An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

A dissertation submitted in partial fulfilment of the requirements for the degree of Bachelor of Science (Honours) in Software Engineering

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Declaration
I hereby declare that this dissertation entitled An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry is entirely my own work, and it has never been submitted nor is it currently being submitted for any other degree.

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Abstract

This study will look into the project management methods of two different sectors of business. The I.T industry and the retail industry. By looking at these two industries the researcher hopes that they will be able to compare and contrast them and see if there is one way of working that would suit both industries.

The researcher will be using a public-sector organisation and a private sector organisation as case studies via the means of a focus group and a survey. I will be conducting the focus group with a public-sector company and this will involve asking questions on real life scenarios of project management, such as what may happen if there are issues with releases, emergency fixes and how weather events may affect release schedules.

For the private sector organisation, the researcher will be taking in surveys into the workplace to see if employees up to a management level have an idea of project management that is taking place in their store.

The literature suggests that agile project management is increasingly being used within the I.T industry today. This is shown by not only reading articles, journals and magazines but by looking at recent job vacancies for these sectors. It is also mentioned on the retail side but it is much vaguer. This is shown in the literature review. There are many articles on agile project management by a range of different authors which means that it is quite hard to find names which keep appearing throughout.

Both the focus group and survey are a mix of qualitative and quantitative research. Which will give me a good indication of the understanding of project management. There were some unexpected questions which came up in the focus group. The researcher did have a lot of individual points of view in regards to the agile way of working. Thematic and voluntary sampling was used to study these results to see if anything relatable could be bought around by looking at the focus group.

The same analysis was done with the survey, with shop floor colleagues showing some understanding of the agile way of working, and others not so much.
This research project will evaluate the project management methodologies of the I.T and Retail industry to see if it is possible to come up with one standard way of working across both of these sectors.
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To the organisations who have assisted the researcher with his research, thank you for your cooperation, time and patience!

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Chapter One: Introduction

Introduction – Overview
The I.T environment is constantly changing, so much so that new project management methods are constantly being used in this industry. Some ways of working are starting to be used in other environments such as retail environments. People are now starting to become much more proactive with their way of working.

With the use of internet and broadband facilities, many people within the I.T industry are now able to opt into doing home working.

The meaning of this chapter is to lay a foundation and basis of the research that I have undertaken. This chapter will also set the scene and give reasons as to why this was the chosen topic for research. A justification, aims and objectives will also be given, analysed and presented to show what will be achieved. The research project is to evaluate project management methodologies within the I.T and retail sectors and to see if they can be potentially interlinked.

The researcher will also be looking into whether people work as a team or if they work as a team on an everyday basis.

1.1 Introduction
Project management is often seen as a very high level term these days. It is administrative, and does scare people because of how high up it appears. It sounds like a management role. In today’s society, where it is becoming more and more important to discuss inclusivity. It is also important to implement a way of working that suits everyone. There are a variety of ways which have previously been studied. In an I.T environment there has been Rapid Application Development (RAD) which has an end result of just producing a final project. It is a management tool which is more often or not used in hackathon events.

The headings given will give an overview on the various topics that are related to the study. These topics will include information from the focus, which will took place in Exeter.
The topics include information on the agile project management, where an overview will be given and explained as to how this way of working is used today. Waterfall project management, where products are made and released without the use of updates. Rapid Application Development which is used in small sections of the public sector organisation, mainly for the sole purpose of experimentation.

Retail environments tend not to have this sort of structure. If so, they are usually bought in with a new way of working. One example of this now being used to Waitrose staff called Modern Waitrose. Where partners can move into different sections for example replenishment and tills. As it encourages utilization of staff.

1.1.1 Agile Project Management
This is a method that is being used in big cooperation’s at the moment, with teams being divided into tribes, and the technical lead of a project being called a scrum master. This way of working makes use of sprints of two to three weeks, where nothing but development is done. Bug fixes can also take place during these individual sprints. Agile issue tracking software is also used to enable projects to be tracked more accurately this way.

It is often required to know about the agile way of working in job descriptions these days too, as it appears to be in job vacancies “Experience of using agile issue tracking software for team collaboration.” (BBC, 2017)

1.1.2 Waterfall development
This is a way of working that, appears to be done in higher education by students. Working on a project for an extensive piece of time and then releasing it or submitting it. It was used in industry much more often in a 1990’s when it wasn’t possible to get updates. An example is Microsoft Windows when a CD-ROM’s with new operating systems were shipped. This was done all the way to Windows Vista, via the means of service packs.

1.1.3 Project Management in retail
In retail, project management is done through offers and promotions. This can seen by different offers on products on various products for a select period of time. Offers on
stands may also change over. Most retail environments have a proactive way of working, by checking central systems for updates, recalls and stock updates.

Ironically, offers in the private sector business tend to last around the same period as an agile sprint (2/3 weeks) before they are changed over to a different date. During peak periods such as Christmas, Easter and summer. Where the audience demographic is challenged more due to environmental factors (summer for example, when temperatures are set to increase, offers on burgers and ice cream tend to be at the front of the store). Suggesting very much so, that an agile approach of working is happening.

Store teams, from colleagues to management are key to deploying relevant show material and making sure that it is put out on time.

1.1.4 Project Management in I.T Environments

The public sector company can be stopped from releasing due to the weather, as it is key to what they do. If warnings need to be issued or adverse weather is expected, then the release schedule will be altered, and maybe pushed back by a week (enabling a rare three week sprint). It is usually up to a solutions architect to make this sort of call, and for them to do what seems fit. The scale of severity of weather is also used. Releases may go ahead with a yellow heavy rain warning for example.

Emergency releases can take place at any given time, for example to amend a serious bug on external websites of the public sector company. There have been occasions where this has happened.

Project tracking software such as the Atlassian suite is ideal as it has the agile way of working built right into it. For example, sprint planning is included which enables tribes to plan sprints accordingly.

Release management is also done by the same tribe, but is under supervision by the solutions architect. This is to make sure that releases are done on the correct days, and also for the release teams to make sure that the correct material which has passed code review is being placed in the right places. The technical lead and solutions architect work with the release team when deployment is taking place to make sure that is successful.
1.2 Purpose of study
The study is being done as part as a third year project. But, the researcher has chosen the topic area based upon two contrasting sectors of work where project management methods differ. These topics are of particular interest to the research for sentimental reasons which may help to shape their career in the future. The topic is also very much in the present at the moment to, in regards to workplace inclusion and trying to get people to perform a variety of roles. In the I.T industry this can be in regard to learning more languages, in retail this can be in regard to learning about other areas of a store. The researcher has also worked in both of these sectors before and can shed some personal experience on how they both operate. The researcher is also looking at the distinct possibly of working in these two sectors studies.

There are two companies, one private sector company for retail and a public sector company that have been analysed. Both of which wish to remain anonymous. This is because the researcher has worked at both companies and wanted to explore their businesses in more detail and also at a high level which is what project management is. There are many methods which can be spoken about, and many theories so the researcher wanted to see what is being used in practise. The researcher felt confident and knowledgeable whilst exploring the project management topic in relation to collating the primary and secondary research as they knew people some both companies and they were willing to give them the time and dedication to do the research required.

1.3 Public Sector Organisation
The public sector organisation collects lots of observational data every day, it also has close ties with the ministry of defence which are still used today. The organisation was established in 1854 and was used to help predict ocean currents and weather patterns. It has advanced, in regards to technology at a massive speed. The technology being used now at this organisation is cutting edge and brand new. This company also provides weather data to many companies around the world. With continued investment coming in from the government, this company is really investing in transforming itself for technology and is for the first time ever, preparing to collaborate with other government agencies and universities with their meteorological data.
This is where project management methods come in, with more technology being used every day it is important that I.T can adapt to the increasing demands of the internet. The public sector organisation is preparing for this with the last of a three phase operation to fit a new supercomputer which will allow it “to take in hundreds of thousands of weather observations from all over the world which it then takes as a starting point for running an atmospheric model containing more than a million lines of code.” (UK Government, 2017)

Small teams work on big projects in this organisation for security reasons, and most projects can take some time to complete, whereas others can be must more tedious. Projects that are in development in terms of I.T are always going to be monitored closely by the press. This comes as this organisation is a top weather data provider.

Currently, this organisation has just shy 2,200 staff and each of them are given a basic introduction to weather, to ensure good customer service when dealing with people from outside of work. Data from recent HR databases show the staff by gender.

Figure 1.1 – The selected public sector organisation workforce staff, based on staff from the HR database in January 2016.

Public Sector organisation staff by gender

(Gender breakdown, UK Government, 2017)
1.4 Private sector organisation
The private sector organisation I have chosen to work with, is a high end supermarket which engages with its workforce as much as possible when it comes to changing around the business and the way in which they may choose to work. This company is known to be very high in terms of quality of its food and customer service. “We believe in treating our customers, Partners, farmers and suppliers fairly, as well as supporting local charities through Community Matters.” (Limited, 2017). This shows that the business looks at all different areas of customer focus.

Today, this organisation also holds a highly respectable rating from customers because of its ability to stock rarely seen brands, which is what may give them an extra edge compared to other supermarket competitors in the supermarket industry. How they do this is mainly based on customer feedback, and what customers wish to see in stores. This makes customers feel happier with brands. This company has also been making changes for employees using inclusion to make sure that they are able to work on all areas of the store, as previously mentioned. “All 86,700 permanent staff are Partners” (johnlewispartnership.co.uk, 2017).

The organisation is world leading in coming up with new ways of working for its partners, and operates on a democratic basis by the means of using forums and then taking changes to council meetings and finally board meetings. This is how feedback into existing methods of working is done, and then proposals are bought in from other members of forum staff.

With many industries going under a period of change, there are many questions to be based if current work methods under retail are efficient or if they are a not needed.

1.5 Research Design
Whilst considering what research design is best to use, the researcher did also have to think about the practicality of what methods would be better to use, rather than some predictable surveys, which whilst useful may not give as much of an insight into a company. The researchers’ data collection strategy was highly based on detail and really asking the questions that needed to be answered in order to gain a full and thorough understanding as to what may be happening in organisations. The researcher
used a few primary data collection methods which included surveys and a focus group. These research methods used a mix of qualitative and quantitative approaches. The focus group provided the flexibility needed to understand the public sector organisation and the way it worked with I.T projects. It was also useful that the researcher, having worked at this company before had background on how the company operated internally with its various projects. The focus group also helped the researcher gain an understanding as was able to ask questions which would be more relevant and useful compared to secondary research which would be more difficult, nay impossible to find.

Secondary research is also going to be conducted to enable the researcher to gain a wider and more in depth understanding of different project management methods, as well as statistical facts and figures about other companies which may use similar approaches. This will be in relation to statistics of project management in chapter 2.

1.6 Who could the research be beneficiary for?
This research will be extremely useful for two individual sectors, the I.T sector and the Retail sector and the way that they carry out their work and major projects. The public sector organisation could have an in depth review on the possibility of only using one project management method, whilst the private sector organisation could start to make its employees more aware on the way that they are working and why they are being told to work that specific way. It’s a way to give a backbone to a process, or giving it justification.

Most people do not understand how project management is done, or even that it exists within a company, when the reality is that it is there, but people don’t see that it is there.

Also, the research that will be conducted will be useful to many students, who may perceive a job in I.T to involve just programming but may not necessarily understand the time management and work management process of these jobs, and being able to track their process is crucial when releasing products out to the wild. The same can be said for retail jobs, to some the job may be perceived as just stacking shelves, but the reality of the situation is a more detailed as stock rotates, it should be managed somehow.
1.7 Researchers aims and objectives

When someone has an aim, they have a goal that they wish to achieve. The purpose of aims is to try and break down the objective. The objective maybe the end goal. Whereas the aims can be the steps to reach the objective. Aims are described by Southampton Solent university as “An intention or aspiration; what you hope to achieve.” (Learn.solent.ac.uk, 2017)

**Aim:** The aim of this study is to evaluate the project management methods of I.T and compare them to the management methods that are being used in retail and see if they can be applied in the retail industry.

**Objectives:**

- Gain a detailed understanding in the agile way of working in office environments
- Use data from focus group and surveys to understand different project management methods and give personal opinions on them
- Give recommendations based on opinion as to which project management method maybe best for individuals / businesses and explain how it is utilised
- Explore upcoming and new project methods in I.T and give a detailed analysis as to how they could be used in start-up businesses today

1.8 Dissertation Overview

This study will be based on chapter in order to give it better structure and for ease of reading. It is also to make sure that every aspect of the project is studied. These chapters will cover the introduction, literature review, methodology, results analysis of the two companies and discussion and lastly a conclusion. To make sure that the researcher is able to get full use of the results to fulfil his aims and objectives it will be important that a direct flowing structure is followed to get this understand of results.

In chapter two, a detailed literature review will be carried out based on subjects which are in chapter one, where the researcher will be getting a grasp of project management methods in both sectors. Chapter three will involve the methodology will discuss and evaluate (look over) the approaches that the researcher chose for their research,
alongside this the researcher will also list the pros and cons for their chosen approach(es). The researcher, will then justify the reasons for not choosing other approaches for research.

