market is going to be people who would just have a basic understanding of how to use a computer e.g. older people, Teens, business start-ups. The target market would only have basic experience of using the internet but would not be aware of the dangers that can come to people who would be vulnerable users of the internet. Dangers such as phishing scams, weak passwords

6.2 Reflective Journal October

James Balfe

X13114182

BSc Technology Management

Business stream

For the month of October, I have had my presentation for my project the project pitch. It was accepted by the supervisors which I was very happy about. The area that I am doing my project on will be very beneficial and I feel I will learn a lot from. This month I also had to do up the project proposal which outlined what I would like the project to be about and how I hope to achieve the tasks involved in doing this project. Eamon arranged for a lecture with Eugene Mc Loughlin which was very informative of how we should go about identifying who the stakeholders will be, how to get requirement specifications by holding interviews, focus groups, brainstorming sessions etc.... This tutorial was welcomed by myself and my class mates who attended as it gave us a lot of information and we had to opportunity to ask questions we had.

This month I also got allocated my supervisor for the project and it will be Ron Elliot. I have had Ron for several modules to date on my course so I know him and I look forward to getting some guidance from him in relation to the project. I am happy Ron is my supervisor as I feel he is very approachable. I have not met up with Ron on my own yet but I plan to do so the first week back after reading week. The Requirements elicitation is due also the end of the first week we are back so I will be going into more detail on this in the next journal.

6.3 November

The requirements specification was due this month I got a good amount of work into it and have met up with my supervisor Ron twice now and I am very grateful for the advice I am receiving from him. Eugene had a talk with the class this week about what is required for the midpoint presentation. I know when the time comes for the midpoint I will be nervous but I am planning on been prepared for it and I am going to practice it a few times before it.

This week has been a very busy one a few CA's due this weekend global supply chain management CA2 was due today I do feel confident on it and hope to get a good mark. CA for information systems management is due on Sunday. I was in the college till 8 tonight it's still not finished but I plan to get stuck in after work tomorrow I don't have too much left and I'm happy with what I have done so far.

I work in Dunnes Stores Ashleaf store a long time now, I done my work experience Dunnes Stores head office this year and I was invited to the Christmas party last week. I went to it and had a good night meeting up with the people I worked with. I was informed that I will get my job back in their when I finish college if I want. I was happy to hear that I already had a feeling that it would be possible before the Christmas party as I worked hard in there and my experience of the company and some of the systems they use I was familiar with before the work experience. Anyway, to get to the point I had a good conversation with a member of the IT Oracle team who I did not work with while I was in the job I was helpdesk but I knew him to see. He Gave me some advice that maybe I should look some other jobs for when I finish college that the training in Dunnes head office IT department is not great that if I went back to the help desk I could be there for a long time before I could progress further.

6.4 December Journal

This month involved putting the mid-point presentation report together. Up until this point nothing has been graded yet and as I was putting the report together I was a little nervous if I was doing it the best way I knew how. The report was due on 11th of December followed by the mid-point presentation on the 20th of December.

The mid-point presentation went all right I feel that I was getting some criticism but it was constructive criticism which I was well able to take on board and I was glad of after. I was informed during the presentation that my report up until now did not contain the right level of research, but going forward my project if it contains the right level of research it can be a good project. I also included in the slides of my presentation a Moscow analysis of requirements gathered from potential users of the website. The Moscow analysis was colour coded and the lecturers were not happy with the colours chosen as they made the diagram difficult to read. This was a mistake on my behalf and I should have a second opinion before going into the presentation but I will learn from that mistake.

I was relieved to get the midpoint presentation finished and semester 1 finished except for the exams but I was looking forward to enjoying Christmas. Then preparing for and concentrating on the exams once Christmas was over.

6.5 Reflective Journal January

James Balfé

This month I had my exams for 5 modules. The pressure was on as I knew that the results of these exams would be going towards my degree so most of this month I mainly concentrated on studying, working, and completing the exams. The exams this year were also very close to one another this year as we had 4 exams in 5 days which was very stressful. I put a lot of time and effort into studying for the exams as for the 2 weeks that they were on I arranged to be off work so that was one less thing to be worrying about. If I had not of getting the time of work it would have been very difficult and that would have shown in my results. My results I was happy with I did mess up in one exam but over-all I was happy with the outcome.

As this month was extremely busy with the exams I did let the project take a back seat. I did how ever get in touch with the principal in my old secondary school to see if I could get permission to get the sixth-year students in the school to complete a survey. As secondary school students are a stakeholder group in relation to my 4th year project. As the survey at this point was not completed at this stage or signed off by Ron my supervisor I did not the final document to forward on to the principal. The principal informed me that he would have to inspect the survey before he could let the students take the survey. Once he is happy with the content of the survey he will have no problem in passing the survey on to the sixth years to take part.

