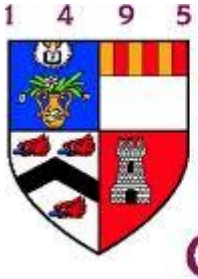

UNIVERSITY OF ABERDEEN

Group Project

Risk Management: Has standardization resulted in organisations adopting a tick box approach to Risk Management?

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Abstract

Organisations are becoming increasingly aware of the benefits to Risk Management and there is an extensive, historic and ever growing amount of literature on the subject. The term 'Risk' is often defined differently, this can be the cause for some contention between risk management experts. ISO 31000 for instance defines it as *"the effect of uncertainty on objectives"* (ISO, 2017), whereas the Health and Safety Executive define it as *"… is the chance, high or low, of somebody being harmed by the hazard, and how serious the harm could be."* (Health and Safety Executive, 2017). So, if 'Risk' is so difficult to define amongst experts, can Risk Management be standardised into a framework that can be adapted across different industries, countries and continents? The International Standards Organisation (ISO) has attempted to do just that with the introduction of its 31000:2009 family. It is the opinion of the group however, that rather than solving the problem of standardising Risk Management, ISO 31000 has in fact just created an ad hoc checklist that organisations blindly follow to try and show compliance or use as a marketing tool.

"*The standard is not designed for certification and in our opinion this is a positive point as there is no need to "tick boxes" or implement processes to "pass an audit"*" (Parker, 2016)

In this Group Project, we examined the existing views on ISO 31000:2009 and the results of a survey we carried out directed at Risk Management professionals. The survey gathered information on the demographics, qualifications and opinions of those involved in Risk Management to the surveys structured questions and compared the views of those who have and haven't adopted the standard. The empirical investigation provided evidence that standardisation combined with poor training does provide the environment where a tick box culture can develop. It would seem there is a fair split to the opinion ISO 31000 aids organisations, with a slight lenience towards the paperwork exercise. It would be fair to say this was the original hypothesis. Positively however, this lenience is very slight indicating ISO 31000 is in fact helping where needed. With a new revision due towards to the end of 2017 / early 2018 there is every chance the standard could only improve.

Introduction

'Risk' and 'Standardisation' are words we work with every day, however what happens when we combine them? Also, in recent years the term 'Tick-Box Exercise' has really stamped its name as the words no manager or employee wants to hear. These three terms combined raise a serious question of which we intend to investigate.

Risk Management is a day to day battle for any Project Manager on any project. Get it right and the results speak for themselves, get it wrong and it can be a total disaster. The first attempt at constructing the Panama Canal was just such a disaster. Whilst the French had already constructed the Suez Canal and therefore had a preformed design, they did not take into account the geographical location and risks that came with it. At one point *'yellow fever was killing 200 laborers each month'* (Latin American Studies, n.d.), this was a perfect example of bad Risk Management.

The collapse of Nokia in the early 2000's can also be attributed to poor Risk Management. This was not a case of physical risk but of a risk from other companies advancing technology in an area Nokia thought not worth investing. The absence of Nokia in present day technology speaks for itself as to the result of not managing the risk.

It is our belief that whilst standardisation has streamlined project risk, it may have gone past useful and created unnecessary bureaucracy. This paper will look to answer the main question albeit split into two parts. Do organisations adopt standardised processes for Risk Management and secondly, does it work? We intend to use ISO 31000 as a benchmark due to its global image as a tool in Project Management. Armed with this benchmark we intend to collect data from a range of project members via a survey, their opinions on the use of Risk Management in general and ISO 31000. This will allow us to compare the views of end users and draw conclusions as to the trend of Risk Management in project management today.

Literature Review

Risk

Defining Risk

Risk is defined as an uncertain event or set of circumstances that, should it occur, will have an effect on the achievement of one or more objectives. In addition, at the higher level of the project, programme or portfolio, overall risk is defined as the exposure of stakeholders to the consequences of variations in outcome, arising from an accumulation of individual risks together with other sources of uncertainty. All projects, programmes and portfolios are inherently risky because they are unique, constrained, based on assumptions, performed by people and subject to external influences. Risk can affect the achievement of objectives either positively or negatively. Risk includes both opportunities and threats and both should be managed through the Risk Management process. Usually, we talk about risks when we must make decisions or choices between different alternatives with uncertain future consequences. We tend to concentrate on negative future consequences or outcomes. As an example, let's consider the case of a failure to reach a desired return on an investment. Various methods and procedures are used to analyse risks. Depending on the method selected, different risk assessments will be arrived at in one or the same decision situation. The appropriateness of the method depends on the information available to the decision-maker, on the size of his/her budget and his/her goals. Basically, there are two ways of assessing and managing risks. They are Qualitative Risk Management and Quantitative Risk Management.

Quantitative Risk Management

Quantitative risk analysis is the process of numerically analysing the effect of identified risks on overall project objectives. On the basis of the results, the quantitative risk analysis is performed on the risks that have been prioritized and analyses the effects of those events and assign them numerical ratings. Instead of estimating the single impacts by using

typology, in the process of quantitative risk analysis, the impact to the whole project is made computable and will be computed for generating a more elaborate total ranking. Shortly spoken, one might say that quantitative risk analysis breaks down risks from a high, medium, low ranking to actual numerical values and probabilities of occurrence for allowing an overall effect. One example of quantitative risk analysis is the decision tree analysis.

Qualitative Risk Management

Qualitative risk analysis is the process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact. All risks have both probability and impact. Probability is the likelihood that a risk event will occur and impact is the significance of the consequences of the risk event. Impact typically affects the following project elements: schedule, budget, resources, deliverables, cost, quality, scope and performance. Such an analysis is very much based on the expertise, experience and knowledge of the individual team members who take part in this process. There are several techniques when performing qualitative risk analysis to determine the probability and impact of risks. What I would like to talk about is brainstorming.

Risk Management

"*Risk management is the systematic application of management policies, procedures and practices to the task of establishing the context, identifying, analysing, assessing, treating, monitoring and communicating*". (Australian Government, 2010)) It is a process that allows individual risk events and overall risk to be understood and manage proactively, optimizing success by minimizing threats and maximizing opportunities. It is an iterative process that, with each cycle, can contribute progressively to the organisational improvement by providing management with greater insight into risks and their impacts. Risk Management should be applied to all levels of the organisation, in both the strategic and operational context, to specific projects, decisions and recognized risk areas. Risk is the chance of something happening that will have an impact on objectives. It is therefore important to understand the objective of the organisation or project prior to attempting to analyse the risk. Risk analysis

is often done in a group with each member of having a good understanding of the objectives being considered. The Risk Management process follows five steps as discussed below.

Risk identification: this is the stage where risks are uncovered, recognized and described. There are a number of techniques we can use to find project risk including brainstorming. During this stage, the preparation of the risk register begins.