Chapter four then follows, with the results and the discussion of the research that was undertaken and how it could provide important information for industries today. Lastly, comes the conclusion where results will be summed up and the researcher will come up with a balanced view.

1.9 Chapter Summary

This chapter has introduced the chosen topic of study and has given justification to why the researcher wishes to explore it in detail. Furthermore, it is more likely that the researcher will find out much more information using both primary and secondary research methods when they have been put together. The researcher has set out their aims and objectives, through which project management methods are mentioned. The researcher has also spoke briefly about their research design and methods and how they corresponds to the methodology section which will appear in chapter three.

This chapter has also discussed who will benefit the most from this study, with target groups being people in industry being the ones who will benefit most. The aims and objectives have also been mentioned here, and lastly a summary of the dissertation with a detailed description within each chapter.

In the next chapter, the researcher will critically analyse and evaluate the literature review based on information available on project management and also background on both companies. This will be done accordingly so that the researcher can then decide his questions accordingly and suitably for each company for his primary research to be successful.
Chapter Two: Literature Review

2.0 Introduction

Oliver (2017) states that literature reviews should be “fairly narrow and focused”. Adhering to this, it means that the content the researcher looks for should be focused and to make sure that they don’t go off on a tangent whilst looking for relevant and relatable sources. This is to make sure that the researcher has topics and pages which hold a vast or good amount of information which will be useful to them to use and even reference later on in the dissertation.

The literature review will also be used to shape primary research questions for when the researcher goes out into the field to ask industries questions which should be relatable and he can reference in his dissertation.

Agile project management firstly, as it is a massive area for the I.T industry. This topic has got a vast amount of literature attached to it, which enables the research to delve deeper into this topic to pinpoint the exact things that he needs. He is also able to achieve one of his objectives too. The second topic, project management in retail and how it is achieved has far much more limited information, which meant that the researcher may have to look at job vacancies to gain an understanding as to how a retail company may operate from a secondary research perspective, anyway.

Literature reviews can be viewed as an important piece of a dissertation puzzle, getting the pieces out of the box and letting them fall to the floor, before assembling the puzzle together later. It’s used to collect relevant and existing information surrounding the researchers chosen topic area. The Royal Literary Fund (2017) believes that “A literature review has four main objectives”. These involve surveying, synthesising, critically analysing and presenting literature in an “organised way”. Doing a literature review this way enables the researcher to build up their knowledge slowly and more appropriately. The researcher can then also gain the skill of critically analysing other people’s work and academic papers. The researcher can then look into the woodwork, as such to find any gaps in knowledge and help to fill them in with their own work.
The literature review chapter will cover the different methods of project management, which will look at Agile Project Management, Scrum, Kanban, Waterfall, Prince and Rad (Rapid application development) on the I.T side. Stock rotation management will also be looked at to see if there is a similarity to I.T project management as to how products on each side are handled.

2.1 Agile Project management
Agile project management, is very much the go to thing these days in the world of I.T, as the world is becoming a much more connected place with internet speeds increasing all the time. Meaning that some projects are now being conducted with global collaboration. Places where the researcher has worked in the past have also used this method, so the researcher feels like he has grown up with it since he was eighteen. One software developer, Atlassian states “Agile project management is an iterative approach to managing software development projects that focuses on continuous releases and incorporating customer feedback with every iteration” (Atlassian Project Management, 2017). Which may work better as concept because of how rapid new releases are needed these days to fix bugs on mobile devices for example.

Within agile project management there are other methods (SCRUM and Kanban) which package up everything nice to make a perfect scenario for time keeping. Practicality is the main reason why the agile methods now succeeds rather than before, where waterfall was the most suitable way of working in the past. This can be seen on the surface these days by looking at windows releases from Microsoft, when CD-ROMs used to be sent to shops, whereas now updates are only delivered through the internet. Windows 10 marked the end of CD-ROMs being shipped out, to save Microsoft money and for environmental protection.

2.2 SCRUM
SCRUM is part of agile project management, but is important enough to deserve its own section. This is agile framework and handles how work is managed. “Scrum is a framework for agile project management that uses fixed-length iterations of work, called sprints.” (Atlassian Project Management, 2017). Sprints are used to make sure that a
team is focused on a fixed number of tasks and as a work management tool for tasks and any sub-tasks which need to be conducted.

Scrum.org (2017) states “Scrum is not a methodology.”, which is something that does cause some conflicts due to the way it operates in companies. It is treated as a methodology, for processes to work the way that they do within industry, otherwise there would be no team structure, and no way for projects to move forward. It’s a very contradictory thing to say, whilst in practice I have seen the Scrum project management method be used effectively as a methodology.

Based on the researchers past work experience in scrum teams, the people structure of a Scrum team is usually done as a Product owner, a technical lead for a project, who is usually referred to as a scrum master and the development team. This is backed up again by Scrum.org (2017) “The Scrum Team consists of a Product Owner, the Development Team, and a Scrum Master.” One or more scrum masters within a team make up a squad. Product owners are imperative to directing the processes as the project progresses into later stages, such as alpha, beta and final releases.

The scrum workflow also plays a major part into how projects progress, it was mentioned and referenced earlier about how work is managed in sprints. This is to make sure that the team doesn’t feel too overloaded with the sheer amount of work that has be completed. There are other bits to the scrum framework which are called scrum events, in these events are where the development team, scrum master and product owner meet to refine or to add individual tasks onto a sprint. This is referred to as “sprint planning” (scrum.org, 2017). There are also other processes which are also used, which can help to assist what maybe currently be going on within the team, this is known as a Sprint Review, which may be used when there is uncertainty in some tasks (which may also be called stories), before a final review of a sprint (known as a sprint review).
Which looks at what went well within a sprint, and what didn’t go so well. If there are stories/tasks which are incomplete, these are then moved into the next sprint and are assigned as a priority to finish. Sometimes, if stories are not finished they can block
processes within the next sprint from taking place. These stories are known as blockers. These become high priority to fix before moving onto the next story.

Set software is also used to help make this process easier. Software that has been used in industry includes Atlassian Packages, which can deal with many different types of project management methods. But supports the main three methods of Agile, Kanban and Scrum.

2.3 Kanban
“Kanban is a popular framework used by software teams practicing agile software development.” Atlassian (2017). The statement above is very interesting in the way it talks about Kanban being a framework not a methodology. Which can be understood and used, earlier it was mentioned how scrum and kanban all fit under the grand agile umbrella and how they all work extremely well in this solution. But the purpose of Kanban is to break tasks down further. “The work of all kanban teams revolves around a kanban board, a tool used to visualize work and optimize the flow of the work among the team.” Atlassian (2017). The way this is done is very much like a simple to do list. By checking off tasks, moving them, or making them vanish totally by deleting them. It is easy to understand why it can be seen as a project method due to its inclusion within the agile bracket. But as a principal it does work, you are managing tasks on a project by using this way of working, a way of working that many students (or those that use lists) have done for many years. By crossing something off and moving it into a done section. The workflow is subtly being optimized.

The key difference that can be seen with the Kanban workflow is the way that it is being done. A Kanban solution is also able to be used across many different industries as the only things that are required are a large piece of card, pens and post-its. Which does seem rather basic and simple, for this to be a project management method. But it is almost certainly one that can be adopted in a place as small as a household, and as large as a multi-national company, for example.
There are flaws with this solution as Atlassian (2017) discusses “A Kanban team is only focused on the work that’s actively in progress.”, this shows that it’s a not a good tool to be used for any future sprint planning, as one sprint should be finished first, before moving onto a new Kanban board. From the researchers experience in the past, development teams had to also write down potential stories on post its, and then it was up to the product owner and scrum master to decide if they were appropriate.

Kanban is also a highly flexible way of working, which means it can be combined into other frameworks very easily and quickly, it maybe to allow for more time for a project to be done correctly, and effectively. Developers shouldn’t feel the need to be worried about the Kanban board, it is there to be used a guide only. But it is something that should be updated as a sprint goes on and progresses towards being completed with a deadline in place. The Kanban board may then end up being completely re-done and remodelled at sprint review if it is mixed with a scrum way of working. To mix these two frameworks can work well, as it has done when the researcher did a year’s placement with a company that decided to do this mid-project. This way the team can make use of the agile way of working, scrum methods and finally Kanban way of working which has worked well for many years and was used years before agile, but was just not formally recognized as a way of working until much later on.

2.4 Waterfall
Waterfall has its best uses when it comes to projects which just need something to be finished. It’s sort of a develop code, get it done, test it and then send it out there. It’s a non iterative way on working. This is backed up by Balaji et al (2012) “Testing is carried out once the code has been fully developed.” This shows that the main idea of waterfall has been for years for it to be a non-iterative process. It is one that could be idealised with university study and assignment, with developing code, testing it and then submitting that code in an assignment, and possibly never seeing it again once it has been released. Waterfall really does have its major flaws. Some of them are seen too late in the process of release. This is explained in the abstract of a paper by Petersen K et al (2009) “Commonly accepted problems are for example to cope with change and
that defects all too often are detected too late in the software development process.” This is a problem which is universal to all project management methods, but with others, the ability to stop this from happening is much higher and it isn’t too late to do.

More companies are familiar with waterfall ways of working, “For many years, the dominant software development life cycle was the waterfall approach” (Highsmith III, n.d.) rather than agile ways of working, this maybe because agile comes with a heavier workload to just setup and get going, where as an iterative way of working is something that works much better on an individual basis, and teams, squads etc., are not used or mentioned in the waterfall way of working.

Finally, the methods of how waterfall work are becoming something of the past. The Software Development Life Cycle is something that is a standard for all areas of project management methods, as it is something that all methods go through individually. It is, in itself a method for “designing, building, and maintaining information and industrial systems” (Bassil, 2012). This is something that the waterfall method did not do as well on, as its non-iterative process got in the way of maintaining information as Bassil says. It was designed for one release only. This was a better way of working at the time when the waterfall method was at its peak flow. Waterfall methods are not only seen in I.T, they can be seen in an everyday environment where steps are followed or repeated over time i.e. an iterative process/cycle. One way this may happen in retail is through stock rotation, where an iterative process also happens to ensure that correct stock is put out, and stock which maybe going out of date will be put out to the front of shelves whilst other stock is taken back. The use of waterfall management methods across different types of industry and the way it is able to fit into stock management is something that is imperative to this research.

2.5 Prince2

“PRINCE2 (an acronym for PRojects IN Controlled Environments)” (Prince2.com, 2017). Prince2 is very different a project management method, as it does rely on qualifications in order for it to be carried out properly. It is a project management method that is more
ideally designed to be used for public sector organisations “Used extensively by the UK Government” (Prince2.com, 2017) which makes this method extremely relevant for the researcher. The way PRINCE works, makes it a highly concentrated way of organising and structuring a project due to its requirement of a qualification.

As PRINCE is a certification, it means that other developers may also need to gain a detailed understanding of how it operates before even starting a role at a public sector organisation, or more experience maybe needed before entering a job role, which can have a knock-on effect for recent graduates as they may not have had the experience of public sector work.

The cost of PRINCE is most certainly a dis-advantage, as a paid course the concept does not work well for the private sector. It is more difficult as a concept to get a hold of due to not enough information being told about how the project management works as a concept.

The way PRINCE works, based on what can be seen is that anyone can do it, it’s a project management method which appears be to trying to be sold, not taught. “Individuals seeking leading project management skills and greater employment prospects” (PRINCE2.com, 2017). This is very different from previous project management methods previously mentioned, as most methods are freely adaptable. Others, are less so.

There are also options today, due to the rapid growth in the agile way of working of taking courses in PRINCE with individually specified elements of agile. This gives some scope on as to how big the agile way of working is and also gives some appreciation for this way of working and its associated methodologies, but PRINCE also has to be respected for its adaptability to rejuvenate itself and not be phased out – unlike waterfall which in very little time, soon may not exist.
The PRINCE method is a difficult method to look at, as most information is put away under a secure portal, but it has very similar properties to the agile solution. The concept does work and does seem to be focussed on the public sector, it is not a specific I.T methodology which means that it can move around different sectors of organisations which means it is non-restrictive. Finally, PRINCE does have that ability to evolve again, as it has done now with agile ways of working, but it will not be able to adapt quick enough due to the public sector usually being left behind on ways of working, not just on a project management side, but also on a I.T side, where software may not be kept up to date, which in turn could cooperate future ways of working.

2.6 Rapid Application Development
RAD can be described as something very different to SSADM (Structured System Analysis and Design Methods), due to its lack of planning time.

The more hackathon style Rapid Application Development (RAD), which encourages the use to make an application in a specific amount of time, can also be considered a project management method due to its nature. RAD can be used as a tool to help encourage more and more ideas to be used in industry. Whilst its use for fully functional applications is not recommended, its use as a starting step for potential new projects is its main use in industry. “Rapid application development is a software development methodology that uses minimal planning in favour of rapid prototyping.” (www.tutorialspoint.com, 2017).