As January was not as productive in relation to my 4th year project as previous months this college year. I look forward to getting back into the process of this final year project.

6.6 Reflective Journal February

This month the work for the project really started to get going I had planned my interviews with stakeholders and I began work on my survey for potential users of keepsafeonline.ie. At the end of January, I held a brainstorming session with stakeholders to gather requirements for the website non-functional and functional requirements. The brainstorming session was a great success as the requirements gathered from this gave us a great understanding of the type of content that stakeholders would find beneficial for the website to contain.

The requirements gathered in the brainstorming session help with putting the survey together as the content ideas from stakeholders were put in the survey to get an idea of how interested a wider scope of stakeholders would be regarding the content.

I also met up with Ron my supervisor twice in the month of February to go over details regarding my survey. The first meeting went well and he pointed out some concerns regarding the questions used in the draft survey I had for him that day. The survey was not approved on this date 14/02/17 and we arranged that I would do some further work on the survey and meet up again to review. Ron also suggested I should get feedback from doing a pilot survey and see what the reaction it would get. The feedback I received was OK a few things were highlighted to me regarding the questions. This feedback will be in the appendix of my project.

Second interview with Ron 30/02/17 went very well I got my survey approved and could go live. I shared the survey on Facebook and it got a great reception 78 participants in total. I was happy with this number.

6.7 Reflective Journal March

March began as a very busy month with CA's due for other modules and semester two is also a short semester this year as it is only 10 weeks long. The exams are also early as they are in April this year. Regarding the project, it is progressing at a good pace the survey went very well and I documented the results from the survey.

This month I also had two interviews with stakeholders a developer Mina Gaid who is also a fourth-year student but is an excellent student. I interviewed Mina as a developer as I had no access to a professional developer. The results from the interview I got from Mina were excellent I personally feel he knows what he is talking about and I gathered some very useful Requirements from him.

The second interview I had was with a professional designer with 16 years' work experience in the industry. I gathered some useful requirements from Tony for the project and he gave me some good advice. I also met up with Ron twice in the month of March 7/03/17 and 28/3/17 these meetings consisted of the preparation for my interviews. I got advice on interview questions from Ron as on both occasions I had draft interviews done up to show him at the meetings.

As this is the last Journal and my time here at NCI is ending I want to just add that my time and experience at NCI was very beneficial to me. I met some great friends in the college that I plan to see after we finish college and keep in contact. All the lecturers and staff at the college were always very approachable and supportive I would recommend this college to anyone thinking of furthering their education as it really has given me an advantage going forward to having a good career that I will hopefully enjoy.

Project Proposal

4th Year Project

Project Proposal

4th Year Project

Mid-Point Project Report

James Balfe

X13114182

BSC Technology Management

Business Analysis Stream

11th December 2016

7 Contents

Background	71
Introduction	73
Finance	75
Project Approach	75
Technical Approach	75
Gant Chart	77
Work Breakdown structure	78
Evaluation.....	78
Bibliography	79
Requirements elicitation and analysis planning	80
Introduction	81
Business Need	82
Business Scope	83
Stakeholders List and Roles.....	84
RACI Matrix.....	86
Onion Diagram	87
Techniques	88
Sample Survey Questions	89
Bibliography	93

Monthly Journals	94
September	94
October.....	95
November	65

8 Background

Online security is a major importance for everyone that uses the internet in today's world and in the future. Since the continued rise of internet use since the early 1990's people have more access to the internet than ever before this trend is expected to keep on rising. According to International Data Corporation they estimate that 44% of the World's population will have online access in 2016, 2 Billion people will have access using their smart devices. (NewsRx, Marketing weekly news, 2016)

With access, so easy to gain to the internet with the use of smartphones, laptops, desktops, tablets, game consoles, TV's etc... People seem to forget about the risks that are out there in the online world from hackers who will try gain access to websites and steal data, Computer viruses designed to maliciously disrupt the normal day to day activities of a PC, phishing scams to try and get personal information on an individual. Also, Trojan horses, email viruses, worms etc...

With the announcement, only 4 weeks ago, of 500 million yahoo user accounts being hacked online security is something that needs to be taken seriously by everyone who uses the internet. From large organization's such as Facebook, Google and Yahoo the end user relies on these organizations to keep strict security by protecting the data they hold on each of the billions of people they store data on. When this type of data gets in the wrong hands it can have devastating effects on the individual whose data has been breached. Passwords can be changed, credit card details stolen, fake online accounts being set up...