Analyse the risk: once the risks are identified, the likelihood and consequence of the risk is identified at this stage. The nature of the risk and its potential to affect the project's goals and objectives is identified at this stage. This information is registered in the risk register.

Rank the risks: the risk is ranked by determining the risk magnitude, which is the combination of likelihood and consequence. A decision is then made on whether the risk is acceptable or whether it is serious enough to warrant treatment. The rankings are also added to the Risk Register.

Mitigation: this can also be referred to as Risk Response Planning. During this stage, the highest ranked risks are assessed and plans are set out to treat or modify these risks to achieve acceptable risk levels. Risk Mitigation Strategies and Contingency Plans are set in the stage. The risk treatment measures are also added to the Risk Register.

Risk monitoring and review: this is the stage for monitoring, tracking and reviewing the risks registered in the project Risk Register.

Risk is about uncertainty and if a framework is put around that uncertainty, the risk can then be effectively managed.

Tick-Box Culture

What is meant by ‘Tick Box Culture’?

We are all familiar with the term ‘Tick-Box Culture’, but what exactly does it mean? Well the term ‘Tick-Box Culture’ has actually been created by another, called ‘Checklist Culture’. Professionals have been using checklists for years in all industries around the world. Medical staff use them to ensure they don’t miss key steps during treatment and construction staff use them to safeguard against mistakes made during construction projects. The airline industry is one of the most notable sectors where checklists have been adopted.

“… he met pilots, who swore by the cockpit check-list, and engineers building skyscrapers, who referred to one constantly, both in planning and execution.” (Blastland, 2011)

It’s been proven that checklists in the medical industry have made serious inroads in to improvement of critical treatment and succeeded in raising survival rates in many hospitals around the world.

“They calculated that, in this one hospital, the checklist had prevented forty-three infections and eight deaths, and saved two million dollars in costs.” (Gawande, 2007)

This checklist culture however, whist improving many aspects of industry has in places, bred the ‘Tick-Box Culture’. Inherently, checklists are used as an aide memoir as opposed to a set of instructions. Training in the relevant field is still required to understand the list. An argument has been put forward that not everyone understands the same checklist, therefore making generic lists potentially useless.

Even armed with this knowledge, organisations continue to pump out checklist after checklist in the hope that compliance is achieved. When people don’t understand, or agree with something they tend to complete it only because they have to, rather than use it to its full potential, and so the ‘Tick-Box Culture’ is born.

Describing it is best done by asking a certain question, 'Where does it apply?'. A 'Tick-Box Culture' can technically exist in any company, organisation, sector or industry globally that deals with processes and procedures. The advent of checklists, as previously discussed, exist within these processes and procedures to ensure steps are not missed enabling a satisfactory outcome, and also to safeguard compliance. We need to dig a little deeper into this aspect to really explain how the culture has developed within the project sector.

Checklists have become a major player in Risk Management, whether it be physical or business related. The use of checklists in the correct areas have greatly reduced incidents and threats. In every project globally, checklists are utilised in order to improve workflow and allow processes and procedures to be carried out without the need for masses of information to be retained by members. This in turn allows confidence to be instilled that the deliverables are been achieved to the required quality. The next question however is, 'Where are checklists deemed relevant?'

This is technically an open-ended question that can only be answered by attributing it to personal preference. It would seem still though, managers are getting it wrong.

'…plenty of projects have lists of risks that everyone includes as a tick box exercise rather than really thinking through the possible risks for your particular project.' (Naybour, 2015)

ISO 31000 was brought into try and solve the above question *'the standard is not designed for certification and in our opinion this is a positive point as there is no need to "tick boxes" or implement processes to "pass an audit"'* (Parker, 2016)

This scenario can also be shared with many other areas related to checklists. We live in a world of compliance, where every industry is regulated by a body or multiple bodies. This compliance has led to organisations adopting checklists to aid in ensuring no regulations are overlooked or missed during audits. As noted by some regulatory bodies though, checklists have made companies and organisations complacent in thinking they are compliant.

'…This, in turn, has led in many cases to a tick-box and overly legalistic compliance culture within firms, encouraged by what has been seen as a tick-box regulatory approach.' (Adamson, 2013)

By just ticking a box on a checklist, organisations have been lead into a false sense of security that they are compliant, this problem is two-fold however. Firstly, is the checklist they are using fit for purpose having been developed using the correct information? After all, if the wrong data is used to create the checklist, completing it won't make you compliant. Regulations are revised and changed constantly, therefore if checklists are not regularly updated, you have another situation where compliance is missed?

A new way of thinking is needed according to Johnathan Blackhurst from Visa Europe. *'There will be a move from a tick box approach to information to one that questions risk and asks whether the risk profile is in line with an organisation's objectives.'* (Copeman, 2011), in other words, it has been realised that the 'Tick Box Culture' is no longer a sufficient tool to ensure the most suitable outcome. The realisation has been that checklists are perhaps not detailed enough to force team members to think about the tasks they are related to. Instead, checklists have taken over the need for people to think. In the same breath, because of this, people see checklists as unnecessary bureaucracy.

They said a "tickbox culture" imposed by the advent of the national offender management service (Noms), which took over prison and probation a decade ago, was part of the root cause of the growth in bureaucracy. (Mulholland, 2011)

Checklists certainly have been proved to have their place. In fact, places like the airline industry *'swore by the cockpit check-list'* (Blastland, 2011). Unfortunately, some management have decided the lists reduce the need for proper training, can be used as a way to reposition liability and to prove an audit trail that may not necessarily exist. This has created the 'Tick-Box Culture' as we know it now.

Complacency

Synonymous with any incident investigation these days, complacency has become an 'ugly' word. The investigation report into the Deepwater Horizon disaster cited that Transocean had *"serious safety management system failures and a poor safety culture, as manifested in the maintenance deficiencies, training and knowledge gaps"* (USCG, 2010). A Safety Management System is centred around procedures and checklists. In a later statement the Head of the presidential investigation was quoted as saying *"BP and the other companies involved in the Gulf of Mexico oil disaster were operating under a "culture of complacency" and need top-to-bottom reform"* (Goldenberg, 2010). We are all aware of the affects this disaster had on the environment and the financial implications on BP plus many other parties.

Whilst the above is specific to one type of Risk Management, the principle applies to all aspects of risk.

