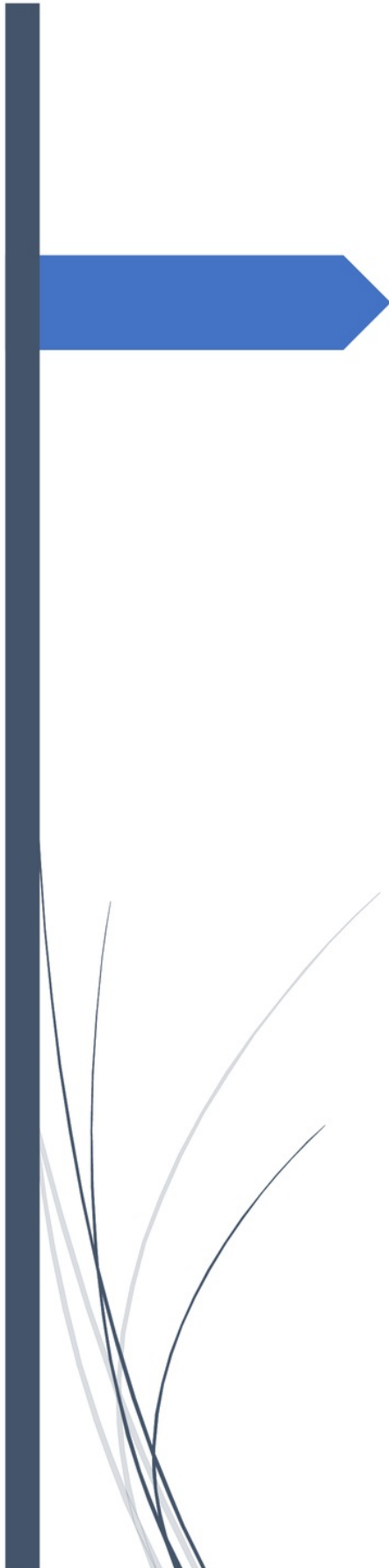


final report 01

by Declan Chambers

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Project management and research methods

An Individual Report on Risk and Code of
Practice.

Declan Chambers

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Introduction

This report aims to show the reader Risk identification, evaluation and management. It also aims to show the Project's Code of Practice and detail the Quality assurance methods developed.

Risk Identification

In every project there are risks. Risks are variables that have the possibility to cause setbacks or completely derail a project/ project plan. Different projects have different risks, which vary in severity, should those risks become a reality. This section identifies the most likely risks this project may face and plan for how it was determined they could be avoided or reduced.

The Risk Evaluation Matrix

	Insignificant	Minor	Moderate	Major	Devastating
Very likely		3			
Likely					1
Common				5	
Unlikely			4	2	
Very Unlikely					

Risk level	
Low	
Med	
High	

1.Loss of Data.

As the Help OS project is technological in nature it relies on a large amount of stored digital data: database code, hardware specifications, reports and designs, and simulations. If this became corrupted, overwritten/wiped, maliciously detained (Ransomware) or physically destroyed, there would be a huge setback in terms of cost, time, effort and team morale. It is therefore key to ensure that data loss is kept to a minimum.

In order to reduce, if not, eliminate risk of data loss, a risk plan is needed.

The suitable steps to take to reduce the risk of data loss were determined to be:

Daily, Weekly, and Monthly backups, Cloud sharing, restricting access to certain data, 3-step-backup (back up, on site, back up off site, back up at home.) and encrypted archiving.

2. Work on Development/ Implementation too demanding.

When planning a project, it becomes easy to fall into a trap of overestimation. This risk shows that parts of the project development, specifically in this project, the Geo-caching section of the app and Database, were too difficult to complete.

When development is too demanding, there are 2 methods to resolve or reduce the risks. The first is to not over-estimate the capabilities of the project group – each member clearly states what they are capable of doing, what skills they possess, and develop the project based on this. This however does not leave room for project ambition. The second method is to hire new team members that complement the projects ambition. There are a few things that can be done to ensure successful hiring of competent members: use screening questions when hiring directly and ensure the job requirements are clear and concise in the application so there is no room for confusion in the role applied for. Alternatively, it is possible to outsource the job to a firm or dedicated team of specialists.

3. Underestimation of Time and Cost requirements

Underestimation of time and cost requirements is the most common risk when undertaking a project. It ties in with many other risks that are unforeseen, such as team member shortfalls (illness, maternal/paternal leave, extenuating circumstance, etc.), or it is due to lack of understanding the scope of the project, usually by the project manager.

This risk occurs when a deadline is set for part of the project and a budget is made for the demands, but the section takes longer than intended due to any reason, and/or the budget was too small. In the Help OS project, the time needed to program the full app was underestimated as the Geo-caching was not implemented.

The only method the team could use to ensure that time and cost requirements were met would be to thoroughly plan every step of the project in greater detail as to know how long it will take, understanding and considering set-backs as well as seeking financial estimates from an accountant or qualified financialist.

4. Not meeting/ late changes to project requirements

This risk comes down to the clients and stakeholders as they are those who have the authority to adjust the project requirements. If the requirements are changed then the project timeline will need to be extended and possibly the budget too, there may need to be staff cut or new staff hired; many different problems can occur if the requirements are changed late. If the requirements are not met in the timeframe then the project is postponed or perhaps the project falls through as the investors/ stockholders do not see it as viable to continue supporting.