Cyber Bullying is becoming more popular than ever as the increasing use of social media such as Facebook, snapchat, twitter etc.... Cyber bully can affect any age group. A survey conducted by Zenith Optimedia based in Dublin surveyed 1,000 adults and 168 children in Ireland. The survey contained some interesting results.

- 1 in 5 Irish children have been a victim of online bullying
- 1 in 10 Irish adults have said they have been a victim of online bullying
- A quarter of woman surveyed said they had experienced body shaming online
- 16% of men or 1 in every 6 said they had experienced body shaming
- A third of children bullied online have said they have experienced depression because of it
- 68% of cyber bullying of adults takes place on Facebook
- Both adults and children said they would unfriend or unfollow people as the most common way to counteract being bullied.

(*Zenith
Optimedia, 2016*)

From the results of this survey it is quite clear that Cyber bullying is happening in Ireland to all age groups. The survey also indicates that cyber bullying can cause depression, which can lead to a lot of other problems in person's life. In some extreme cases, it has been proving to cause suicide (Audrie and Daisey, Netflix). This is a global problem and one of the ways of prevention is to offer information and support on the issue. For the person been bullied which could be an adult or child, if it is a child the website can be a useful resource to the child's parents on how to tackle the issue.

9 Introduction

For my 4th year project I will be doing a business Analysis on the creation of a website that offers online security advice to people who would not be aware of the importance of keeping themselves safe online. The website will be set up to inform its users of the threats of using the internet that can affect everyone. The website will be set up for users of all ages from 13 to 90 years of age.

The website will have specific areas on how to stay safe while using online banking, social media, emails, etc. It will give details on the threats of using these online services and how to protect themselves from these threats.

The website will be targeted to all ages there will be sections on each area which will be targeted to specific age groups. Given examples on how certain age groups do be targeted online. For example, elderly people who would be using online banking or young teens on social media.

- Viruses what they are, the symptoms of viruses, how to get rid of them. Anti-virus software how important it is, what it does, E-videos on how to install anti-virus software will be provided to users.
- Passwords how to create an effective password, information on how easy it is for hackers to crack passwords, the site will have a password checker to inform users how affective the password is.
- Social Media the dangers involved in connecting with strangers online, information on what is bad social media practice such as giving your address,

phone number to strangers online. How posts put on social media today can influence your employment prospects in the future.

- Home network how to keep it protected and why it is important to keep the WIFI in your home password enabled to outside users.
- Emails how individuals can be targeted from emails claiming to be from highly reputable organizations looking to be sent on sensitive information when in fact it is a fraud email. Information on how to identify such emails and what to do with them.
- Crypto locker what it is and how it works. Examples on how to avoid it for companies and consumers.
- Online shopping how to distinguish if the website offering goods online is a genuine online retailer. How to identify if a site is secure before entering any credit card details.
- Information will be provided on consumers online statutory rights.
- Daily News related to online security will be posted on the website every day. Articles from all over the world
- All the above sections of the website will give examples of how people have been affected by the threats imposed. It will include examples of many different age groups and scenario's.

10 Finance

Financial plans for the website are to get a grant from the Irish government. As this is an education website teaching the public on how to keep safe online. The website will have a business model of a not for profit business.

Funding will cover the costs involved in running the website, maintenance, salaries, advertising. The management of the website will also be seeking to gain sponsorship from companies that would have a big online market share such as Facebook, Google, PayPal, EBay who all have head offices in Ireland.