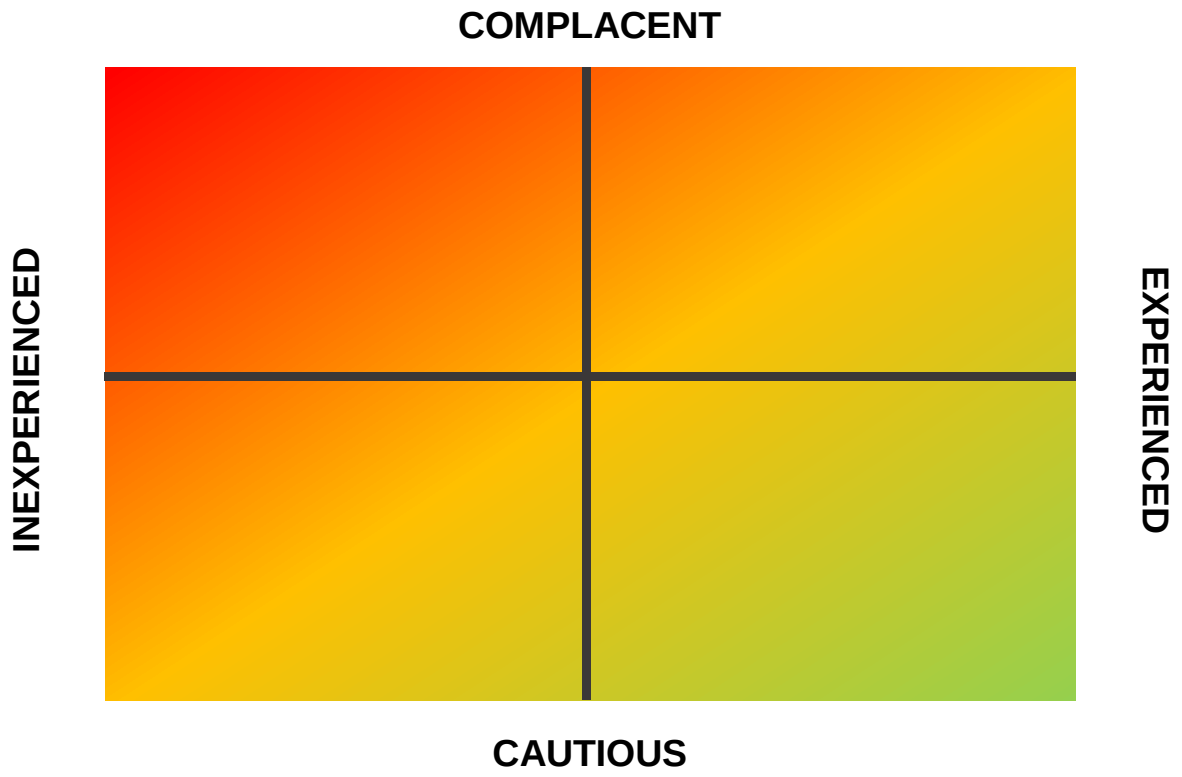
"The culture of complacency is not limited to oil rigs far out at sea. The recent recession — which was caused, in part, by an erroneous belief that the status quo would continue and the housing market would never decline — is one case in point." (Zavatsky, 2012)

Complacency in any form can increase risk exponentially, whether it be personal injury or huge financial loss. Complacency is more often than not traced back to inadequate/poor training and continual failure thereafter to observe good practise, in short, a positive proactive culture.

Complacency can be as simple as imparting the 'we've always done it that way' mentality or alternatively ignoring risks that are known to exist but don't want to be acknowledged, the later can be attributed to the 'if we ignore it, it won't happen'. As a human element, it is not just as easy as getting rid of it. Complacency is bred in part by the environment you work in and possible most dangerously it can be instilled by experience. It was said "*Experience breeds familiarity, familiarity breeds complacency and complacency breeds carelessness"*

(Zawodniak, 2010), so whilst we put an argument forward that experience is essential it can be this very element that manifests problems. This is where the constant positive culture comes into play, ensuring that the procedures and processes are heeded, even by the more experienced individuals.

The below diagram shows the linear relationship between Experience and Complacency. It is a very good representation of how experience can reduce risk on the one hand however, coupled with complacency can still add an element of risk (shown in the diagram by the yellow colour).



(Scubatech, 2017)

Standardisation

History of Standardisation

The first systematic attempt at standardization started in post revolution France with the introduction of the metric system from 1790 – 1875. This new standardized system was essential for national & international trade, before the metric system France had a confusing array of weights and measures "*Ken Alder even states that ancien régime France knew 250,000 different weights and measures*". (Wenzlhuemer, 2010). Metrication introduced and popularised the concept of unification, as technology advanced the process of standardization had to increase. The invention of the telegraph system made international standardization essential, the existence of widely varying standards reduced the very benefit of telegraphic communications and rendered standardisation highly desirable for all parties involved.

The world's first national standards body the British Standards Institute (BSI) was formed in 1901 by Sir John Wolfe-Barry, (BSI, 2017). The first national standard in the UK, BS1, was published in February 1903 and "…*tabulated the standard dimensions of steel angle sections, essential for structural engineers in Sourcing from different manufacturers*." (Cebr, 2015) During the 1920s, standardization spread to Canada, Australia, South Africa and New Zealand, interest was also developing in the USA and Germany. Post WW2, 1945 to 1975, there was further international consolidation with standards covering subjects such as checking air pollution, nuclear energy, safety colors for use in industry, schools and office furniture and the carrying of live animals by air.

Between 1975 - 2000 many of the world's management systems standards were developed, including the three most widely adopted for quality, the environment and health and safety. During this period co-operation between national standards body's and multinational organizations creating international standards. (BSI, 2017).

Standardisation Explained

As organisations have expanded globally there has become an increasing need for standardisation to provide sets of guidelines, common practises and procedures that enable organisations to operate in different areas with the greatest amount of order possible. As stated (UK Government, 2012)., "*Standardisation is the process of creating, issuing and implementing standards. A standard is a document, established by consensus and approved by a recognised body. It provides rules, guidelines or characteristics for activities or their results so that they can be repeated. They aim to achieve the greatest degree of order in a given context.*"

The aims of standardization, as summarized by (Bredillet, 2003), are multi-fold. The first object for standardization is to provide clear definitions of products and services for producers' informational purpose. Second, standardization is destined to improve quality of life, safety, health and environment. The third goal of standardization is to achieve optimum economic resource usage in production processes. Easy and unambiguous communication between interested parties comprises the fourth aim of standardization, while the fifth advantage of standardization lies in the promotion of international trade with uniformed standards in traded products and services. Therefore, it is not hard to tell from the aims of standardization that the function of standards can never be over-emphasized in any industries or professions, including the topic in this paper Risk Management by (Aldhfayan, 2008).

Standardisation in Project Management

Project management in essence is bringing standardised practices to unique endeavours, the APM Body of Knowledge (APMBoK) defines project management as "*The process by which projects are defined, planned, monitored, controlled and delivered such that the agreed benefits are realised. Projects are unique, transient endeavours undertaken to achieve a desired outcome. Projects bring about change and project management is recognised as the most efficient way of managing change*".