To throw away project planning and RAD, does form the basis of a hackathon. RAD does form a potential future in the computing industry due to the rapidly changing time of projects being taken to be completed. RAD could be seen as a backbone towards the future of project management methodologies. With the government encouraging more and more hackathons to take place, there is an idea that this method is actively being used to encourage younger people to make applications.
RAD is also different in respect that unlike Waterfall methods of working, where ideas have to be thrown back and forth to a client, BBC bite size backs this “continual involvement of the client allows for the rapid development of potential solutions” (BBC.co.uk, 2017). RAD involves the client on a full time basis, so that they can make an informed decision as to how a potential product will go and how it will be shaped, which is a project management method which may suit the younger generation much better.

RAD is now also being used in higher education, admittedly at a slower pace, but at least at a pace where it is now being taught, or undergraduate students are almost certainly looking at this method in depth. Having RAD as a process maybe something where students can base future assignments or, or perhaps it can be an assignment method due to its popularity. It is important though, to remember that this model is non iterative, steps cannot be repeated as the methodology progresses. Once a step has passed, the next step has to happen.

It is still very different to the agile way of working which means, that whilst useful to do and learn, it won’t be used by a majority of workplaces at this time due to its emergence and lack of mobile computing resources that are needed to support it as it grows. By computing resources, this could mean money, or transformation and efficiency that is being put in place by companies at short notice.

RAD does, still have a future, but using this project management method should only (for now) be used in hackathons, planning is still needed, and models which are not iterative are more likely to be safer to follow.

2.7 Chapter Summary
This chapter, has discussed literature that is most relevant and needed, which has enabled the researcher the gain a full and detailed understanding of five of the main project management methods and frameworks which can be associated with them. There is a detailed amount of connectivity between different project management
methods, for example PRINCE and Agile. PRINCE has been able to adapt to the agile methodology and integrate it into its project management style, and qualifications associated with it. There is very limited literature/no literature in relation to the way project management is found in retail, but the researcher has found common ground between them, and how they could be applied in theory to create a better understanding of what could be better for retail companies.

Throughout this chapter, there was a distinct correlation between reading through the scrum, agile and Kanban methodologies which suggest how they can be applied easily and quickly into a work place. This correlation was seen to be positive. If these project management methods were too applied in a workplace such as retail, an agile approach maybe better in some respects as processes would be able to be used again. A better approach than a non-iterative approach such as waterfall or RAD.

This chapter has bought together the different methodologies that the researcher wishes to focus on, which can relate to answering the researchers’ individual aims and objectives. The next chapter will evaluate the different research methods which will be most suitable for primary data collection.
Chapter Three: Methodology

3.0 Introduction
This chapter will discuss the relevant research methods which will be used to collect primary and secondary data, but will also give the advantages and disadvantages of using each type of data. A methodology is defined as "a body of methods… employed by a discipline" (Merriam-webster.com, 2017). The discipline here being the project management methods.

The aim and purpose of this study is to give justification for using a specified technique, as well as giving evidence into how data was collected and constructed to make it readable and digestible to draw conclusions from. This chapter will also discuss how reliable, valid, and ethical the issues are of this research. Lastly, the challenges that were faced in collecting the data which would be most relatable and reliable, and see if there could be any improvements so that data collection could be done again.

Many aspects of the chapter will discuss the various research approaches that were mused including qualitative and quantitative research methods. But firstly, the primary and secondary data will be discussed and fully analysed.

There were a variety of research methods which were considered for the researcher to collect new data. The researcher had a range of options to consider whilst thinking about the best types of data collection to use so they could make full use of the time available. The researcher decided to in-cooperate both primary and secondary research.

The chapter is structured in terms of the various research methods, and follows the pattern of, secondary research (3.1), primary research (3.2), qualitative and quantitative research (3.3), rationale for research methods used in this study (3.4), focus group (3.5), focus group sample (3.5.1), focus group sampling (3.5.2), survey (3.6), survey design (3.6.1), survey sampling (3.6.2), data analysis, reliability and validity (3.7), ethics (3.8), limitations of overall data (3.9) and finally, a chapter summary (3.10).
3.1 Secondary Research
Secondary research involves the use of websites, electronic journals, statistics and images. The idea of secondary research is that it can be used to interoperate views of others, and express the researchers’ opinion on what has been said by another author. The secondary research that was carried out took review in the form of the literature review chapter, to give a detailed view of the different project management methods in I.T environments and how they could be used in retail areas.

Most of the secondary research used a variety of online resources due to time constraints of the researcher. This lead to some significant issues in the form a rather limited literature review, but a rather concise review as well. The researcher has found it difficult to find detailed information on the project management methods of retail. As there was not much data relating to the project management methods of retail, the researcher wanted to make use of this gap and exploit it in the best way they could, thus, responding to the aims and objectives of the research project by comparing the two work environments (I.T and Retail).

It is important to emphasise that this way of conducting secondary research was not used in the individual study, but was a way of being able to more readily build a concise literature review. It was not contributing to any actual results of the research study.

As resources for finding project management in retail were tricky, and the continuous shift pattern of a private sector company, the researcher considered the use of a survey. Whilst, the researcher had a way of being able to talk to people in a more informal environment the researcher requested a focus group and a survey, which would be same as the one given to the private sector company. This would help the researcher fulfil objectives one and three.

3.2 Primary Research
The whole point of primary research is for the researcher to gain new information and insights so that it can be diagnosed and looked at in detail. The researcher did have to firstly, gain approval from his dissertation supervisor and the Cardiff Met ethics
committee. The researcher was successful in gaining this. The approved form can be seen in the Appendix. It was imperative that the researcher gained permission from the university to protect himself, his project and ultimately, the university. The whole point of this was to make sure that had anything bad happened, the researcher had the full backing of the ethics committee.

The primary research was concise and appropriate in comparison to the secondary research which has proved to be lengthy and difficult. The primary research could be customised to answer the researchers’ aims and objectives. It is also interesting to note that primary research can give a more accurate and up to date reflection of how people and companies may think.

3.3 Qualitative and Quantitative research

“Qualitative research gathers information that is not in numerical form… Quantitative research gathers data in numerical form” (Simplypsychology.org, 2008). This was something that the researcher wanted to empathise with in case others got it wrong. The researcher wanted to use a mixture of quantitative and qualitative data to get a selection of both facts and opinions which would help him to better understanding of where gaps are in project management methods, and where individual boundaries may be.

Therefore, the survey was relevant for both companies, to collect a mixture of facts and opinions. The focus group was also a qualitative data collection method, which gave an hour of vital opinions from people in industry. The researcher, therefore used a mixed method of data collection. Although, largely qualitative some quantitative data was used in the surveys. The researcher invited all employees from a store in the private sector to have their say. Whilst by using contacts gained in his year of industry he could contact a product creation team in the public-sector organisation that could attend a focus group. The same survey questions were then sent out to them via a web link for them to fill in.
3.4 Rationale for research methods used in this study
The researcher decided to use a mixed approach, meaning that both quantitative and qualitative approach could be used so that the researcher could get the facts as well as opinions. Something that he needs when he refers to his aim and objectives to meet them. The researcher has decided to carry out a focus group to collect personal views/experiences on specific subject matters and questions, it also makes it easier to analyse as the researcher can draw their own conclusions and their own generalisations about the topic and what was discussed. The views of the focus group represent an individual staff member, and not the company’s stance on how project management should be done.

For the survey, the researcher decided to ask a mixture of quantitative and qualitative questions, to give employees of both industries a chance to express their own thoughts, and to give feelings on a scale of one to ten. The researcher also had to factor into account that at the private sector company, people were often on breaks and did not have access to a PC at work, so he gave out paper copies which didn’t contain any information which breaches the data protection act. Once surveys were filled in, the folder was placed in a locked in the store, where the door was locked to make sure that information could not be stolen. The survey was designed to be concise as well to prevent it from taking up too much of employees' time.

3.5 Focus Group
The purpose of a focus group is to allow for “collect data on a specific topic.” (Qualres.org, 2017). Which is a method that the researcher thought would be most useful for asking questions to public sector I.T workers. The way a focus group operates allows for some informality and does allow the interviewer and the interviewees to feel comfortable to answer relevant questions. The researcher is also able to look for signs of discomfort when discussing a topic by looking at interviewees’ body language as a level to indicate enthusiasm for a topic or question that the researcher may have asked. Before the focus group took place, the researcher asked for permission for voice
recordings. All participants agreed to this, and a recording was taken on the researchers' mobile phone. Consent forms are in the appendix.

The disadvantage to using a focus group is time, and being able to get this time from a large public sector organisation can be a big challenge. Questions should ideally, be concise and relevant in order to prevent the focus group from running over. The researcher used a set of both open and close ended questions that could be answered as yes/no or to allow for discussion around the focus group, adding some opinion into the discussion.

There are some risks with a focus group. It is essential that all participants including the interviewer pay full attention to answers being given or discussed, attend and also make sure that the question does not turn into a debate, or that false information is flying around the room.

3.5.1 Focus group sample
The focus group was made up of eight questions, most of these questions were very direct, and some allowed for open ended-ness. The focus group was carried out in Exeter. The focus group used eight people from a product creation team who knew about project management as this is one of companies’ main lines of work, and all were relevant to the topic in question. The focus group questions can be seen in the appendix.
### Table 3.1 – Focus Group Participants

<table>
<thead>
<tr>
<th>Group Name</th>
<th>Gender</th>
<th>Number of Participants</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>FG1 (Focus Group 1)</td>
<td>All Male</td>
<td>8</td>
<td>Not Disclosed</td>
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<td>Not Disclosed</td>
</tr>
</tbody>
</table>

The table above matches with the gender by profile pie chart discussed earlier, which reported a more male than female presence at this public sector company. The researcher sent an email out to the solutions architect of the product creation team in order to draw more attention to the focus group to get more attendance, but this would have meant more of the companies’ time would be spent on people wanting to attend these focus groups. Timing was also another aspect for the focus group. It was held on a Friday afternoon, not ideal when people work from home on a Friday thanks to mobile working being an option.

#### 3.5.2 Focus group sampling

The participants that were involved in the focus group had the option to take part voluntarily or to not take part and carry on with a normal working day, therefore sampling was done by convenience (also known as convenience sampling) “Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher” (Explorable.com, 2017). This was most useful and relevant for my focus group as
offices at the product creation area are laid out in an open layer scenario to enable collaboration.

3.6 Survey
The purpose of the researcher’s survey was to find out information about both organisations and the project management methods they had in place. The survey asked both quantitative and qualitative questions so that he could get a mixture of facts and figures. Before filling in a survey online, participants had the option to agree to participation. Whilst a paper survey, consent was done by filling in the paper form. “Whilst participants are not signing a separate consent form, consent is obtained by virtue of completion. “ (St-andrews.ac.uk, 2017).

The survey was given to both companies but was distributed in different ways. For the private sector company, twenty surveys were printed off and placed in the staff room so that staff members could voluntarily give them in, whilst in the public sector company, a link was emailed out, but a PDF was provided in case some team members wanted to fill in the survey manually, scan it back in and send their survey to the researcher directly. The numbers for the survey were small, as expected for the way they were distributed, which was directly in paper form and online form. The researcher chose to use paper form for the reasons of accessibility. In the private sector organisation, not many people have access to computers so it would be easier and less hassle to fill in a paper copy of a survey, compared to the public sector organisation, who have access to computers all the time (since they are developers!). A URL seemed to more appropriate in the researchers mind.

3.6.1 Survey Design
The survey questions asked were the same across both organisations, and had a straightforward structure. Survey questions can be seen in the Appendix. Survey question, as the researcher has mentioned previously used open and close ended questions as well qualitative and quantitative measures to get a sense and feel of variety to a deeper analysis can really be made from the answers to surveys.
Survey questions were also part of the ethics process to make sure that the questions that were going to be asked were neutral and did not compromise the research project, researcher or the university. The researcher created the online survey on a secure system which requires a password to enter, and paper surveys were left in a locked room overnight to prevent any data protection, even when no sensitive data was on forms, but for safety and security it was carried out in this manner.

3.6.2 Survey Sampling
Survey sampling was done on a voluntary basis. Individuals volunteered themselves to fill in a survey, therefore they were recruited via voluntary sampling. A definition of voluntary sampling is given by sagepub. “It usually involves individuals who agree to participate in research” (Methods.sagepub.com, 2017). All volunteers, did not have any further question after survey completion/collection was done.

3.7 Data Analysis, reliability and validity
The data that has been gathered from both focus group and survey has been analysed and evaluated using both thematic and statistical analysis (where appropriate, as a small amount of data is quantitative). Thematic analysis takes “a method for identifying, analysing, and reporting patterns (themes) within data.” (Braun and Clarke, 2006). This is the technique that shall be used to look through results from data collection.

Data will be summed up via the means of content analysis, which is a technique “for systematically describing written, spoken or visual communication.”(Psc.dss.ucdavis.edu, n.d.). This technique does also create issues in regard to other questions or hypothesis appearing as a result of analysis of data which can cause the researcher to question himself on the validity of his results. Especially in regard to the focus group.