11 Project Approach

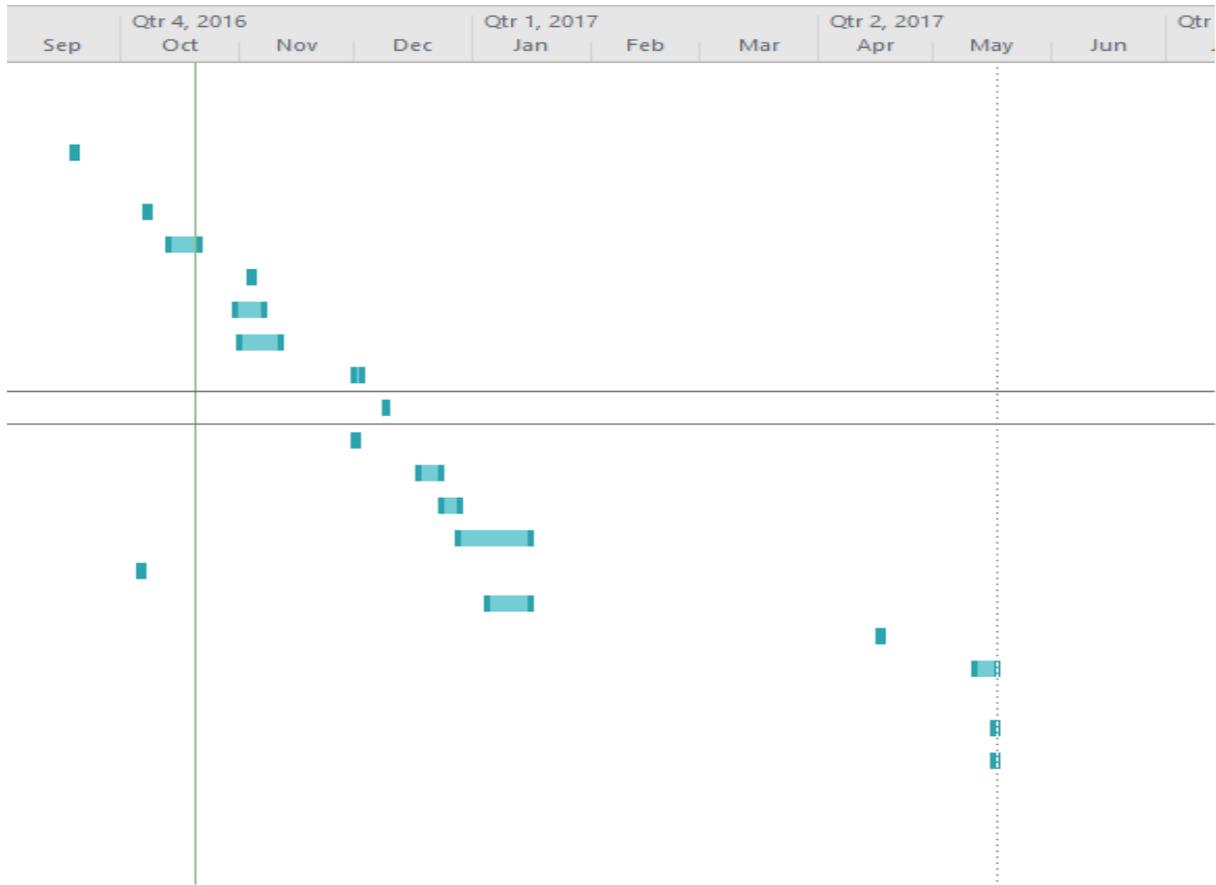
For this project, I plan to get information from a variety of resources such as books in the library, the online database of journals, studies previously conducted, online media available through the college library. I also intend to use some techniques such as conducting surveys, brain storming session and interviews with the stakeholders and with my project supervisor.

12 Technical Approach

- Surveys: I plan to set up online surveys to gather requirements, feedback, and information on potential users of the website. It will have specific questions regarding online security. To get a general feedback of what is known of online security, how people look for information on online security or if they do at all.
- Brainstorming: I plan to conduct Brainstorming session to gather feedback from the targeted users of the website. It will be myself and a group of 3 to 4 potential users.
- Interviews I plan to hold interviews with 1 or 2 stakeholders at a time to get specific requirements from them.
- When enough information is gathered, I will use it to create a wireframe using Giffy
- For the final year show case I plan to create the website using bootstrap. After all the hard work, I will be putting in to this business analysis I will want to be

able to have something to display at the show case in May. As I was at last year's showcase and some of the students that had completed this stream did not have anything on display.

13 Gant Chart



14 Work Breakdown structure

	Task Mode ▾	Task Name ▾	Duration ▾	Start ▾	Finish ▾
		Project Deliverable			Delivery Date
		Project proposal Ratified	1 day	Mon 19/09/16	Mon 19/09/16
		September Journal	1 day	Sat 08/10/16	Sat 08/10/16
		Project Proposal Document	6 days	Fri 14/10/16	Fri 21/10/16
		October Journal	1 day	Fri 04/11/16	Fri 04/11/16
		Reading Week Semester 1	6 days	Mon 31/10/16	Mon 07/11/16
		Requirements Spec	9 days	Tue 01/11/16	Fri 11/11/16
		Project Prototype	2 days	Thu 01/12/16	Fri 02/12/16
		November Journal	1 day	Fri 09/12/16	Fri 09/12/16
		Mid Point Presentation	1 day	Thu 01/12/16	Thu 01/12/16
		Begin studying for exams	6 days	Sun 18/12/16	Fri 23/12/16
		Break for christmas	4 days	Sat 24/12/16	Wed 28/12/16
		Continue study for Exams	14 days	Wed 28/12/16	Sun 15/01/17
		December Journal	1 day	Thu 06/10/16	Thu 06/10/16
		Semester 1 Exams	8 days	Thu 05/01/17	Sun 15/01/17
		Showcase Materials	1 day	Mon 17/04/17	Mon 17/04/17
		Final Project Hard Copies Documentation	4 days	Fri 12/05/17	Wed 17/05/17
		Software & Doc Upload	1 day	Wed 17/05/17	Wed 17/05/17
		Project Presentations	1 day	Wed 17/05/17	Wed 17/05/17

15 Evaluation

As this project is spread out over 2 semesters I am Fully aware of the high standard that is expected. I will be using all the resources that I have available to me in the library, Information online, I am currently undertaken requirements management this semester and I know I will be gain good knowledge in this module on planning and I will be putting it to good use for this assignment. My other modules also strategic management and Business data analytics. I will be backing all my work up between Dropbox, my personal laptop, and my student drive in college.