Without standardisation in project management, each project would be run in an organised chaos, as stated by (Marks, 2012) "*In an environment where there are no standardised procedures for project management, projects are undertaken in an unpredictable manner, with potentially different techniques and ways of working – all leading to inefficiencies within an organisation.*"

There are several bodies involved in project management as well as different methodologies, the most prominent professional bodies in project management are:

- The International Project Management Association (IPMA)
- The Project Management Institute (PMI)
- The Association for Project Management (APM)

There are also several methodologies including:

- Prince 2
- Projects integrating Sustainable Methods (PRiSM).
- Agile Project Management.
- Waterfall Project Management.

Standards developed by these bodies and methodologies allow for transfer of knowledge between projects which allows for the development of the most efficient methods commonly

known as ‘best practice’. The benefits to the project management community are highlighted by (Marks, 2012) as:

- Provision of a consistent approach to all projects within an organisation.
- A scalable approach that can be used on both large and small projects.
- It increases the chances of successfully achieving objectives.
- It develops an environment to allow continuous development in project management processes.
- It develops common understanding of the various project roles and responsibilities (including stakeholders).
- Process descriptions for each phase of the cycle.
- Inputs and outputs for each process.
- Documentation guidelines and templates.
- Guidelines covering the structure of the project organisation, accountability, responsibility and communication.
- Role definition for all those involved in a project.
- A set of procedures to be used throughout the life cycle.

Benefits of Standardisation

Standardisation and international uniformity has many advantages, there has been a growth in literature on the effects of standardisation (Blind, 2013), states “ (Swann, 2000) *conducted a first comprehensive survey on the existing literature on standards and standardization. Related to innovation, he identified the following factors:*

a) Standardization helps to build focus, cohesion and critical mass in the emerging stages of technologies and markets.

b) Standards for measurements and tests help innovative companies to demonstrate to the customer that their innovative products possess the features they claim to have, but also acceptable levels of risks for health, safety and the environment.

c) Standards codify and diffuse state of the art in science and technology and best practice

d) Open standardization processes and standards enable a competition between and within technologies and contribute therefore to innovation-led growth."

The relationship between standardisation and innovation led growth is shown in Fig 1. PDCA (Plan–Do–Check–Act or Plan–Do–Check–Adjust) is an iterative four-step management method used in business for the control and continuous improvement of processes and products.

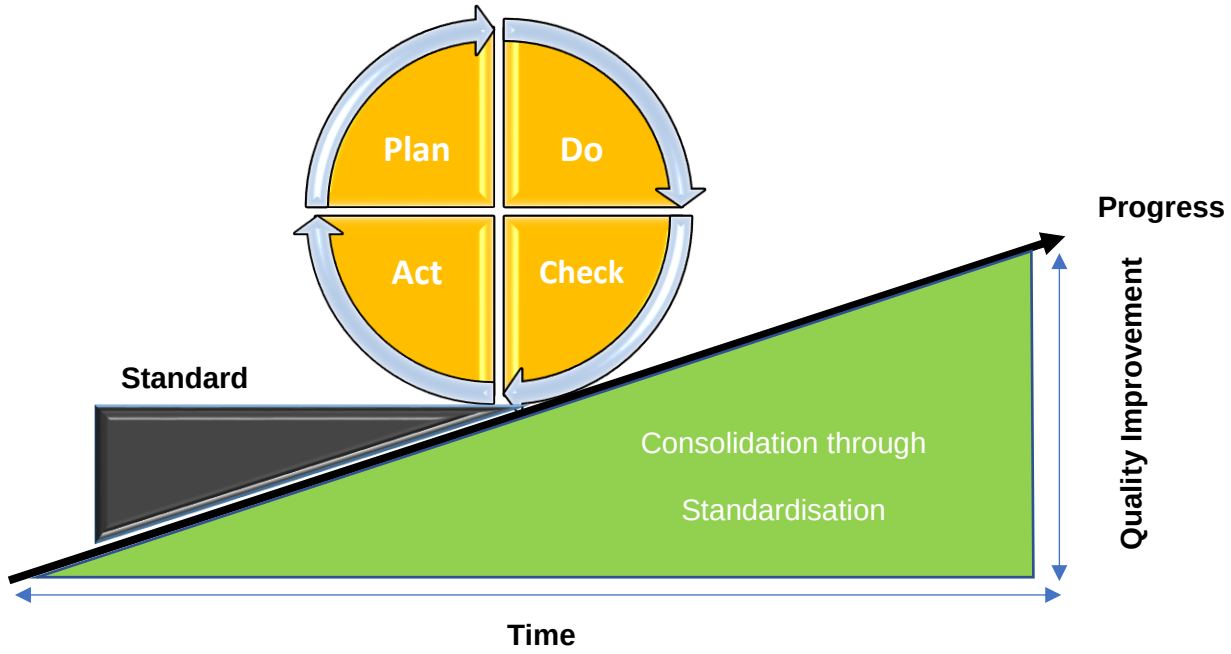


Fig 1, PDCA (Cosima, 2015)

Source:http://web.spi.pt/cosima/sites/all/downloads/R2_EN_COSIMA_Process_Optimization_methods.pdf, 2015.

There has also been considerable research into the economic benefits of standardization an example of this is the BSI's standards and industry survey covering 527 companies across 7 sectors. The results showed:

- Investing in standards pays dividends for organizations that use them.
- Standards always generate more benefits for companies than they cost to implement.

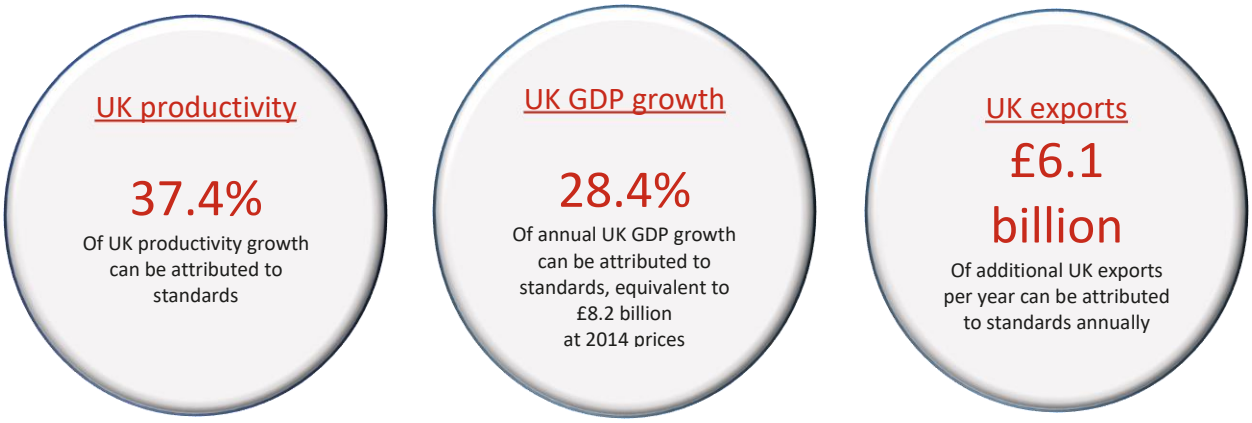


Fig 2, Economic Benefits of Standardisation to British Business (BSI, 2017)

Source: https://www.bsigroup.com/LocalFiles/en-GB/standards/BSI-standards-brochure-how-standards-benefit-businesses-and-the-UK-economy-UK-EN.pdf, 2015.