The researcher listened to the focus group and made notes on who spoke at what time during each question by writing down who spoke first, and in what question they were
speaking about. This was done by the researcher writing out a name of the person (as they had signed on the consent form), and then a number in relation to the question they were answering.

From a qualitative point of view, there weren’t any questions asked which could be assigned to a numerical value. One question which could, was on the survey which asked for a rating. But survey questions were broken down into this view to take into account of answer to question including (yes or no answers), individual work or team work, knowledge of computer systems. For the focus group, body language which may be understood via recording due to the tones of voice and language used throughout, which could then be assigned of value of being interested or not interested.

When it comes to reliability, as most of the data is qualitative and is opinion based, it is difficult to measure if it correct or not as most is just others thoughts and feelings. So, the researcher then has to fall back on the literature review that he carried out and to see if that was a reliable and accurate representation of the primary data collection that he was going to carry out.

The survey and focus group had their own set of questions to make sure that people weren’t answering the same thing twice. This is to show both companies researcher reliability, by asking a variety of questions.

The researcher also had an in-depth look into validity to see what sort of validity would lead to the triangulation of results. The validity that the researcher identified as being most important is construct Validity which “defines how well a test or experiment measures up to its claims.” (Shuttleworth, 2017). What this means is, can the management methods of I.T and retail by using the information just from the interviews and surveys. Being as most data is from a qualitative source. The validity which may suit the solution in order to be observed throughout the primary research study by using triangulation which “involves using multiple data sources in an investigation to produce understanding.” (Qualres.org, 2017). Which basically means, by looking at primary and
secondary information, is it possible to understand a comparison of the project management methods of project management and retail.

3.8 Ethics
Prior to conducting a project like this, it is important to take note of the ethical steps that must be followed before primary research can begin. “Cardiff Metropolitan University has the responsibility to ensure that research involving human participants carried out by staff and students conforms to the highest ethical standards.” (Cardiffmet.ac.uk, 2017).

The researcher had to fill in ethical forms stating what they were intending to do for primary research, this involved listing their intents on a form and giving information on how they should safeguard primary data. The ethics form can be found in the appendix.

Before the focus group was carried out, the researcher passed around an information sheet stating what they were here for today, and the types of questions that they would be asked. The information sheet told focus group attendees the reason why they had been asked to be involved in this study. Afterwards, the attendees were given a consent form to sign as evidence for the researcher that each individual attendee was happy to proceed with the focus group. Copies of these forms can be found in the appendix as well as a blank copy.

For the survey, as previously mentioned, participants were invited to complete the survey on a voluntary basis, meaning that participants had to complete a survey fully for their results to be recorded. Once this was done, the participant either pressed finish if the survey was carried out online, or put it in a green folder on a table. The folder would then be kept in a locked room at the end of the day.

For primary research methods, especially for the focus group, it was important to keep all information confidential. The researcher placed passwords on recordings and encrypted them to make sure that the recordings could not be transferred anywhere.
else. The researcher’s main device was his mobile phone, which also has a password. He carried the phone around with him to prevent data from being stolen. In the event of the phone being stolen, the researcher had saved a back-up of the recording on an external password protected hard drive. When each focus group recording was finalized and important points were written down, the recordings were then destroyed.

3.9 Limitations of overall data

“Primary research (field research) involves gathering new data that has not been collected before” (BBC, 2011) the BBC bite size site sums up the point of primary research rather simply. But there have been a few limitations on data collection. The biggest limitation for data collection was having to negotiate a time to meet focus group participants due to a big work schedule. This also led to a couple of months of not hearing back from them due to demands of the public sector. The researcher also had to take a look at his own work schedule to arrange time away from two jobs and some lectures.

The public sector organization was very good at arranging a meeting room, and for letting the researcher meet the team beforehand. The researcher did find the start of the focus group a little big difficult, as it was hard to get into a flow. But soon afterwards conversation just flowed naturally. There was also a range of ages in the focus group which helped to show differing opinions. The gender was all male, which the researcher found to be interesting as most and all at point shared the same view on individual questions.

With regards to the survey, data was limited due to short answers. The amount of people who carried out the survey was fine, but most participants wanted the survey to be a quick activity, so there was not really any evidence of any detailed data from surveys, just generalization.

With regard to collecting secondary data, this has also been difficult due to the vast amount of information on project management methods in I.T, and very little external
information (outside of the private organization’s intranet) on project management methods in retail. This has caused the researcher some difficulty, but he has been able to give some justification of where project management methods may occur in both places of industry.

3.10 Chapter summary
This chapter has discussed the reasons behind why the researcher decided on a mixed approach of research in relation to conducting a focus group and a survey. The researcher has also discussed in this chapter the justifiable sampling (voluntarily and thematic), the reliability and validity of the data involved, ethical research and lastly the improvements that could be made.

The results which the researcher received surprised him, because from using a mixed research approach he has received highly justifiable results from both companies and an idea that perhaps a certain project management method shouldn’t just be used for one area of employment.

This chapter has explored the different sorts of research options that are available for anyone to look into, and gave justification as to which research methods are the best ones to use.

In chapter four, there will be detailed discussion into the findings of the research. These will be grouped into the project management types and their associated methodologies.
Chapter Four: Discussion and Analysis

4.0 Introduction

This chapter will discuss the researchers’ findings from the primary research data collection that he conducted. The results which follow were collected through the same survey (distributed online for the public sector company, and in paper form for the private sector company), and a focus group that took place in a meeting room in Exeter with the private sector company. These methods were used because the researcher wanted to use a mixed approach in order to gain all the facts. These data collection methods allowed the researcher to collect new and relevant data.

The results which came from the focus group and the surveys do show similarity with regard to project management methods which may work between two sectors, as at least one person through both industries has knowledge of them. The researcher will discuss the focus group and the survey on a comparison basis. To see if relevant matches and positive correlations can be drawn up between the two. The interviewees in the focus group wished for their names and companies to remain anonymous. So for the purposes of anonymity, the researcher will be quoting anonymously.

4.1 Themes

4.1.1 Agile, SCRUM and Kanban project management methods.

The first question that was asked to the focus group was “In your opinion what is the biggest challenge faced with the current project management system?” All attendees answered the question and gave their own individual responses as they went around the room.

The way agile works is that it is a non-iterative project management method, so that if anything does go wrong during the process, it can always be something that people can come back to. The way that agile works is largely based on a methodical approach, which operates on a much better basis one could argue compared to an iterative approach.
The way that the public sector works is on a mix of agile, Kanban and scrum project management structures which means that they all form one methodology. Which can be a good indicator of the way the workforce wishes to run itself, and the teams around it. When asked this question to the focus group, there were a wide variety of answers with a wide range of viewpoints.

It was also interesting that the researcher was able to get a response from the survey on the retail side stating that agile was a project management method that they were familiar with. This does suggest that there may be some knowledge across different sectors of industry, but this is speaking in a minority of cases.

A variety of attendees had different viewpoints in the focus group from “from previous projects, agile makes the assumption that your team is totally autonomous”, to “not always interpreting it the right way” and “the depth of implementing agile”. It is interesting to hear these viewpoints because it does signal that there is some ground that could be covered on improving projects. It was particularly useful to hear from a managements point of view as to the way that agile had developed and had become an office wide concept. The agile way of working is by no means an easy feet. It is very complex. One assisting factor maybe the workflow management, which at the public sector company can be difficult task to pull off. One member of the focus group did also say “is it at a team level or an organisational level where the potential problems may lie”.

Others at the public sector organisation are concerned about following a process too literally, “I think the danger of following a guided principal or process, is that you focus too much on the process, and that is where you can lose your team”. The process with agile, as previously said is mobility, there is a lot of guess work with this process and its associated methodologies. One member of the focus group said that in his role, he has had difficulty with “when to end projects” following the agile way of working and how it can affect team morale as requirements for the project change overtime.
In comparison to the project management methods being used by the private sector organisation, where a whole individual concept is in play and currently being integrated. With many survey responses calling this project management method “modern”. It is easy to tell that inclusivity is largely being played here, which does take into account some agile ways of working. But as it is not a clear methodology it is difficult to tell what this method really does entail. The role of a member of staff could provide some knowledge here. But as this is internal only it is difficult to predict what this maybe. Only by work experience it is it possible to say how the “modern” approach works as it is very vague. There is some evidence of agile ways of working in the job that the researcher does part time by moving to different sectors of the store. There were numerous occasions when various members of the focus group did say that “we use the agile methodology, to try and automate our processes” but that doesn’t always work, which is understandable. Not all processes do work as smoothly. There was also a brief comparison to waterfall made, about knowing how workload operates and how it may be a plus “with the waterfall management method, I feel like I had more of an understanding into how the project worked and what was next.” This is totally understandable as waterfall does use a non iterative flow and once a project is completed under this methodology it is gone.

When the focus group was questioned about how the size of the public sector organisation and if there are any challenges or issues that face them when getting new projects. There were many alternate opinions, some of focus group were not able to answer due to the question being too high level, and a sort of question that maybe given to management. But the researcher could get answers from three members of the focus group about this “It does take a while for a new project to get down to a developer level”. The agile way of working is also in cooperated into upcoming projects but there is “stage gates to go through” first. Agile ways of working do usually start like this due to their nature and then slowly descend to developers as the point of the project becomes clear.
The focus group was also asked on what is essential when taking part in a new project? The focus group did get quite optimistic at this point with many answers. “Understanding”, “passionate interest”, “wanting to learn”, “not being scared of code”, “knowledge”, “being proactive”, “building knowledge from previous projects”, “collaboration with other teams” and “understanding workflows”. These were first thought responses, there was a good expression of body language. The focus group did seen keen to answer and discuss upcoming projects that they had coming up.

The survey response was also interesting, with a slim minority opting to do work in small stages compared to those who preferred to finish a project to the end. This could count as comparison between Agile and waterfall project management methods. By putting the results of both work sectors together we can see that most prefer an agile way of working with doing a project in small stages.

Other responses included “yes”, which was not entered into the pie chart, and “It depends on what is being developed. Some projects lend themselves well to completing it all in one go; whilst others are better at completing in small stages. Generally, it is a better approach to develop software in smaller increments, as this allows the project to adapt to different requirements and goals.”
The SCRUM methodology can work on its own or as part of the Kanban methodology, in the focus group it was referred to as “scrumban” which means that it is a possible approach that can be explored and looked at, if the time was there. The focus group discussed in quite some detail about the scrum methodology. The public sector organisation makes use of stand-ups. “Our stand-ups’ are often our first tool that we use to measure our progress, as well as our board”. The board was being referred to as part of the Kanban methodology where issues are tracked. The focus group had a decent amount of knowledge when it came to discussing SCRUM. “SCRUM has always been a method that we have used to track progress with tasks in our team.” When the researcher asked another technical lead of another agile team and asked if this was the same the response was similar “we all try and stick to the same methods of working” which does suggest that there is also an organisational level at play as well.

Finding evidence of a scrum methodology in the surveys alone is difficult to come by, especially in the retail sector whilst sifting through surveys. There is evidence of agile, yes but hardly any of SCRUM in the retail side. However, there is overall evidence of a familiarity of agile project management in both the I.T and Retail sectors, as the question did ask for this.
There is a growing amount of confidence with these results that an agile way of working does seem to be making a headway into other areas of industry with standard retail staff and management getting to know a little more about it. But, there is still little evidence that in the retail industry that SCRUM is making a headway into private organisations. It would be extremely difficult to integrate it into a retail environment due to shift workers.

The focus group also discussed the backlog of work that is to be done – ironically, and how this relates to the SCRUM methods “the backlog is a tool which we can use to say what we wish to put first. We can also prioritise it by sprint”. Meaning that if time does run out on a certain piece of work, the task can be moved onto the next sprint and prioritised again. “The idea of SCRUM is a good one, but the practicality of it isn’t such a good one. It’s heavy on meetings, and we aren’t that much of a fan on meetings”. There was unanimous agreement on this statement in the focus group, but another member pointed out “well it’s because we are developers, we like to see things working. We don’t really like to be refining tasks when we maybe inches way from achieving a story and moving it cross to a done section”. This is perfectly understandable. “I think we all get a kick out of moving something over on the board".
When the focus group was asked about what its biggest strength was, it was interesting to hear a variety of responses as there were members from other smaller teams within the product creation team there. “paired programming has, for me been the best thing about this job”, there were nods of agreement with regard to this statement as programming in a public sector organisation isn’t something that tends to be found very often. “The way we run as a team is good too, with an office wide conference taking place in November, we also feel like we have that continued learning going on”.

There are other areas where we can relate the two industries of I.T and retail via the Kanban methodology. This methodology is all about prioritisation in an agile way. To be able to use Kanban, it is important that people work in a team to delate tasks. In an I.T environment this maybe assigning issues/stories to individuals, in retail this maybe done in form of delegating staff to specific areas. Surveys asked about this, to see if any Kanban traits can be found to see if a full agile approach can be found.