16 Bibliography

Stafford, T. and Poston, R. (2010). Online Security Threats and Computer User Intentions. *Computer*, 43(1), pp.58-64.

Over half of cyber bullying case happening to Irish children on Facebook, article on the Journal.ie, Author Cormac Fitzgerald, Survey conducted by Zenith Optimedia survey was conducted on 1,000 adults and 186 children

<http://www.thejournal.ie/cyber-bullying-3-2906259-Aug2016/>

Audrie and Daisey Documentary Netflix

<https://www.netflix.com/ie/>

17 Requirements elicitation and analysis
planning

James Balfe

X13114182

BSC Technology Management

Business Stream

18/11/2016

18 Introduction

This project involves gathering and subsequently documenting requirements for a new website getsafeonline.ie. The website's main objective is to provide information on how to stay protected online from the many threats that are out there to everyone who uses the internet. This website is targeted to all age groups young and old offering advice to all regarding online security. In many different areas, such as online banking, social media, Cyber bullying and how to stay safe while online, anti-virus software and why it is important. Tips and advice for buying and selling online also consumer rights for buying online. E-videos and daily articles related to online news will be posted on the website etc...

There is currently no official Irish site dedicated to providing this type of information specifically to the Irish public. This project will be receiving government grants from the department of communications. This project is going to require the gathering of requirements from all the stakeholders involved such as the department of communications, Sponsorship Management, the public, students, trainers, designers, Journalists, content management, Marketing. Once all the requirements are gathered from all these stakeholder groups they will be put together in a requirement specification document. This document will then be the basis of the functional and non-functional requirements that will be used to design a website that will benefit all the stakeholders involved.

To gather the requirements several techniques will be used such as a brain storming session will be set up with different age groups of the public. This will help us gather information on what the public know about online security and cyber bullying, what they could learn and how best to teach them also for suggestions on how the site will benefit them the most. This information can then be taken assistant secretary to the minister for communications Katherine Licken who will be responsible for providing a government grant, Also the stakeholders of the site will be interviewed, surveyed and brainstorming sessions will be done. As having the specifications to present can give an indication to the cost of the project from early on, also the scope of the business can be narrowed down to benefit all involved.

19 Business Need

The threats that are online to the public are getting more sophisticated as time goes on. With the internet ever evolving people are becoming increasingly reliant on services that are offered online such as online banking, social media, messaging services, online gaming, gambling, reservations, streaming movies music and sport, online shopping, the internet of things, the list is ever increasing of what can be done over the world-wide web to make the users experience more convenient.

With the ever-increasing convenience, it will attract some forms of criminality and as there will be vulnerabilities in the services (Yahoo 2014, Sony 2014) that are on offer to the public who use these services and they will be targeted. As most of this services cost money and the end user must disclose personal information to use these services. This is the attraction for hackers, scammers, fraudsters to be able to use vulnerabilities in the systems running the services or the people who use them. As the criminals, can con people for financial gain directly by stealing credit card details or indirectly by stealing people's data online which can be used for identity theft which can have devastating effects.

Public awareness on how to avoid these threats that are online is just as important as anti-virus software. As security services, such as anti-virus software is very important against tackling some of these threats they cannot protect against everything. The public needs to be aware of how to identify phishing emails, how to create a strong password, good social media practice, what is cyber bullying etc... The website will be hub of up to date information on what is currently out there and how to stay protected as information and education are the key to prevention.

To get the wider community online. As we live in an information age where everything is available with the click of a button online. The technology that is out there and ever evolving is common place to some segments of the community but not all. The elderly and or non-tech savvy citizens are being left behind. This can be a big disadvantage as these citizens can be left behind as increasingly services are going online. For example, Bank branches, have been closing all over the country for the past number of years. As online banking, has taking over the need to call into a local branch, the local bank outlet has declined around the country. People can transfer money from one account to another from the comfort of their own home using their laptop, smartphome etc... Even using cash is declining as the rise of chip and pin technology and contactless payments is rising. But not all the community would be up to date on these emerging technologies and ways of doing business. The need to keep the community of people who would be not up to date on these advancements is also increasing.