Disadvantages of standardisation

Though the benefits of standardisation are widely recognised it has attracted some criticism (Swann, 2000) states "*Intense global competition and rapid rates of innovation have led to ever-shorter Product life cycles. This has created a competitive imperative to define standards quickly and that has put formal standards bodies under great pressure*". Another criticism of standardisation is that it stifles creativity as identified by (Blind, 2013). "*In the past, standardisation and standards have often been perceived as a contradiction to innovation*".

It is widely purported that standardization aids international trade, there is substantial evidence of economic benefits to developed countries. However, as reported in BSI's survey those who benefit most from the introduction of a standard are those who help develop them (BSI, 2017). This means developing economies have to adapt to match the standards imposed by developed nations in order to export their goods and services. "*As of today, the participation of the national standards boards from developing countries in the international standardization process is almost negligible; in the end the standards bodies of*

developing countries don't count in the writing of worldwide standards. It would be safe to say that the industrialized world is imposing its technical standards upon developing countries, regardless of the application and usefulness of those standards in those countries." (Tobón, 2002)

Another issue with standardisation is misapplying them, an organisation may adopt a set of standards that works well in other industries, or locations but doesn't fit that organisations goal or suit their current environment. A good example of an organisations approach not transferring to global markets as highlighted by (Alwazir, 2013). "*Walmart's failure in entering global markets. The retail giant faced many challenges when entering foreign markets such as Germany, Brazil, South Korea and Japan as it discovered that its formula for success in the USA (low prices, inventory control and a large collection of merchandise) did not translate to markets with their own discount chains and shoppers with different habits*".

"*It is easy to make things worse if one makes the assumption (sometimes based on what might be labelled "best practices") that what works well for some (or even most) divisions will be equally good for all. Such assessments are almost always specific to one or a few divisions, and often fail to take into account all the conditions that permitted that "best practice" to actually work or work well in the first place. And, as always, management decisions made without the input of the people "in the trenches" has great potential for creating inefficiency at best, or impossibilities at worst*". (Prosser, 2008).

ISO, the International Organisation for Standardization

"*ISO is an independent, non-governmental international organisation with a membership of 162 national standards bodies. Through its members, it brings together experts to share knowledge and develop voluntary, consensus-based, market relevant International Standards that support innovation and provide solutions to global challenges."* (ISO, 2017).

ISO 31000

"*ISO 31000:2009, Risk management – Principles and guidelines, provides principles, framework and a process for managing risk. It can be used by any organization regardless of its size, activity or sector. Using ISO 31000 can help organisations increase the likelihood of achieving objectives, improve the identification of opportunities and threats and effectively allocate and use resources for risk treatment.*

However, ISO 31000 cannot be used for certification purposes, but does provide guidance for internal or external audit programmes. Organisations using it can compare their Risk Management practices with an internationally recognised benchmark, providing sound principles for effective management and corporate governance." (ISO 2017).

The ISO 31000 family of standards also includes:

- ISO Guide 73:2009, Risk management - Vocabulary complements ISO 31000 by providing a collection of terms and definitions relating to the management of risk.
- ISO/IEC 31010:2009, Risk management – Risk assessment techniques focuses on risk assessment. Risk assessment helps decision makers understand the risks that could affect the achievement of objectives as well as the adequacy of the controls already in place. ISO/IEC 31010:2009 focuses on risk assessment concepts, processes and the selection of risk assessment techniques.

ISO 31000:2009 was developed using the framework of an existing standard on Risk Management, AS/NZS 4360:2004. The initial standard provided a process by which Risk Management could be undertaken, ISO 31000:2009 addresses the entire management system that supports the design, implementation, maintenance and improvement of risk management processes. One of the key changes was the way in which ISO 31000 defined risk from 'the chance of something happening that will have an impact on objectives' to 'the effect of uncertainty on objectives' (Australian Government, 2010). This definition links risks

to objectives. Therefore, this definition of risk can most easily be applied when the objectives of the organisation are comprehensive and fully stated (IRM, 2010).

Current Views on ISO 31000

"*The effect this uncertainty has on an organisation is "risk"*" (Gjerdrum & Peter, 2011). These uncertainties can have a positive or negative effect upon the organisation. The positive effects can be thought of as opportunities whereas the negative effect are threats. These threats can posse particular concern for those involved in the risks. (Gjerdrum & Peter, 2011) states that 59% of those involved in risk are kept awake at night worrying about unknown risks. These risks need to be identified and managed in order for a project to succeed. There are a number of options available to the Risk Manager, ISO 31000 and COSO being the main two. (Jamieson & Jones, 2013) defines ISO 31000 as an international standard for Risk Management. It offers standard risk concepts, terminology and processes for diverse organizations and their component departments.

Advantages of ISO 31000

A complete absence of Risk Management will minimize the cost of risk mitigation measures. On the other hand, excess backup capacity, reviews and quality controls bind more resources and cost more money than they save. Good Risk Management helps to strike the right balance between minimizing risk and the cost of doing so (Oehmen & Rebentisch, 2010). ISO 31000 provides organisations with a standardised process for good Risk Management and provides a number of advantages for organisations that have adopted it.

"*ISO expands upon what is already being done well*" (Teixeira, 2010). However, organisations that have fully implemented COSO may not need or wish to switch to ISO 31000 however, "*a real strength of this new ISO 31000 risk management approach is the identification of risk owners and the necessary widespread education about risk—both within and without your organisation*" (Teixeira, 2010).

ISO 31000 offers a number of other advantages when compared to COSO. (PECB, 2015) Gives a list of advantages over COSO:

1. It is more practical
2. It provides more details
3. It explicitly defines the terms
4. It is more clearly written, and easier to understand for CXOs, and risk professionals
5. The information in the standard can be adapted to develop guidelines to assess existing risk management methodologies
6. It provides a foundation for implementing other ISO risk management standards and guidelines

In order for an organisation to best exploit ISO 31000 they must fully implement it within the organisation as highlighted in (Moraru, 2012) for this process to be effective, the company culture must be willing to embrace the risk process. If an organisation can effectively implement ISO 31000 then it will benefit from the following advantages (PECB, 2015).