Figure 4.3 – Can Kanban be achieved by delegating tasks?

This question is a difficult one to answer, in order for Kanban to work at its best everyone must be engaged and willing to take part in delegation of tasks. The Kanban method sadly was glossed over during the focus group, but it was touched upon. “Having the board with the tasks really helps to motivate the team, however the bad
thing about it is having to carry it around to meeting rooms”. The focus group did discuss how their development software has got in-built functionality for the use of Kanban. When the researcher asked the focus group about this, the replies were “it’s a simple drag and drop based system, you move a task to done and then it’s done. Easy as that!”

In regards to if it can work in both sectors, the question is difficult to answer as you need to get a fully collaborating team to that delegation of tasks can be successful in order for it to be done correctly, or done the approved agile way. It would be much more difficult to incorporate such a method into the retail workplace due to rapidly changing situations, but standard operating procedures could use the agile approach for sure.

4.1.2 Waterfall, PRINCE2 Rapid Application Development (RAD) and other non-listed methodologies

These are very different project management methods compared to the agile methodologies and frameworks. They are different because they are in three different states, dying, in use or emerging.

“The waterfall model is one in which each phase of a product’s life cycle takes place in sequence, so that progress flows steadily downwards through these phases like a waterfall.” (Bowes, 2014). Meaning that once something is released, as previously mentioned it can never come back.

This methodology does not have any familiarity with those who work in retail by looking at the results, which suggest that any possible implantation of this project management method would not work as, as an iterative way of working is needed. Steps need to be followed. In comparison to the private company, the public company has got an understanding of waterfall, the researcher targeted members of the public company who had been working there for a number of years to ask if agile was a recent methodology. “It was phased in as a way to manage work”. “Waterfall did work well with certain types of work, but not with others that we knew were difficult and had tight deadlines on”.

The PRINCE2 project management method really interested the researcher, especially for the public sector organisation to discover that this method was not being used as it is
a UK government based method. It was glossed over in the focus group interview, as there was much more of an interest in the agile way of working and what seemed to be more appropriate. There was brief knowledge of the prince methodology but it was not decided in focus group “the prince methodology is not really discussed or used here”. Which was interesting, but the PRINCE2 methodology can also be integrated with agile, so this maybe why it was not produced at focus group.

There was a result for the PRINCE2 methodology in the surveys with a grand total of five participants mentioning the PRINCE methodology.

Figure 4.4 – Participants who mentioned PRINCE2 in the survey

Rapid application development (RAD) is still very much used internally at the public sector organisation to hold hackathons within teams “we are frequently trying to improve our knowledge with meetings” the public sector does take its continued learning very seriously. This is a massive contrast compared to the private organisation where according the survey no one knows about this methodology. It was mentioned that in the future “RAD may be integrated as an experimental method, but for the time being, I think it is safer to stick to an agile way of working”. This does make sense, but staying up to date with methodologies is important for business as well learning about what rival companies may also be up to when developing new products.
On the survey a question was asked about the project management methods that the participant knew of, the researcher found some new and interesting ones and would like to briefly share these and see if they may help him to answer his aims and objectives for the future of project management methodologies.

4.2 Six Sigma
“The Six Sigma methodology DMAIC (Define, Measure, Analyse, Improve, Control) offers a structured and disciplined process for solving business problems” (Zucker, 2017). The six sigma methodology looks like a potential methodology to adapt in areas where numeracy is used, the public sector organisation could almost certainly benefit from this management method in other departments which involve the heavy use of computer modelling and forecasting.

4.3 CPM
“The critical path method (CPM) is a step-by-step project management technique for process planning that defines critical and non-critical tasks with the goal of preventing time-frame problems and process bottlenecks.” (Rouse, 2017). The CPM methodology is one that works well when there is time available to plan things out in terms of how to plan out a project. It is a management method that maybe used higher up in management to avoid laping between two projects at once.

4.4 Chapter Summary
This chapter has presented the key data findings of the project management methods of the I.T and Retail industry and has compared them with each other. It has taken into consideration information from the literature review which has helped to formulate arguments of using agile ways of working and its familiarity across job sectors.

The agile way of working and its methodologies have been discussed in detail, whilst other, lesser known management methods have been touched upon in order to show and understanding as to how these once worked, are managing to sustain themselves or are slowly becoming more widely popular in multiple sectors of industry.
In the fifth and final chapter, the researcher will conclude the study, evaluate the limitations, give future recommendations and draw up a conclusion.
Chapter Five: Conclusion and recommendations to companies

In this final chapter, the study will draw to a close, this will enable to researcher to determine if the study has been a success or not. The way this will be achieved will by evaluating the researchers’ aims and objectives.

The chapter will also highlight the limitations of this study and will give future recommendations to both companies which can be gathered from the findings of this study.

5.1 Aims and Objectives

In the introduction of this study (chapter one), the researcher discussed their full aims and objectives which was to try and bridge a gap between two sectors of industry, the I.T sector and the retail sector. There were four essential objectives needed for this to be delivered. The aim was: to evaluate the project management methods of I.T and compare them to the management methods that are being used in retail and see if they can be applied in the retail industry.

Objective one- Gain a detailed understanding in the agile way of working in office environments

This objective was done by researching agile ways of working, this can be found in the literature review in chapter two, carrying out work experience at the public-sector company and lastly, upon arrival at the public sector organisation having informal chats to various team members and learning about what they all did and how they played their individual role in the agile way of working.

Objective two- Use data from focus group and surveys to understand different project management methods and give personal opinions on them

Using the data from the focus group enabled this objective to be much simpler then the researcher thought it was going to be due to the wide variety of project management methods that were available. The researcher has changed his personal stance as to which project management may now be best applied to retail. The researcher was also
surprised to find out that there was a project management method that was designed by the UK government.

**Objective three - Give recommendations and conclusions based on personal opinion as to which project management method maybe best for individuals / businesses and explain how it is utilised.**

The researcher is about to lay out his recommendations and conclusion as to which management method maybe best for both categories, and how best to use them. The objective has been achieved and his data does specify the one to go for due to a majority of agreement of an agile way of working. A positive correlation has been found, it does also help that the familiarity of this method as it is currently the one that appears to be most popular. Not just in organisations but in software such as Atlassian as well which make use of the agile methodology in their software.

**Objective four - Explore upcoming and new project methods in I.T and give a detailed analysis as to how they could be used in start-up businesses today**

This objective was for the researchers' personal development as a soon to be graduate, he wanted to know what maybe upcoming and is being used experimentally. The researcher has achieved this method by discussing Rapid Application Development (RAD) and smaller project management methodologies.
5.2 Recommendations

5.2.1 Limitations

The researcher feels that over the small amount of time he has had to conduct this study, that there were some limitations that do need to be considered. These are:

- Focus group questions became too broad as they were asked, the researcher had a tendency to go off topic. The researcher also had to contact one of the two companies in advance to arrange the focus group, the key limitation here was time. If interviews were needed, this could have taken longer due to part time workers.

- The researcher wanted to use more quantitative material such as more numerical questions but due to the nature of his study he also wanted to find out what could help to bridge the gap for one standard way of working. But the researcher is not very good at numeracy, so this may have caused further problems.

- The potential low response rate from surveys was something that the researcher also mindful of, so he had to make sure that paper surveys were being filled in, this lead to a drive for them to be filled in via a post it note.

- There was also the potential limitation that the Cardiff Metropolitan University ethics committee could have declined his application form, forcing him to resort to secondary information only, this would have meant that without approval from the ethics committee, the research proposal would have to be amended again and submitted. This could have delayed data collection and the general time scale of this research study.

5.2.2 Recommendation for future studies

If this study was to be carried out again or developed even further, from the view of the researcher there are a number of recommendations which could help to improve it. These are:

- To get in touch with more than one public company and more than one private company. Allow more areas of industry to have a say on their project management methods. The benefits of this are that connections between
companies are made, new contractual deals outside of the study and greater employability which is of a major benefit for the researcher.

- Allow more time for research to be carried out and allow for individual team members to let their voices be heard. This is especially important for focus groups. Everyone wants to have their say in focus groups because it is outside of company policy. It’s an invitation for an opinion. Not a company one.

- If the researcher was to conduct this study again, allow for mistakes to happen. Ask the supervisor questions. The researcher should also be able to manage their time keeping skills better and have a proactive, rather than reactive attitude to his research project. This is because the researcher prioritises other assignments which are also going on. Make use of a Gantt chart.

- Finally, explore smaller local businesses across a variety of sectors and see how they manage their workloads. Why not try and see what they do differently and implement it into a personal schedule for managing assignments.

5.3 Recommendations of private and public companies

The definition of recommendation is “A suggestion or proposal as to the best course of action” (Oxford Dictionaries | English, 2017). The following recommendations are targeted towards making the work sectors of I.T and retail inclusive and standard.

Recommendation one: Encourage teamwork within both industries in order to try and automate the agile process. In IT environments continue the use of SCRUM meetings and backlog refinement. In retail environments, team meetings every morning so the order of the day is known, what offers and promotions maybe on in store, important announcements and updates.

Recommendation two: Encourage the use of Kanban throughout both industries. For I.T environments this can be to move stories on to their next stage. In retail environments this can be to regulate procedures that are done every day such as opening up, cashing up and delegating tasks to shop staff and managers.

Recommendation three: In IT environments have a non-iterative process to allow changes to be made to individual stories before going through any reviews or checks. In
retail environments stock management could be non-iterative as stock needs to rotate and be put out and sold by a certain date.

Recommendation four: Inclusivity in teams, allow for learning to happen. In I.T environments this can be done through pair programming or self-taught continued professional development (CPD) in retail environment this could be done by asking for new tasks to be delegated to yourself such as learning about stock rotation and replenishment.

5.4 Conclusion
The researcher has tried to demonstrate that he is able to carry out a successful independent research project by carrying out an evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry. The researcher feels as if this has been done relatively successfully by collecting secondary and primary data which is of a similar size between two surveys and focus groups. The literature review enabled a large amount of secondary information to be collected in a short amount of time and provided the knowledge needed. The researcher also worked at a public sector company for his placement year, so he gained some knowledge from that year away as well. In addition to this the researcher feels as if his personal confidence has increased by carrying out focus group interviews and showing leadership by asking questions and leading an interview. The researcher found the study bearable achievable due to the familiarity of the industries that he was looking at.

The results in chapter four made the research project question and analysis acceptable. The methodology in chapter three gave a detailed understanding over the research methods used and the individual techniques can relate to it. This includes the sampling methods that were used as well. The researcher hopes that this will slowly, but surely close the gap between I.T and retail as these are the two work areas are ones that are expanding rapidly all the time, with leaps and bounds taking place in I.T every day, and the market of retail in a very different place compared to five years ago thanks to delivery sites and the surge of smartphones, the retail industry needs to improve and
keep on attracting customers to its shops. The researcher feels that this study can be used in both a marketing and I.T environment as it tries to encourage inclusivity between job sectors.
6.0 Appendices

6.1 Bibliography


St-andrews.ac.uk. (2017). *Online surveys and questionnaires | University of St Andrews*. [online] Available at: https://www.st-


# 6.2 Ethics Form

## DEVOLVED ETHICS APPROVAL APPLICATION SUMMARY

Student Name: Samuel Mark Gibbins  
Student Number: **ST20047382**

Module Name: Software Development Project  
Module Number: **BCO6010**

Programme Name: Software Engineering  
Supervisor Name: Mohamed Mostafa

<table>
<thead>
<tr>
<th>To be completed by student and supervisor before submission to Ethics Approval Panel</th>
<th>Student Signature;</th>
<th>Supervisor Signature;</th>
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<td>Application for ethics approval</td>
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<td>Participant information sheet</td>
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<td>Participant consent form</td>
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<td>Pilot interview/s</td>
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<td>Pilot questionnaire/s</td>
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<td>Letter/s to participating organisation/s</td>
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<tr>
<td>Confirmation of interviewee participation</td>
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First Submission [ ]  
Resubmission [ ]

Date: ____________________

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For use by the devolved ethics approval panel:

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<th>Panel Members</th>
<th>Name</th>
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Module leader, Chair:

__________________________  
__________________________
Supervisor: ____________________________

CSM Ethics Committee Representative: ____________________________

Date: ________________ Date of Reassessment: ________

Outcome:

Project Approved [ ] Reference number issued: ____________

Chair’s Action [ ]

Application not Approved [ ]

Comments for projects not fully approved:

The original to be retained by the supervisor and a copy given to the student and module leader.

In the case of a resubmission being required this original form should be submitted with the resubmission not a new, blank, one.

When undertaking a research or enterprise project, Cardiff Met staff and students are obliged to complete this form in order that the ethics implications of that project may be considered.

If the project requires ethics approval from an external agency (e.g. NHS), you will not need to seek additional ethics approval from Cardiff Met. You should however complete Part One of this form and attach a copy of your ethics letter(s) of approval in order that your School has a record of the project.