Cyber Bullying comes in many different forms and all avenues will be covered on the website when it comes to cyber bullying. This is a major concern for the government and the public as it is costing lives every year thus in some extreme circumstances. It is not around too long cyber bullying but it seems to be getting more common place as time goes on. There are many different forms of it but hopefully the website will help to prevent it by providing information on support and how to tackle the issue.

20 Business Scope

This website's main primary concern will be to help protect the general Irish public from the dangers that can arise from using the internet. As it is aimed at helping the public, all age groups male and female will be able to benefit from what the site must offer. The main areas of the site will be Cyber Bullying, Cyber Crime, News articles on the latest technology news, E-Learning and a Forum to contact staff of the website on areas related.

The website will be a not for profit organisation as the government will fund it. The staff, management, journalists, and teachers will be paid salary's inline of the industry average of the profession they are in. The funding from the government will cover the costs of salary's and the resources i.e. software, hardware, funding will cover place of business. The grant which will be set out in a five-year contract which will then be reviewed every four and a half years.

There are some risks involved in the production of this website that it will not be user friendly. This will need to be considering when selecting the designer of the website. It needs to be user friendly as the site will be used for attracting user's that would be only getting to know the basics of using the internet. When all the requirements are gathered from the stakeholders of the project they will be prioritised using the Moscow technique. This will sift out requirements gathered that will not be going into the final website.

21 Stakeholders List and Roles

1. Business Analyst Will be responsible for the gathering of requirements and specifications from all stakeholders. Conducting stakeholder analysis. They will be responsible for the communication with the stakeholders. To put in place structure, policies, operations, and recommendations for the organisation to fully achieve its goals.
2. Content Manager will be responsible for the content of the website they will work closely with the business analyst, website developer, journalists, management, and trainers involved in the website. The content manager will be like a director of the actual website of the content that is available.
3. Marketing will be responsible for making the public aware of the website by running add campaigns to show what the website must offer. By putting the brand into the public domain.
4. Members of the public are the end users of the website. The website is for the public's benefit to educate them on the issues raised in the business plan. The public are the tax payers so it is in the best interest that the website is a success.
5. Department of communication are the government department responsible for granting of the funding of the website. The goals set out for the website to achieve are in the best interest of the department as having a long-term advantage of educating the public on issues that the website deals with.
6. Website designer will be responsible for the presentation of the website insuring that the website is user friendly considering the segments of the public the website is aimed at e.g. The elderly. They will be in close communication with the business analyst, management, and marketing.
7. Trainers will be in some way on the front line of the website as they will be responsible for making videos that will be posted on the website on a regular basis. Such as how to do videos on many subjects. They will also do live chat with the students of the website. Trainers work closely with the content manager and students subscribed to the website.

8. Staff will not be directly involved with the website but they will work alongside the other stakeholders who are. The staff would consist of Admin staff, receptionist, promotional staff etc...
9. Students are the members of the website that will have a personal log in name and password. The students will be members of the public that will be undertaking e-learning courses provided by the website.
10. Journalists will be responsible for uploading articles to the website specifically technology related articles. Such as if Microsoft is planning to bring out a new operating system or If another hacking scandal has accured.
11. Management will be responsible for the staff in the and the day to day running of the organization. Such as they will work closely with the content manager, business analyst, marketing, web developer and government agencies on achieving the goals of the business.

22 RACI Matrix

Business Analyst	R
Content Manager	A
Marketing	C
Members of the Public	I
Department of communications	C R
Website Designer	C
Trainers	I
Staff	I
Students	I
Journalists	C
Management	R

The RACI matrix above highlights the responsibilities of the stakeholders involved with the project. This can change per business needs.