1. It creates and protects value.
2. It is an integral part of all organisational processes.
3. It is part of decision making.
4. It explicitly addresses uncertainty.
5. It is systematic, structured and timely.
6. It is based on the best available information.
7. It is tailored.
8. It takes human and cultural factors into account.
9. It is transparent and inclusive.
10. It is dynamic, iterative and responsive to change.
11. It facilitates continual improvement of the organisation

If an organisation is to achieve an effective implementation of ISO 31000 then everyone involved must be bought in to the concept. "*Not everyone within an organisation needs to be close to the risk process on a day-to-day basis*" (Teixeira, 2010). However blindly applying this standard without using a degree of common sense will lead to issues within the organisation as stated by (Leitch, Views on current risk management guidance and standards, 2016) "*all senior people within an organisation need to apply logic and good sense instead of passively accepting bad ideas*". Implementing new standards in any organisation is difficult "*Risk Management practitioners need to examine their current ways of working and language used*" (Purdy, 2010) so their customers can receive consistent and useful information.

Risk Management Practitioners Views on ISO 31000

ISO 31000 has now become a globally accepted standard (Purdy, 2010) even so in order for ISO 31000 to be effective it must be accepted by those implementing it. "*Addressing human factors is at the core of risk management*" (Broadbent, 2012). The human factor here is that those implementing the standard do not accept the document, then they will not implement it to the best of their ability. A number of surveys have been conducted of Risk Management practitioners about their views on ISO 31000. Two such surveys are those of (Leitch, Results of a survey on ISO 31000:2009 and future editions, 2013) and (The IIA, 2010).

ISO 31000 and COSO both offer different Risk Management frameworks were a Risk Management framework links the management of risk with other management activities within the organization as defined by (Sousa, Marques De Almeida, & Dias, 2012).

(The IIA, 2010) found that those surveyed found the framework of ISO 31000 easier to follow than that of COSO. With COSO framework being cited as too complex and difficult to follow and ISO being cited as intuitive and executive-friendly. Although in some cases practitioners chose not to fully accept one framework, instead selecting pieces of each

frameworks that best fitted their needs. Overall (The IIA, 2010) gives ISO 31000 as the preferred and more intuitive of the two standards surveyed.

(Scannell, Curkovic, & Wagner, 2013) used survey data from Supply Chain Risk Management (SCRM) companies determining that ISO 31000 provided a foundation for advancing future SCRM research, and a more successful execution of SCRM. The survey concluded that although ISO 31000 built upon the already existing SCRM framework it had two major advantages, development of strategic context and performance monitoring.

(Leitch, Results of a survey on ISO 31000:2009 and future editions, 2013) surveyed the attendees, around 850 people, at the TC/262 and BSI event on the same topic held on 13th and 14th June 2013. It was an anonymous survey in order to get an honest idea of what people thought of ISO 31000. A brief summary of the findings is shown below (Leitch, Results of a survey on ISO 31000:2009 and future editions, 2013):

1. A strong desire for methods that work well.
2. More interest in everyday awareness, skills, and behaviour than in corporate processes and risk register databases.
3. Clear support for extending the scope of the risk management process(es) to include all significant decisions, not just decisions on actions seen as responses to risk.
4. Strong interest in reducing the number of specially defined risk terms used in the standard.
5. Strong interest in more clarity and guidance on integration, including diagrams showing how risk can be managed in core management activities.
6. Confirmation that ISO 31000:2009 can be usefully clarified on some important points.

It can be concluded from the two surveys that the majority of Risk Management practitioners favour ISO 31000 over other standards available. They find it more intuitive and easier to follow when compared to COSO. However, they did not necessarily accept in in blind faith, choosing to handpick the parts they felt most useful and relevant to their organisation.

Filling the gaps with part of other frameworks in order to meet their business needs. They did however have a strong desire for the standard to succeed when it was being implemented.

ISO 31000 is by no means perfect and will not always be the framework of choice by an organisation. However, it is on majority the preferred standard and framework in use. In order to continually improve the standard, it must be revised regularly. (Tranchard, 2015) States the revision period as every 5 years to remain relevant to its users.

Research Methodology

Introduction

After initial research into ISO 31000 it was clear there was no shortage of previous examination of the standard. As expected there is also a considerable amount of research into Project Risk as a whole. These factors alone allow us to ensure we have relevant reference material to collect the most accurate data we can. The research leant us towards using existing techniques as opposed to anything new, time constraints will also dictate the methods that will be suitable.

Method

Qualitative and Quantitative are two words synonymous with research. The best research is conducted with a mixture of both Qualitative and Quantitative. Qualitative research would allow us to interview individuals and gain a broad understanding on the views of ISO 31000. This dataset would then allow us to construct the basis for the Quantitative portion. The Qualitative views can be used to create a set of survey questions designed to pull out a more detailed view of ISO 31000. It is this dataset that would provide the basis for a detailed analysis on our research topic.

This project however, due to distance and time, is only going to let us carry out quantitative research, this will be done in the form of a survey. A survey will allow us to target a specific group of people working in Project Management and more deeply in the Risk sector.

Survey

The survey was designed to capture two specific sections of data. The first section was generic to all respondents, finding out age, occupation, industry etc. Then based on whether the respondents worked with ISO 31000 or not they were given a set of more specific question to do with Risk Management. The generic demographic questions at the beginning would allow use to draw better conclusions and say which industries focused

more on training or experience, which qualifications were used most widely, and is experience picked over qualifications. This also meant we could construct correlations on the different types of people who use or don't use ISO 31000.

The survey had a few teething problems going through the ethics committee and certain aspects had to be changed bringing it in line with the universities standards. We initially decided on a platform to disseminate the survey however, after the changes required by the Ethics Committee a new platform had to be sought. A few more days were then assigned to find a new platform which was done successfully.

Platform

Google Forms was used to construct the survey based on:

- Intuitive to set up survey
- Allowed pipelining of questions
    - This allowed us to send respondents two different ways according to whether they used ISO 31000 or not.
- Easily created link to allow posting on forums
- Allowed survey monitoring throughout the duration
- Downloadable results in common format for analysis

Sources

List:

- LinkedIn - Groups
    - ISO 31000
    - APM
    - PMI
- Projectmanagement.com

Source	Followers
LinkedIn	
ISO31000	61,708
APM	26,438
PMI	204,363
ProjectManagement.com	Approx. 800,000

It was decided to use LinkedIn as the main source for respondents. This comprised of three groups listed above. As you can see from the table above, the No. of followers for each group is significant, as well as been specific to our area of research. The projectmanagement.com forum is more generic however the number of members is far greater than LinkedIn. We thought the two sources provided a wide enough scope to cover a good selection of respondents.