The document Ethics application guidance notes will help you complete this form. It is available from the Cardiff Met website. The School or Unit in which you are based
may also have produced some guidance documents, please consult your supervisor or School Ethics Coordinator.

Once you have completed the form, sign the declaration and forward to the appropriate person(s) in your School or Unit.

**PLEASE NOTE:**
Participant recruitment or data collection **MUST NOT** commence until ethics approval has been obtained.

### PART ONE

<table>
<thead>
<tr>
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<th>Samuel Mark Gibbins</th>
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<tr>
<td>Supervisor (if student project):</td>
<td>Mohamed Mostafa</td>
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<tr>
<td>School / Unit:</td>
<td>Cardiff School of Management</td>
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<tr>
<td>Student number (if applicable):</td>
<td>ST20047382</td>
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<tr>
<td>Programme enrolled on (if applicable):</td>
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<td>Approximate duration of data collection:</td>
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<td>Funding Body (if applicable):</td>
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<tr>
<td>Other researcher(s) working on the project:</td>
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<tr>
<td>Will the study involve NHS patients or staff?</td>
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<td>Will the study involve human samples and/or human cell lines?</td>
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Does your project fall entirely within one of the following categories:

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<td>Practice based not involving human participants (e.g., curatorial, practice audit)</td>
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If you have answered YES to any of these questions, expand on your answer in the non-technical summary. No further information regarding your project is required.

If you have answered NO to all of these questions, you must complete Part 2 of this form.

In no more than 150 words, give a non-technical summary of the project:

My project will compare two different project management methods. It will be comparing the project management methods in two different work-based environments, office and retail store based. Is it easier to work in an agile way and release I.T components slowly or is it best to build a whole application and just deploy it?

By looking at these two different project methods we can suggest and draw conclusions on what may be better for each work environment and the circumstances when these methods should be used accordingly.

**DECLARATION:**

I confirm that this project conforms with the Cardiff Met Research Governance Framework.

I confirm that I will abide by the Cardiff Met requirements regarding confidentiality and anonymity when conducting this project.
**STUDENTS:** I confirm that I will not disclose any information about this project without the prior approval of my supervisor.

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**FOR STUDENT PROJECTS ONLY**

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Details of any conditions upon which approval is dependant:

Click here to enter text.
### A RESEARCH DESIGN

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<th>A1 Will you be using an approved protocol in your project?</th>
<th>No</th>
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<td>A2 If yes, please state the name and code of the approved protocol to be used</td>
<td>Click here to enter text.</td>
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<tr>
<td>A3 Describe the research design to be used in your project</td>
<td>The main research methods I want to use for this project are interviews, because I think it will be extremely useful to hear various people’s views and how they feel about the method that they are currently under and how it is being managed.</td>
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<td></td>
<td>Research will be an interpretative research philosophy to make sure that subjective experiences from different people are heard rather than just observing the facts of one project management method.</td>
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<td>Having inductive research strategy for gathering qualitative data is more geared towards my project, also interview techniques done this way tend to work better, and get much better and more open responses.</td>
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<td>The sample I wish to use would involve relevant teams of each work area from a range of roles, including technical leads, developers and project management in an office based scenario.</td>
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<td>In a retail based scenario using a manager, several store assistants and a store manager would be ideal to get an understanding of the environment and how I.T is used at a store level.</td>
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<td>The reason why I am using people from a range of positions is to get a good consensus on how colleagues are feeling on all levels of their company.</td>
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1 An Approved Protocol is one which has been approved by Cardiff Met to be used under supervision of designated members of staff; a list of approved protocols can be found on the Cardiff Met website here
The interview size would be a minimum of two people and a maximum of twenty. I will be using purposeful sampling to make sure I get the best results from people in the relevant industries.

My questionnaire size will be a maximum of 40 people from across two companies. Questionnaire will be written in Qualtrics if those wish to carry out the survey online. Same questions will be used as on the paper survey for the online version. Otherwise, it will be handed out and collected in person.

Questionnaire and any other information will be kept on a password protected folder. All information and data collected will remain wholly and totally confidential and kept on a password protected computer system.

Paper surveys will be kept in a locked drawer within a locked room.

The interviews will be recorded.

All participants will remain anonymous; any data provided will not be traceable back to specific people.

I will analyse the data after the interview by using electronic and/or printed surveys which I will then analyse and use for my primary research. I will analyse my data in the form of graphs. Data will be quantative and qualitative but not complex qualitative, and surveys will use questions such as “Rank on a scale from 1-5” and list options for roles. (so that one option is ticked). Another option will be provided on surveys.

<table>
<thead>
<tr>
<th>A4 Will the project involve deceptive or covert research?</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5 If yes, give a rationale for the use of deceptive or covert research</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### A6 Will the project have security sensitive implications?
- **No**

### A7 If yes, please explain what they are and the measures that are proposed to address them
- **N/A**

### B PREVIOUS EXPERIENCE

#### B1 What previous experience of research involving human participants relevant to this project do you have?

Former and current work colleagues can give their free opinion on project management techniques and experiences that have happened in the past when there has been a new change to an I.T system or when they have had to work on helping to integrate change into the work place/business.

#### B2 Student project only

What previous experience of research involving human participants relevant to this project does your supervisor have?

My supervisor has good knowledge of project management methods and the variety of project methods that exist in the workplace and their different sectors.

### C POTENTIAL RISKS

#### C1 What potential risks do you foresee?

1. Interviewees may have concern over data protection
2. Interviewees may not take questions seriously and not give true answers
3. Loss of survey forms
4. Interviewees maybe worried about recording exposing projects in progress
5. Failure of attendance of employees at interviews
6. Too many employees at interview

#### C2 How will you deal with the potential risks?

1. Ask interviewees to sign data protection forms, forms should be in a locked draw in a locked room, names will not be exposed in the project
2.) Explain at the start that it would be great if questions could be answered honestly

3.) Offer option of electronic survey, survey should be nice and simple to understand in terms of layout

4.) Recordings will be kept in a password protected folder, and the recording device will be password protected as well

5.) Have two back-up members of staff in case original can’t make it

6.) Set low number for number of minimum employees, and set maximum number of employees allowed at interview.

When submitting your application, you MUST attach a copy of the following:

- All information sheets
- Consent/assent form(s)

An exemplar information sheet and participant consent form are available from the Research section of the Cardiff Met website.
6.3 Ethics approval

Hi Mohamed, looks Ok for ethics purposes but please ask Sam to reconfirm interview participation when interviewee is back at work
Here is the ethics number

20047382  Gibbins  Samuel  SE  MM  2016D0329

Regards
Hilary
19/12/2016
6.4 Letters to companies
Mr. Joseph Sach.
Met Office,
Exeter,
EX1 3PB
Dear Joe,

I am an undergraduate student at Cardiff Metropolitan University. The title of my research is “An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.” Its aim is to gain an understanding of how different industries adjust their project management methods according to their relevant industry. As part of my research I would like to undertake research with people who are employed in an I.T service industry company at a project manager level and below. I am writing to you because the Met Office fits the profile of this type of organisation and also employs a sufficient number of employees so as to provide a large enough number of potential participants. Before any primary data is collected this project will have been approved by Cardiff Metropolitan University and all data collection will be in accordance with the university’s ethics code of practice.

My purpose in writing is to ask if you would permit me to issue a questionnaire and to interview your employees/team members. Their participation would be entirely voluntary, neither they nor the company would be identified in the research and it would only take 10 to 15 minutes for each employee to complete a questionnaire and a short hour interview. I would hope to gain 20 survey responses from your employees and a free flowing interview on project management methods.

The areas which would be covered by the questionnaire include:

- Naming project management methods
- Knowledge of computer systems
- Question on time management
- Training of I.T Systems
I shall be very happy to make the results of my research available to you as a participant in the research when it is complete. If you would like to participate in this project and or are interested in discussing it further, please contact me.

If you require any further information about this project, then please contact:

Sam Gibbins, Cardiff Metropolitan University – Student Undertaking Project

Mohammad Mostafa, Cardiff Metropolitan University – Project Supervisor

Cardiff Metropolitan University email: st20047382@outlook.cardiffmet.ac.uk or momostafa@outlook.cardiffmet.ac.uk

Thank you in anticipation.

Yours sincerely

Sam Gibbins
Dear Sir/Madam,

I am an undergraduate student at Cardiff Metropolitan University. The title of my research is “An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.”

Its aim is to gain an understanding of how different industries adjust their project management methods according to their relevant industry. As part of my research I would like to undertake research with people who are employed in the retail industry at a Management Level and below. I am writing to you because the Waitrose fits the profile of this type of organisation and also employ a sufficient number of employees so as to provide a large enough number of potential participants. Before any primary data is collected this project will have been approved by Cardiff Metropolitan University and all data collection will be in accordance with the university’s ethics code of practice.

My purpose in writing is to ask if you would permit me to issue a questionnaire and to interview your employees/team members. Their participation would be entirely voluntary, neither they nor the company would be identified in the research and it would only take 10 to 15 minutes for each employee to complete a questionnaire and a short hour group interview. I would hope to gain 20 survey responses from your employees and a free flowing interview on project management methods.

The areas which would be covered by the questionnaire include:

- Naming project management methods
- Knowledge of computer systems
- Question on time management
• Training of I.T Systems

I shall be very happy to make the results of my research available to you as a participant in the research when it is complete. If you would like to participate in this project and or are interested in discussing it further, please contact me.

If you require any further information about this project, then please contact:

Sam Gibbins, Cardiff Metropolitan University – Student Undertaking Project

Mohammad Mostafa, Cardiff Metropolitan University – Project Supervisor

Cardiff Metropolitan University email: st20047382@outlook.cardiffmet.ac.uk or momostafa@outlook.cardiffmet.ac.uk. Thank you in anticipation.

Yours sincerely

Sam Gibbins
6.5 Email to the public sector company

Hi,

Hope all is well with everyone in Exatar.

I was wondering if I could maybe pop in for one of your Thursday team meetings in January to conduct a focus group on agile project management?

You can find the details attached.

Sam :)

Sent from Outlook

Show message history
6.5 Interview Confirmation

Sam,

Just so I’m clear. You want the team to

1. complete a written survey/questionnaire
2. join you for an hour as a group so you can ask some stuff in person

Is that right?

If so, I’m supportive but a bit busy to organise. So...

ACTION ON SAM: Please send the questionnaire at your earliest convenience and I’ll circulate.

ACTION ON STEVE: – can you work with Sam to agree a date for him to come in, sort out the paperwork and setup an hours meeting between him and the whole tribe. Fri 24th is good for me.

J
6.6 Participant Information Sheet

Information Sheet

Name of student carrying out research: Sam Gibbins

Project Summary

The purpose of this project is to look at the different project management methods of two different companies, one in an office based environment and one in a retail based environment to see how much they differentiate in terms of staff satisfaction, thoughts and the way work is carried out

The reason why you’ve been asked to take part

You’ve been asked to take part because I have carried out work experience with your company meaning that it would be good to have your thoughts on how your company operates on various projects and how it plans for the future.

Is there anything I need to do?

Before we carry on, you will need to fill out a quick survey, and sign a form with your consent to being voice recorded in an interview. Don’t worry it won’t take long!

What’s required of you?

All that is required of you is to turn up and have your say! You can say what you like. Please feel free to also engage in a debate about your preferred style. The floor is yours. I may intervene from time to time to let others have their say on how they feel for the purpose of balance.

Risks and privacy protection

This project involves the completion of a survey, and an interview which will be analyzed at a later date. I don’t want to collect any sensitive data from yourself. This study is only concentrated on the way people work. We don’t want to collect any information on projects that are in progress and we won’t ask about them. Any projects that are mentioned will only be heard by myself and recordings will be protected by password protection on the recording device, the same also applies for any copies that
are on a PC. They will be stored in a password protected file on a password protected PC.

If you feel any questions are not appropriate, any one of you can refuse to reply or ask me to stop at any time. The last thing I want to do is make you feel uncomfortable. Steps have been taken to make sure that your data is kept safe and secure. Data from surveys and consent forms will be stored in locked drawers in locked rooms.

After the study is over, your data can be destroyed immediately except the consent form which will be kept for five years. Recordings will also be held in a secure and confidential environment during the study and destroyed after a five-year period.

You will be offered a copy of this information sheet to keep.