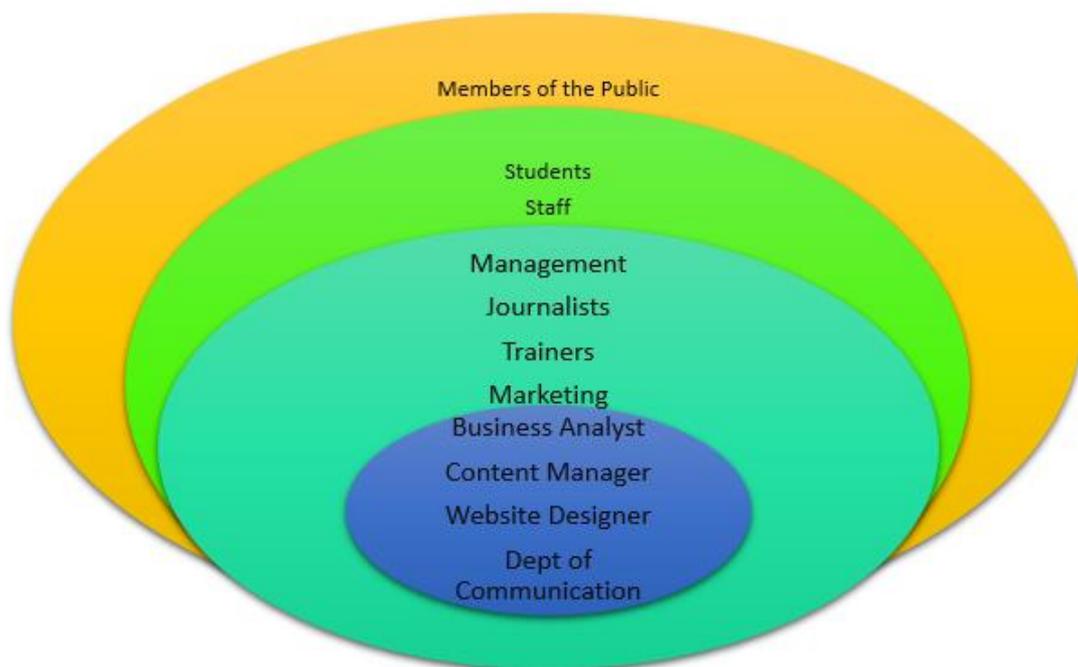
R = Responsible A = Accountable C = Consulted I = Informed

23

24

25

26 Onion Diagram



27

The Onion Diagram Highlights the different levels of the organisation between stakeholders and how close to the project process each stakeholder is.

- The inner blue circle represents the stakeholders responsible for the actual delivery of the website setting the goals and policies of how it will be run down to how it will look. They are the project team who are responsible creating the website.

- The next layer represents the affected organisational unit stakeholders within this category they are not directly involved in the production of the website itself but who do have an influence on the content of the website when the project is up and running.
- The following layer is direct users of the website they do not have an influence on the production of the website or its content but do have an influence as the website is to cater for the needs of this group.
- The outer layer is external users of the website who are not signed up or members. But will be targeted in marketing campaigns to become direct users. The stakeholders in this layer the public can come and go from the website without been a member. The website will provide information without having to become a member.

28 Techniques

To fulfil the goals that this project is aiming for there will be different techniques involved in getting the right information from the stakeholders. The process of doing this task will take a lot of planning before the right technique takes place with any share holder. To do this the first step will be to come up with a requirement's plan on the different types of stakeholders, what type of information is required, Which Technique will be used to get the right information. Then we will assess when and how the stakeholder will be contacted about the meeting.

A communication list will be then produced stating the time and place. The list will also contain information on any other additional aides needed to conduct the chosen technique. For example, if there would be a projector required to do a presentation to stakeholders.

Some of the Techniques that may come in useful to produce this project to its full potential are but not limited to.

- Brainstorming sessions will be conducted to get an overall view of the requirements of certain stakeholders some but not all the information may be used. This technique is great for getting people talking and coming up with ideas.
- Interviews will be conducted with 1 up to 3 stakeholders present. Questions will be thought out prior to the interview in detail to gain the information that is required.

- Data Mining will be done to get information on stakeholders such as the public that would be already done by a third party for example the central statistics office would provide a wealth of information on the public in regards to information required.
- Focus Groups to get Ideas from and can give a good indication on the attitudes towards certain topics.
- Surveys can be done to get information from a large group of stakeholders. For example, by sending out emails containing the survey to students. This alleviates the need to meet up with the person as the information can be received as soon as the survey is finished.

The following page contains some sample questions that might be used in a survey that will be conducted on members of the public. The following sample survey questions have not been approved by my supervisor. To see how often they would use social media and how they interact with strangers. Online banking to see what age group uses online banking the most.

29 Sample Survey Questions

Some questions in this survey require a scoring of 1 to 10 1 being the weakest and 10 being the strongest in agreement with the question.

1. Please choose the age category which you would be in?

13-18 years

18-30 years

30-60 years

over 60

2. How familiar would you be with the term phishing?

1 2 3 4 5 6 7 8 9 10

3. Do you use online Banking?

1 2 3 4 5 6 7 8 9 10

If not would you like to share why? Please tick an option

Do not know anything about it

I do not trust online banking

I have heard of too many bad experiences of people that have used it

I just have not gotten around to setting it up

4. How often do you use social media?

1 2 3 4 5 6 7 8 9 10

If yes, how many hours a week would you use it?