Research

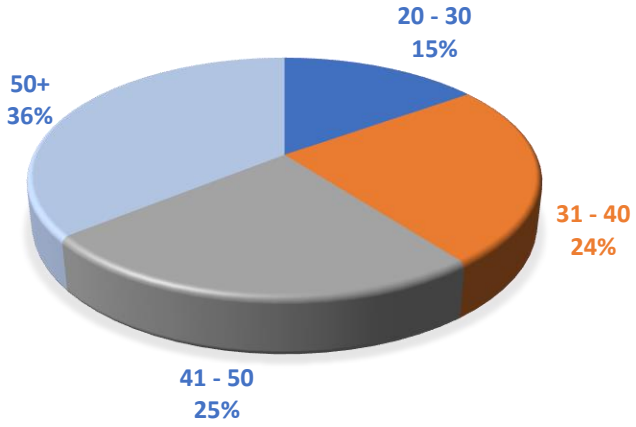
Introduction

In total, we had 53 responses collected over 10 days. Due to the nature of the dissemination process this was seen to be a very good response. Initial glances at the result also showed an interesting split in who used ISO 31000 and who didn't. This has allowed for some interesting discussion within the project.

Results

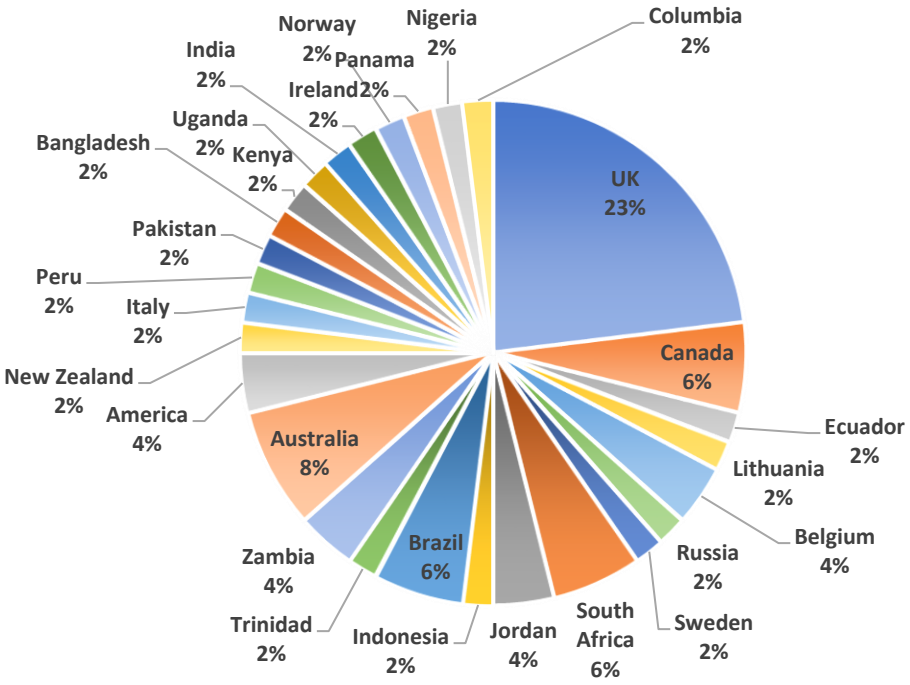
Age

Ages were grouped in to ranges of 20-30, 31-40, 41-50, 51+ years. This covered the scope of respondents who we believe would provide beneficial feedback. The biggest proportion was 51+ at 36% (19). Groups 31-40 and 41-50 were equal at 25% (13) each followed by 20-30 at 15% (8).



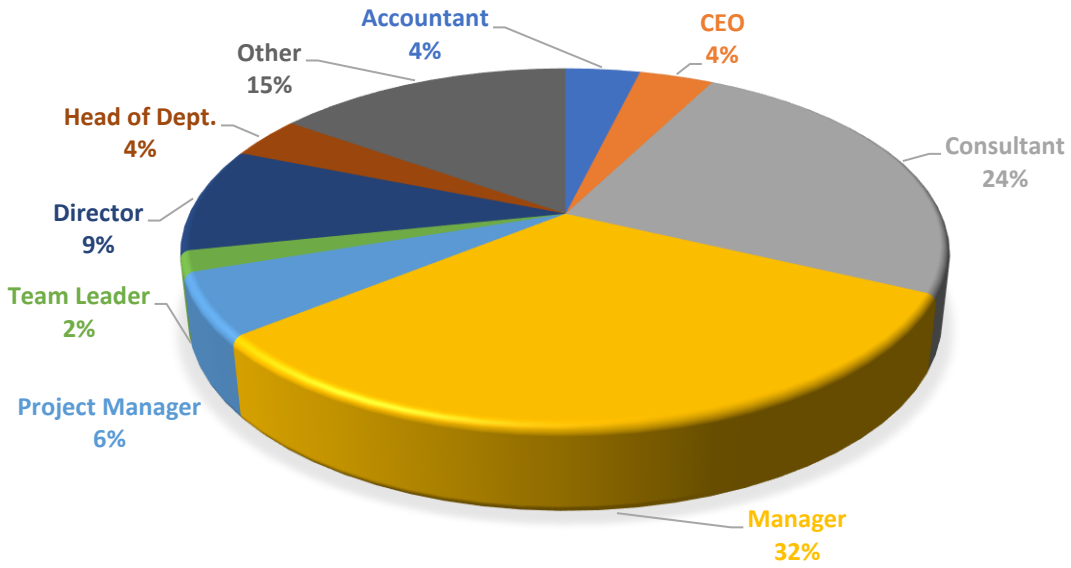
Nationality

This was set as a text field so any value could be entered. The largest nationality came from the UK with 21% (11) followed by Australia with 8% (4). Brazil, Canada and South Africa followed up with 6% (3) each and America, Belgium, Zambia and Jordan came in with 4% (2) each. The remaining 21 respondents were all single representations and covered a large proportion of the globe.