If you require any further information about this project, then please contact:

Sam Gibbins, Cardiff Metropolitan University

Mohammad Mostafa, Cardiff Metropolitan University

Cardiff Metropolitan University email: st20047382@outlook.cardiffmet.ac.uk or momostafa@outlook.cardiffmet.ac.uk
PARTICIPANT CONSENT FORM

Cardiff Metropolitan University Ethics Reference Number:

Participant name:

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins

Email: st20047382@outlook.cardiffmet.ac.uk

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. [ ]

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. [ ]

3. I agree to take part in the above study. [ ]
4. I agree to the interview / focus group / consultation being recorded [ ]

[ ] [ ]

Yes  No

5. I agree to the use of anonymised quotes in publications

[ ] [ ]

6. I would like my organisations’ name to be anonymised in all publications

Signature of Participant  Date

Name of person taking consent  Date

Signature of person taking consent

Print: _______________________________________________________________

Sign: ___________________________  Date: __ / __

/ ______
PARTICIPANT CONSENT FORM

Cardiff Metropolitan University Ethics Reference Number: 20160329

Participant name: CHRIS WATSON

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins
Email: si20047382@outlook.cardiffnet.ac.uk

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ✔

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. ✔

3. I agree to take part in the above study. ✔

4. I agree to the interview / focus group / consultation being recorded ✔

   Yes    No

5. I agree to the use of anonymised quotes in publications [ ✔  ]

6. I would like my organisation’s name to be anonymised in all publications [   ] ✔

Signature of Participant

Name of person taking consent

Signature of person taking consent

Print: CHRIS WATSON

Sign: Date: 24/03/2017
Cardiff Metropolitan University
Ethics Committee

PARTICIPANT CONSENT FORM

Cardiff Metropolitan University Ethics Reference Number: 2016D0329

Participant name: Andrew Poynter

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins
Email: st20047382@outlook.cardiffnet.ac.uk

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. [✓]

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. [✓]

3. I agree to take part in the above study. [✓]

4. I agree to the interview / focus group / consultation being recorded [✓]

Yes No

5. I agree to the use of anonymised quotes in publications [✓] [ ]

6. I would like my organisations' name to be anonymised in all publications [✓] [ ]

Signature of Participant
Andrew Poynter

Date 24/03/2018

Name of person taking consent

Signature of person taking consent
Print: Andrew Poynter

Sign: Andrew Poynter Date: 24/03/2018
Cardiff Metropolitan University

Ethics Committee

PARTICIPANT CONSENT FORM

Cardiff Metropolitan University Ethics Reference Number: 20160329

Participant name: Rowan "String"

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins

Email: st20647382@outlook.cardiffmet.ac.uk

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. [ ]

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. [ ]

3. I agree to take part in the above study. [ ]

4. I agree to the interview / focus group / consultation being recorded [ ]
   Yes No

5. I agree to the use of anonymised quotes in publications [ ]
   [ ]

6. I would like my organisations’ name to be anonymised in all publications [ ]
   [ ]

Signature of Participant

[Signature]

Date: 24/11/17

Name of person taking consent

Rowan "String"

Date

Signature of person taking consent

[Signature]

Date: 24/11/17

Print: Rowan "String"

Sign: [Signature]
Cardiff Metropolitan University
Ethics Committee

PARTICIPANT CONSENT FORM
Cardiff Metropolitan University Ethics Reference Number: 201600329

Participant name: ELIAS PELAOU

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins
Email: st20047382@outlook.cardiffmet.ac.uk

Participant to complete this section:  Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ✓

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. ✓

3. I agree to take part in the above study. ✓

4. I agree to the interview / focus group / consultation being recorded ✓ Yes No

5. I agree to the use of anonymised quotes in publications ✓ [ ]

6. I would like my organisation's name to be anonymised in all publications ✓ [ ]

Signature of Participant ____________________________ Date 24/03/17

Name of person taking consent ELIAS PELAOU

Signature of person taking consent ____________________________ Date 24/03/17

Print: ELIAS PELAOU

Sign: ____________________________
Cardiff Metropolitan University
Ethics Committee

PARTICIPANT CONSENT FORM

Cardiff Metropolitan University Ethics Reference Number: 201600329

Participant name: JOEL CLEONECE

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins
Email: st20047382@outlook.cardiffmet.ac.uk

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I agree to take part in the above study.

4. I agree to the interview / focus group / consultation being recorded

5. I agree to the use of anonymised quotes in publications

6. I would like my organisation’s name to be anonymised in all publications

Signature of Participant

Name of person taking consent

Signature of person taking consent

Print: JOEL CLEONECE

Sign: ___________________________ Date: 24.03.17
Cardiff Metropolitan University
Ethics Committee

PARTICIPANT CONSENT FORM
Cardiff Metropolitan University Ethics Reference Number: 2016D0329

Participant name: SosEpit SACH

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins
Email: st20647382@outlook.cardiffnet.ac.uk

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. [Y]

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. [Y]

3. I agree to take part in the above study. [Y]

4. I agree to the interview / focus group / consultation being recorded [Y] No

5. I agree to the use of anonymised quotes in publications [Y] [ ]

6. I would like my organisations' name to be anonymised in all publications [Y] [ ]

Signature of Participant ______________________________ Date ______________________________

Name of person taking consent SosEpit SACH ______________________________ Date ______________________________

Signature of person taking consent ______________________________ Date: 26/3/2017

Print: ______________________________
Cardiff Metropolitan University
Ethics Committee

PARTICIPANT CONSENT FORM

Cardiff Metropolitan University Ethics Reference Number: 20160329

Participant name: S Mudd

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins
Email: st20647382@outlook.cardiffnet.ac.uk

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. [ ]

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. [ ]

3. I agree to take part in the above study. [ ]

4. I agree to the interview / focus group / consultation being recorded [ ]

   Yes  [ ]
   No  [ ]

5. I agree to the use of anonymised quotes in publications [ ]

6. I would like my organisation's name to be anonymised in all publications [ ]

Signature of Participant

Date 24/3/17

Name of person taking consent

Signature of person taking consent

Print: S R Mudd

Sign: S R Mudd

Date: 24/3/17
Cardiff Metropolitan University
Ethics Committee

PARTICIPANT CONSENT FORM

Cardiff Metropolitan University Ethics Reference Number: 201600329

Participant name: Joe Greaves

Title of Project: An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

PLEASE HAND BACK THESE CONSENT FORMS TO MYSELF AT THE END.

If you wish to have a copy of your consent form please tell me at the end so I can make a copy and make arrangements to send the copy to yourself.

Name of Researcher: Sam Gibbins
Email: st20047382@outlook.cardiffnet.ac.uk

Participant to complete this section: Joe Greaves

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. [X]

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. [X]

3. I agree to take part in the above study. [X]

4. I agree to the interview / focus group / consultation being recorded [ ] Yes/No

5. I agree to the use of anonymised quotes in publications [ ]

6. I would like my organisation’s name to be anonymised in all publications [X]

Signature of Participant

Date

Name of person taking consent

Date

Signature of person taking consent

Print: Joe Greaves
Sign: Joe Greaves

Date: 24/3/17
## 6.9 Focus Group Questions

<table>
<thead>
<tr>
<th>Order of the focus group</th>
<th>Discussed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome all the participants and introduce myself and the project title.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make sure everyone has signed consent form and copies to the attendees. Remind them about recording systems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) In your opinion what is the biggest challenge faced with the current project management system?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) What is your current project management system, and why? How is it helping your organisation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Do you think the scale (or size) of the organisation is related to the challenges/ issues faced when faced with new projects, especially in getting the clearance to do them?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Within your team, what would you say is its biggest strength and why?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Do you think that any academic study has been transferable to your job(s) or have you learned as you have been working?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) What is essential when taking part in a new project?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>7)</td>
<td>Do you think you need to have relevant skills to work in this industry, or can anyone step into it? Why do you think this?</td>
<td></td>
</tr>
<tr>
<td>8)</td>
<td>How do you think you, as a team will move forward?</td>
<td></td>
</tr>
</tbody>
</table>
6.10 Survey Questions

Workplace Survey

This survey is to help give me an idea of any project management methods you are aware of and how your relevant sector of industry may work. In this survey you will be asked questions on project management methods, knowledge of I.T systems and some general non-specific questions which will help for my results of my project.

Please let me know if you would like the results afterwards by contacting myself (st20047382@outlook.cardiffmet.ac.uk) or my project manager Mohamed Mosafa (momostafa@cardiffmet.ac.uk)

Please answer all questions honestly.

If you wish to answer this survey online instead please let me know by telling me at the end or by emailing me at the email address above.

1. Name one or more project management methods that you are aware of

2. On a scale of one to ten how comfortable are you with the idea of agile project management methods

3. What type of work environment are you in?

4. Do you think it's easier and quicker to do a project in small stages and review it or to finish a project all the way to the end?
5. Do you have much knowledge of computer systems?

6. Do you feel comfortable with the way work is given to you?

7. Are you given suitable training for any I.T systems you use?

8. How do you manage your time to keep up on jobs that need to be completed? Do you have targets?

9. Do you work as team or individually?

10. Do you have objectives in which, team members must fulfil in their roles?
If you have any questions, please contact Sam Gibbins
(st20047382@outlook.cardiffmet.ac.uk) or Mohammad Mostafa
(momostafa@cardiffmet.ac.uk)
6.11 Survey Agreement (if survey taken online)

FRONT/ENTRY PAGE FOR AN ONLINE QUESTIONNAIRE (if requested)

School of Management, Cardiff Metropolitan University

An evaluation of different project management methodologies that can be applied in IT environments and sectors of retail industry.

This project has received the approval of Cardiff School of Managements’ Ethics Committee, Cardiff Metropolitan University

I understand that my participation in this project will involve completing a questionnaire about project management methodologies that can be applied in IT environments and sectors of retail industry which will take approximately 10 minutes of my time.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason or I can discuss my concerns with Sam Gibbins (st20047382@outlook.cardiffmet.ac.uk)

I understand that any identifying information provided by me will be held confidentially, such that only the PI (Sam Gibbins) can trace this information back to me individually. I understand that my data will be stored on password protected computers, anonymised after completion of the survey and that no one will be able to trace my information back to me. The raw data will be retained for five years when it will be deleted/destroyed.

If you are 18 years of age or over, understand the statement above and freely consent to participate in this study please tick the consent box to proceed

☐ Consent box

Thank you very much for helping us with this project and participating in the research
6.12 Paper survey answers (Private Company)
Workplace Survey

This survey is to help give me an idea of any project management methods you are aware of and how your relevant sector of industry may work. In this survey you will be asked questions on project management methods, knowledge of IT systems and some general non-specific questions which will help for my results of my project.

Please let me know if you would like the results afterwards by contacting myself (sli20347382@outlook.cardiffmet.ac.uk) or my project manager Mohamed Mosafa (mmosafa@cardiffmet.ac.uk).

Please answer all questions honestly.

If you wish to answer this survey online instead please let me know by telling me at the end or by emailing me at the email address above.

1. Name one or more project management methods that you are aware of

2. On a scale of one to ten how comfortable are you with the idea of agile project management methods

3. What type of work environment are you in?

4. Do you think it's easier and quicker to do a project in small stages and review it or to finish a project all the way to the end?

5. Do you have much knowledge of computer systems?

6. Do you feel comfortable with the way work is given to you?

7. Are you given suitable training for any IT systems you use?
9. How do you manage your time to keep up on jobs that need to be completed? Do you have targets?

- [ ] Yes - meet targets
- [ ] No

10. Do you work as a team or individually?

- [ ] Team
- [ ] Individual

If you have any questions, please contact Sam Gibbons (at 20047382@gmail.com or contact me at ac. u) or Mohammed Mostafa (mostafa@cardiff.ac.uk)
Workplace Survey

This survey is to help give me an idea of any project management methods you are aware of and how your relevant sector of industry may work. In this survey you will be asked questions on project management methods, knowledge of IT systems and some general non-specific questions which will help for my results of my project.

Please let me know if you would like the results afterwards by contacting myself (st20147332@outlook.cardiffmet.ac.uk) or my project manager Mohamed Moesaff (m.mosesaff@cardiffmet.ac.uk)

Please answer all questions honestly.

If you wish to answer this survey online instead please let me know by telling me at the end or by emailing me at the email address above.

1. Name one or more project management methods that you are aware of

2. On a scale of one to ten how comfortable are you with the idea of agile project management methods?

3. What type of work environment are you in?

4. Do you think it's easier and quicker to do a project in small stages and review it or to finish a project all the way to the end?

5. Do you have much knowledge of computer systems?

6. Do you feel comfortable with the way work is given to you?

7. Are you given suitable training for any IT systems you use?
B. How do you manage your time to keep up on jobs that need to be completed? Do you have targets?

Routina: [ ]
Pressure: [X]

9. Do you work as team or individually?

Both: [X]

10. Do you have objectives in which team members must fulfil in their roles?

Yes

If you have any questions, please contact Sam Gibbins (sam20047362@gmail.com) or Mohammed Mostafa (mostafa@cardiff.ac.uk)
Workplace Survey

This survey is to help give me an idea on any project management methods you are aware of and how your relevant sector of industry may work. In this survey you will be asked questions on project management methods, knowledge of IT systems and some general non-specific questions which will help for my results of my project.

Please let me know if you would like the results afterwards by contacting myself (aths2047352@outlook.cardiff.ac.uk) or my project manager Mohamed Mostafa (momostafa@cardiff.ac.uk).

Please answer all questions honestly.

If you wish to answer the survey online instead please let me know by telling me at the end or by emailing me at the email address above.