0 hours a week

1-3 hours a week

4-7 hours a week

8-11 hours a week

12 or more hours a week

5. If you use social media which sites do you use? (more than 1 option can be picked)

Facebook

Twitter

Snapchat

Other

6. Would you accept friend requests from strangers on social media?

Yes, I have done in the past

Only if I had friends in common with them

No Never

I did before and had a bad experience

7. Have you ever communicated with strangers while using social media?

Yes, I have done in the past

Only if I had friends in common with them

No Never

I did before and had a bad experience

8. Would you be interested in a website or App that offers tips and advice on how to stay safe while online?

Yes/No

9. Do you Buy online?

Yes, all the time

Just on occasion

No, I have no interest

I would but I don't know how

10. Do you sell online?

Yes, all the time

Just on occasion

No, I have no interest

I would but I don't know how

11. What would you do if you found a USB key on the street?

Would you throw it away?

Bring it home and see what is on it?

Hand, it in to the lost and found of where you found it?

30 Bibliography

<http://www.cso.ie/en/releasesandpublications/er/iss hh/information society statistics-households2015/>

<http://www.brightpoint-designs.com/report-on-irish-internet-usage-in-2014/>

<http://www.dccae.gov.ie/en-ie/about-us/Pages/home.aspx>

<http://babokonline.org/#pf47>

31 Monthly Journals

32 September

This month is the first month of my final year studying BSC in Technology Management in NCI. The first day back we were told we would have to come up with a Technology based project for our final year project. I choose to do the business analysis stream for my course as coding was not one of my favourite modules in the course up till now, I always felt more comfortable with the business modules.

I wanted to do something for my project that I could have a good interest in and be proud of when it is finished at the end of the college year. Also, keeping in mind that the final year project would be what will surely come up in interviews for jobs when I have my degree.

My project is going to be a website that specialises in online security. The website's target market is going to be people who would just have a basic understanding of how to use a computer e.g. older people, Teens, business start-ups. The target market would only have basic experience of using the internet but would not be aware of the dangers that can come to people who would be vulnerable users of the internet. Dangers such as phishing frauds, weak passwords

33 October

For the month of October, I have had my presentation for my project the project pitch. It was accepted by the supervisors which I was very happy about. The area that I am doing my project on will be very beneficial and I feel I will learn a lot from. This month I also had to do up the project proposal which outlined what I would like the project to be about and how I hope to achieve the tasks involved in doing this project.

Eamon arranged for a lecture with Eugene Mc Loughlin which was very informative of how we should go about identifying who the stakeholders will be, how to get requirement specifications by holding interviews, focus groups, brainstorming sessions etc.... This tutorial was welcomed by myself and my class mates who attended as it gave us a lot of information and we had the opportunity to ask questions we had.

This month I also got allocated my supervisor for the project and it will be Ron Elliot. I have had Ron for several modules to date on my course so I know him and I look forward to getting some guidance from him in relation to the project. I am happy Ron is my supervisor as I feel he is very approachable. I have not met up with Ron on my own yet but I plan to do so the first week back after reading week. The Requirements elicitation is due also the end of the first week we are back so I will be going into more detail on this in the next journal.

34 November

The requirements specification was due this month I got a good amount of work into it and have met up with my supervisor Ron twice now and I am very grateful for the advice I am receiving from him. Eugene had a talk with the class this week about what is required for the midpoint presentation. I know when the time comes for the midpoint I will be nervous but I am planning on been prepared for it and I am going to practice it a few times before it.

This week has been a very busy one a few CA's due this weekend global supply chain management CA2 was due today I do feel confident on it and hope to get a good mark. CA for information systems management is due on Sunday. I was in the college till 8 tonight it's still not finished but I plan to get stuck in after work tomorrow I don't have too much left and I'm happy with what I have done so far.

I work in Dunnes Stores Ashleaf store a long time now, I done my work experience Dunnes Stores head office this year and I was invited to the Christmas party last week. I went to it and had a good night meeting up with the people I worked with. I was informed that I will get my job back in their when I finish college if I want. I was happy to hear that I already had a feeling that it would be possible before the Christmas party as I worked hard in there and my experience of the company and some of the systems they use I was familiar with before the work experience.

Anyway, to get to the point I had a good conversation with a member of the IT Oracle team who I did not work with while I was in the job I was helpdesk but I knew him to see. He Gave me some advice that maybe I should look some other jobs for when I finish college that the training in Dunnes head office IT department is not great that if I went back to the help desk I could be there for a long time before I could progress further.

I am after taking that advice on board now and have set up a LinkedIn profile and I have gone to Helen Conway Who helped me clean up my CV and I am a little proud of the direction it is going once I get a good degree that is. I do hope to get a good degree I am putting the work in this year as best I can. To date my CA's are going very good so I hope to keep up the hard work with what is left of this semester and the exam's I am going to put a lot of preparation into them and I have arranged to be off work the weeks of the exams.