In order to reduce this, regular meetings with stakeholders/ investors are needed and updates to the project should be showcased. In the Help OS project, the app, database, and Packet Tracer simulation were showcased to Sue Maw, the group admitted that our Geo-Caching capabilities were not ready and would need to be outsourced or further researched which would both require more time.

5. Performance Integrity

Performance integrity is the risk that the performance of the product does not function as well as is needed or required; it is faulty, buggy, insecure, etc. In the Help OS device, the Geo-caching and map part of the app and database were not implemented and didn't work and so fell short of the performance integrity that the team wanted.

In order to resolve or reduce this risk it is necessary to perform alpha and beta tests on the product to find bugs and allows for simulated use that it would see in the open world.

Code of Practice

It is very important to consider certain impacts a project will have in various fields. This section of the report will analyse the different areas that have an affect on the project and what the project team will do to keep to a code of practice.

Environmental code of practice

It is very important to consider the environment when planning a product in the modern age. Many individuals express the impact they have on the planet by using a "carbon footprint", this theoretically shows how much their daily life emits carbon dioxide into the environment, reinforcing the ozone layer, which causes global warming.

As a project that seeks to help survivors of disaster scenarios that are potentially caused by the effects of global warming (floods, draughts, storms, earthquakes), it would be ethical to limit the carbon footprint that the project causes. There are several causes for environmental

impact that the IT sectors contribute to. The consumed energy in 2010 for the UK businesses alone was 246 billion Kwh, almost 10 years ago, this was expected to increase by 40% by 2020 [1].

Environmental plan

In order to reduce the carbon footprint of the project, the following strategies should be followed:

Encouraging work from home, or cycling/carpooling/ using public transport to travel to meetings

Ensuring renewable energy sources are used (solar powered and/or biofuel powered smart offices),

Employing motion sensor lights that are only operation during later hours

Ensuring all electronics (that aren't critical) are turned off out of working hours.

Ethical and legal code of practice

In the age of Technology, information is easily accessible. This causes many people to be wary of who has access to their personal data. Recently, there have been many scares related to personal data protection. Facebook admitted to selling personal data to Cambridge Analytica, their mobile app was also found to be monitoring phone calls and SMS messages, and Facebook was selling user data to 3rd parties to generate personalised ads[2]. This led to the new DPA/GDPR act of 2018 [3].

Another issue faced is the increase in Ransomware. Ransomware is malware that encrypts targeted data and can only be accessed by paying money/ bitcoin to the attacker.

Ethical and Legal plans

To combat the social impact of the DPA act, the project team will simply comply with all laws related to data protection. Training will be provided to the team members so that they can comply with the DPA, and further training on internet safety and security. Regular security checks will be taken, and antivirus installed on all computer devices that will be used in the project. It is also important to keep the stakeholders up to date in terms of financials; the project team will keep the investors and stakeholders up to date on these matters and inform them if matters do arise so a detailed plan can be constructed on how to correct the issues.

Soon the United Kingdom may leave the European Union. There are many impacts this may have on the project, such as laws changing and funding changes. It is difficult to state exactly the changes that will be faced, but there is much optimism for the IT field. To quote the BCS Digital Brexit report **"Although there is undoubtedly uncertainty among BCS members as to what Brexit will mean to the tech sector, as a nation we have advantages that we hope will continue to allow the UK to be a digital leader. BCS members believe that that our academic culture and history of innovation are integral to our continuing success in this area."** ... **"Ethics and social good underpin any profession, so BCS is by its Constitution committed to diversity and inclusion. The digital economy is**

highly international in its outlook and constituent parts. BCS members have a duty to support welcoming and inclusive environments. The IT profession can and should act as ambassadors for an open and inclusive UK that welcomes positive relationships with non-UK citizens and a diverse UK society” [4]

Quality assurance & the Third Sector

This project falls into the boundaries of a Third Sector Organisation (TSO). A TSO is not a government subsidiary and is therefore independent of governments. TSOs do not work for profit, but rather to achieve a “social goal” be it, environmental, economic or social. As they are not for profit, surplus revenue is re-invested in the business to help pursue their goals [5]. As a TSO is independent of governments, they must self regulate their quality assurance, meaning every aspect of the organisation must be held under scrutiny to meet their own guidelines. As an example, poorly designed/ implemented products will lose investors, so a guideline will be made to ensure testing and prototyping is performed so that the product is satisfactory. To ensure funding is not being wasted/ is within budget, regular feedback sessions will be arranged to form an expenditure analysis sheet.

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FINAL GRADE

42/100

GENERAL COMMENTS

Instructor

Risk Management: A good section with a set of risks identified and a Risk Evaluation Matrix presented. A strategy is presented to manage each risk. This could have discussed the priorities identified.

Sustainability Issues: First, Second and Third Order Impacts are not mentioned but some very general advice with references is given.

Ethical and Legal Issues: A brief outline is given here and more specific advice would be an improvement.

Quality: Very brief without consideration of specific quality metrics.

Overall the assignment starts well with risks identified and discussed but becomes more general. An improvement would be to extent the discussion standard in the Risk section to other topics.

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