1. Name one or more project management methods that you are aware of

2. On a scale of one to ten how comfortable are you with the idea of agile project management methods

3. What type of work environment are you in?

4. Do you think it's easier and quicker to do a project in small stages and review it or to finish a project all the way to the end?

5. Do you have much knowledge of computer systems?

6. Do you feel comfortable with the way work is given to you?

7. Are you given suitable training for any IT systems you use?
8. How do you manage your time to keep up on jobs that need to be completed? Do you have targets?

- [ ] Yes

9. Do you work as a team or individually?

- [ ] Team

10. Do you have objectives in which team members must fulfill their roles?

- [ ] Listening
- [ ] Support
- [ ] Considerate

If you have any questions, please contact Gem Gibbins (tel:01792 2260505@cardiff.ac.uk) or Mohammed Mostafa (momostafa@cardiff.ac.uk)
Workplace Survey

This survey is to help give me an idea of any project management methods you are aware of and how your relevant sector of industry may work. In this survey you will be asked questions on project management methods, knowledge of IT systems and some general non-specific questions which will help for my results of my project.

Please let me know if you would like the results afterwards by contacting myself (st200373826@outlook.cardiffuni.ac.uk) or my project manager Mohamed Mostafa (mmostafa@cardiffuni.ac.uk).

Please answer all questions honestly.

If you wish to answer this survey online instead please let me know by telling me at the end or by emailing me at the email address above.

1. Name one or more project management methods that you are aware of
   - [ ] Modern Wontrose

2. On a scale of one to ten how comfortable are you with the idea of agile project management methods
   - [ ]

3. What type of work environment are you in?
   - [ ] Retail

4. Do you think it's easier and quicker to do a project in small stages and review it or to finish a project all at once?
   - [ ] Review

5. Do you have much knowledge of computer systems?
   - [ ] Minimal

6. Do you feel comfortable with the way work is given to you?
   - [ ] It depends on how it's given

7. Are you given suitable training for any IT systems you use?
8. How do you manage your time to keep up on jobs that need to be completed? Do you have targets?

Organized: Yes

9. Do you work as a team or individually?

Both

10. Do you have objectives in which, team members must fulfill their roles?

If you have any questions, please contact Sam Gabbini (sam.gabbini@gmail.com) or Mohammad Mostaфа (mmostafa@cardiff.ac.uk)
Workplace Survey

This survey is to help give me an idea of any project management methods you are aware of and how your relevant sector of industry may work. In this survey you will be asked questions on project management methods, knowledge of IT systems and some general non-specific questions which will help for my results of my project.

Please let me know if you would like the results afterwards by contacting myself (est20147382@moutlook.cardiffmet.ac.uk) or my project manager Mohamed Mosafa (m.mostafa@cardiffmet.ac.uk).

Please answer all questions honestly.

If you wish to answer this survey online instead please let me know by telling me at the end or by emailing me at the email address above.

1. Name one or more project management methods that you are aware of
   - Modern
   - Waterfall

2. On a scale of one to ten how comfortable are you with the idea of agile project management methods
   - 6

3. What type of work environment are you in?
   - Retail

4. Do you think it's easier and quicker to do a project in small stages and review it or to finish a project all the way to the end?
   - Small Stages

5. Do you have much knowledge of computer systems?
   - Yes

6. Do you feel comfortable with the way work is given to you?
   - Yes

7. Are you given suitable training for any IT systems you use?
8. How do you manage your time to keep up on jobs that need to be completed? Do you have targets?

[ ] List my tasks

9. Do you work as a team or individually?

[ ] Both at times

10. Do you have objectives in which team members must fulfill their roles?

[ ] Yes

If you have any questions, please contact Sam Gabbins (s200473822@outlook.cardiff.ac.uk) or Mohammad Mostafa (mmostafa2@cardiff.ac.uk)
Workplace Survey

This survey is to help give me an idea of any project management methods you are aware of and how your relevant sector of industry may work. In this survey you will be asked questions on project management methods, knowledge of IT systems and some general non-specific questions which will help for my results of my project.

Please let me know if you would like the results afterwards by contacting myself (st20147382@outlook.cardiffmet.ac.uk) or my project manager Mohamed Mosala (mohcatala@cardiffmet.ac.uk)

Please answer all questions honestly.

If you wish to answer this survey online instead please let me know by telling me at the end or by emailing me at the email address above.

1. Name one or more project management methods that you are aware of

[ ] Modern
[ ] Waterfall

2. On a scale of one to ten how comfortable are you with the idea of agile project management methods

[ ]

3. What type of work environment are you in?

[ ] Retail

[ ]

4. Do you think it's easier and quicker to do a project in small stages and review it or to finish a project all the way to the end?

[ ] Small stages

[ ]

5. Do you have much knowledge of computer systems?

[ ] Yes

[ ]

6. Do you feel comfortable with the way work is given to you?

[ ] Sort of

[ ]

7. Are you given suitable training for any IT systems you use?
1. How do you manage your time to keep up on jobs that need to be completed? Do you have targets?

- List tasks and manage time
- My own time

9. Do you work as a team or individually?

- Team

10. Do you have objectives in which team members must fulfill in their roles?

Yes

If you have any questions, please contact Sain Gibbons (s120047358@outlook.cardiff.ac.uk) or Muhammad Mostafa (nomostafa@cardiff.ac.uk)
Workplace Survey

This survey is to help me understand any project management methods you are aware of and how your relevant sector of industry may work. In this survey, you will be asked questions on project management methods, knowledge of IT systems and some general non-specific questions which will help for my results of my project.

Please let me know if you would like the results afterwards by contacting myself (st2034732@outlook.cardiffmet.ac.uk) or my project manager Mohamad Mosafa (momstafa@cardiffmet.ac.uk)

Please answer all questions honestly.

If you wish to answer this survey online instead please let me know by telling me at the end or by emailing me at the email address above.

1. Name one or more project management methods that you are aware of

2. On a scale of one to ten how comfortable are you with the idea of agile project management methods

3. What type of work environment are you in?

4. Do you think it's easier and quicker to do a project in small stages and review it or to finish a project all the way to the end?

5. Do you have much knowledge of computer systems?

6. Do you feel comfortable with the way work is given to you?

7. Are you given suitable training for any IT systems you use?
1. How do you manage your time to keep up with jobs that need to be completed? Do you have targets?

Yes. Meet targets.

9. Do you work as team or individually?

Team

10. Do you have objectives in which team members must fulfill their roles?

Yes.
6.13 Online Survey (Public Company)

6.13.1 Question 1 - Name one or more project management methods that you are aware of

<table>
<thead>
<tr>
<th>Timestamp</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/9/2017 14:47:15</td>
<td>SCRUM, KANBAN, waterfall, AgilePM,</td>
</tr>
<tr>
<td>3/9/2017 14:53:18</td>
<td>Scrum, Agile, Prince2, Waterfall</td>
</tr>
<tr>
<td>3/10/2017 12:15:13</td>
<td>agile, scrum, waterfall</td>
</tr>
<tr>
<td>3/13/2017 8:57:19</td>
<td>Agile, waterfall</td>
</tr>
<tr>
<td>3/13/2017 11:35:04</td>
<td>Agile, Scrum, Kanban, Waterfall</td>
</tr>
<tr>
<td>3/23/2017 10:06:33</td>
<td>agile waterfall prince2</td>
</tr>
<tr>
<td>3/29/2017 9:53:58</td>
<td>kamban, scrum, scrum, waterfall</td>
</tr>
<tr>
<td>3/29/2017 10:54:12</td>
<td>Agile, Scrum, Kanban, Extreme Programming (XP), Feature Driven Development (FDD) and PRINCE2</td>
</tr>
<tr>
<td>3/30/2017 14:53:01</td>
<td>Agile, Waterfall, PRINCE2</td>
</tr>
</tbody>
</table>
6.13.2 Question 2 - On a scale of one to ten how comfortable are you with the idea of agile project management methods

<table>
<thead>
<tr>
<th>2</th>
<th>On a scale of one to ten how comfortable are you with the idea of agile project management methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td></td>
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<tr>
<td>7</td>
<td></td>
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<td>10</td>
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<td>9</td>
<td></td>
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<td>7</td>
<td></td>
</tr>
</tbody>
</table>
### 6.13.3 Question 3 - What type of work environment are you in?

<table>
<thead>
<tr>
<th>3.) What type of work environment are you in?</th>
</tr>
</thead>
<tbody>
<tr>
<td>open plan office</td>
</tr>
<tr>
<td>Software Development</td>
</tr>
<tr>
<td>Office</td>
</tr>
<tr>
<td>We use a sort of process-heavy agile</td>
</tr>
<tr>
<td>Office environment in IT.</td>
</tr>
<tr>
<td>i work in an agile environment</td>
</tr>
<tr>
<td>kanban</td>
</tr>
<tr>
<td>Software Development.</td>
</tr>
<tr>
<td>IT (development team)</td>
</tr>
</tbody>
</table>
6.13.4 Question 4 - Do you think it’s easier and quicker to do a project in small stages and review it, or to finish a project all the way to the end?

<table>
<thead>
<tr>
<th></th>
<th>Small stages and review</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not sure if quicker or easier, but small stages definitely result in the product being more user-focused and relevant.</td>
</tr>
<tr>
<td></td>
<td>Doing a project all the way to the end is quicker and easier, but you probably won’t get the right functionality out of it, which means there’s less point to doing it at all.</td>
</tr>
</tbody>
</table>

It depends on what is being developed. Some projects lend themselves well to completing it all in one go, whilst others are better at completing it in small stages. Generally, it is a better approach to develop software in smaller increments, as this allows the project to adapt to different requirements and goals.

It isn’t necessarily quicker but it does make the project easier in terms of not having to redo a large amount of work in order to add a change or remove a problem. |

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small stages and reviewing it.</td>
</tr>
<tr>
<td></td>
<td>The frequent reviews and feedback from agile is certainly easier.</td>
</tr>
</tbody>
</table>
6.13.5 Question 5 - Do you have much knowledge of computer systems?

<table>
<thead>
<tr>
<th>5.) Do you have much knowledge of computer systems?</th>
</tr>
</thead>
<tbody>
<tr>
<td>lots - I'm a Solution Architect</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>yes</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

Yes, I have a broad understanding of computer hardware, databases and networks, and contain a greater depth of knowledge in software development.

Yes I was work with a number of different operating systems, coding languages and programs expert

Yes.

Yes, many years experience
6.13.6 Question 6 - Do you feel comfortable with the way work is given to you?

<table>
<thead>
<tr>
<th>5. Do you feel comfortable with the way work is given to you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>yes</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

As we use the Agile methodology - Scrum, this allows us to plan work together as a team. We also all share the responsibility of the work and complete this as a team. Yes, it is a very balanced system where each task is given a set amount of points relating to its difficulty allowing team members to choose tasks they are comfortable with. Yes

Yes, but goals frequently change
### 6.13.7 Question 7 - Are you given suitable training for any I.T systems you use?

<table>
<thead>
<tr>
<th>Option</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not always, but I have the autonomy to seek it out if it isn’t offered initially</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Yes, but self-driven</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
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<tr>
<td>Yes</td>
<td>Yes we are up skilled so we are able to confidently work with the systems required</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>A lot of training is on-the-job</td>
</tr>
</tbody>
</table>
6.13.8 Question 8 - How do you manage your time to keep up on jobs that need to be completed? Do you have targets?

<p>| | |</p>
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</table>

We work in 'Sprints', which typically last for 2 weeks. At the end of the Sprint, there is a deadline, which is to deliver the work planned for the Sprint. I manage my time by prioritizing my work.

We work in sprints of 2 weeks to distribute the tasks in order to keep up with the deadlines. Although tasks can sometimes take a little longer than the sprint, we make the best use of the time we have.

- Work on the most important jobs within a sprint.
- Direct tasks are assigned to me and done, using Text, Review, Develop, To-Do, and Bank log to help facilitate progression in jobs to be completed.
- JIRA helps with tracking what needs doing, and reports progress targets.

110
### 6.13.9 Question 9 - Do you work as team or individually?

<table>
<thead>
<tr>
<th>9.) Do you work as team or individually?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individually</td>
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<tr>
<td>Team</td>
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<td>Team</td>
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</tbody>
</table>
6.13.10 Question 10 - Do you have objectives in which, team members must fulfil in their roles?

<table>
<thead>
<tr>
<th>No.</th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Do you have objectives in which, team members must fulfil in their roles?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yes, we have personal objectives that link to our job role.

Yes, our team is very proactive in working on different parts of the same task, ensuring that the priorities are ordered correctly so one member’s work doesn’t delay or block another member’s work.

Not sure

We do have defined roles and priorities depending on those roles (e.g., Developer, Tester), each with different or similar skills and experiences. But we are a team, and we knowledge share and develop together. In relation to my answer to Question 8, we all prioritise from working on our allocated jobs, to testing, reviewing, developing with other member’s job (providing support and pair programming). If all is clear, then we continue with taking another job from the To-Do swim-lane, and if this is not possible, then we can go look into the Backlog to find any viable jobs to work on in the current Sprint.

Yes