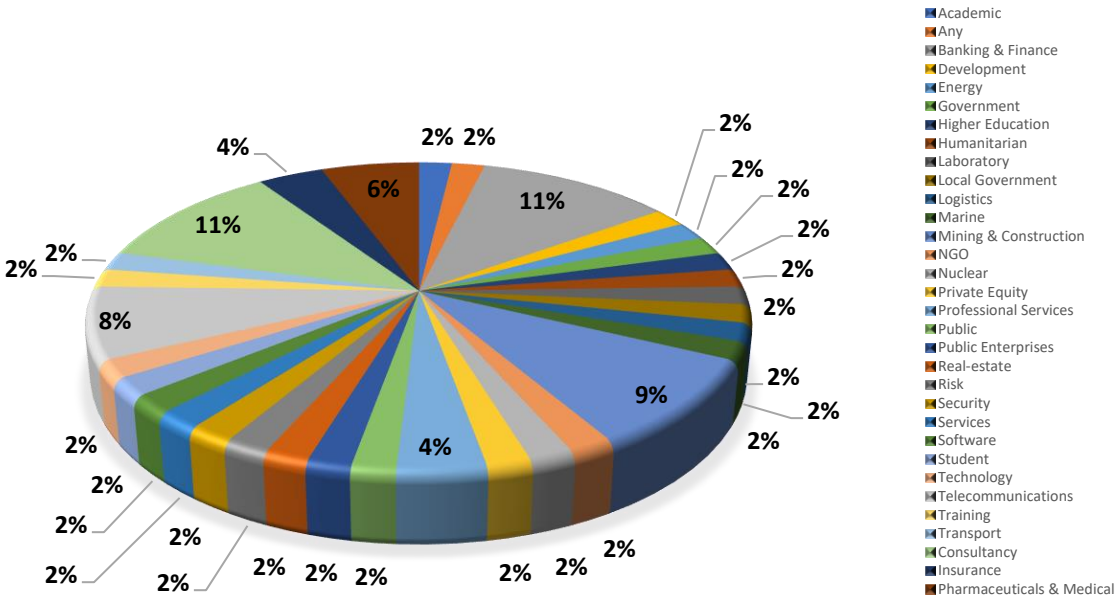
Occupation

This was set as a text field so any value could be entered. The main area of respondents with 32% (17) came from a Managerial position, which was closely followed by Consultancy with 25% (13) of the total. Other and Directors were the next two highest with 15% (8) and 9% (5) respectively. Project Managers as a single entity came in at 6% (3) with Accountants, CEO's and Head of Depts. representing 4% (2) each. The final respondent was a Team Leader.



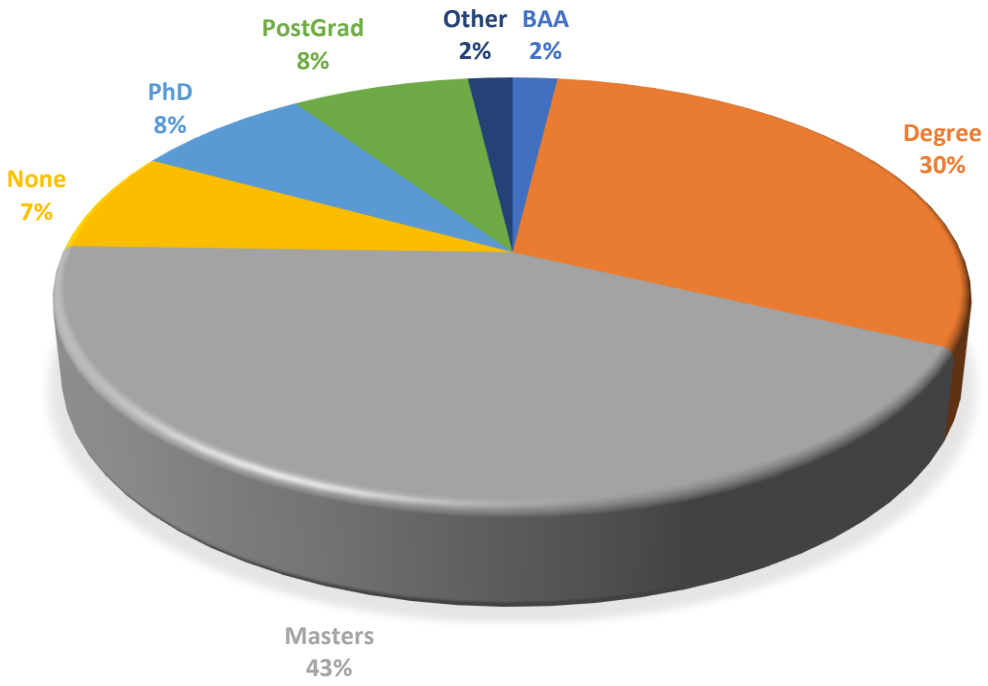
Industry

This was set as a text field so any value could be entered. Two sectors came out on top with 11% (6) each, these were Consultancy and Banking & Finance. Mining, Telecoms and Pharmaceuticals followed with 9% (5), 8% (4), 6% (3) respectively. All the other results comprised of 4% (2) and 2% (1) for each.



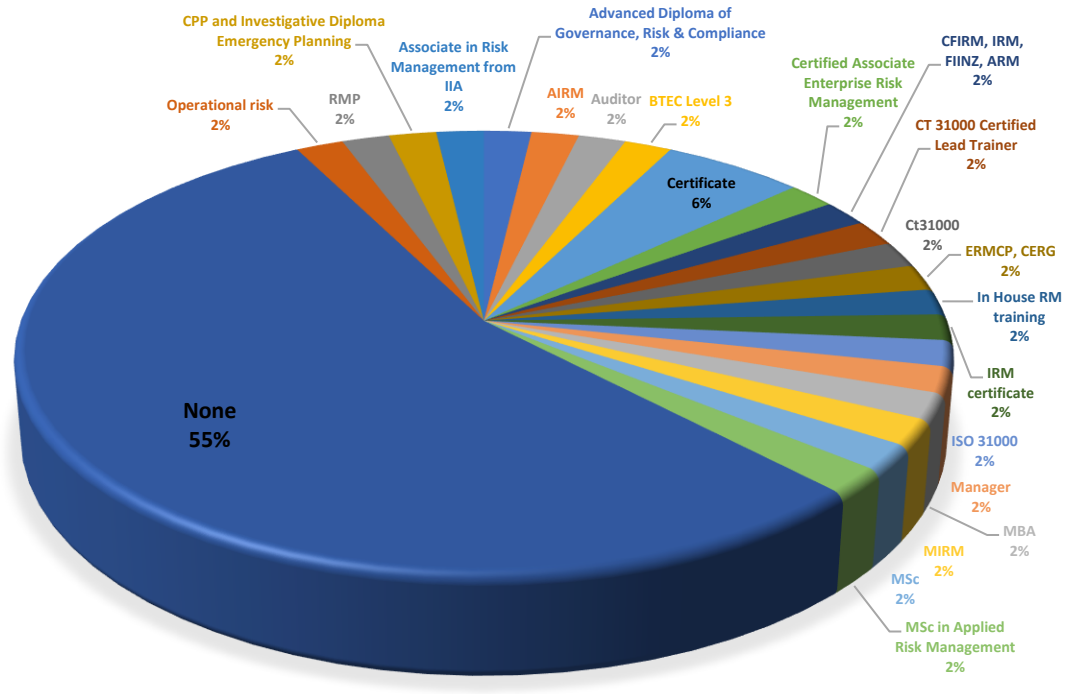
Qualifications

This was set as a text field so any value could be entered. A filter process was then applied to group the qualifications together based on their relative level in education. This produced a more meaningful representation among the respondents. The principal level of respondents was Master's at 43% (23), this was trailed by Degree's with 30% (16). PostGrad, PhD and No Qualifications equalled out at 8% (4) each with BAA (Pharmaceutical Qualification) and other picking up 2% (1) each.



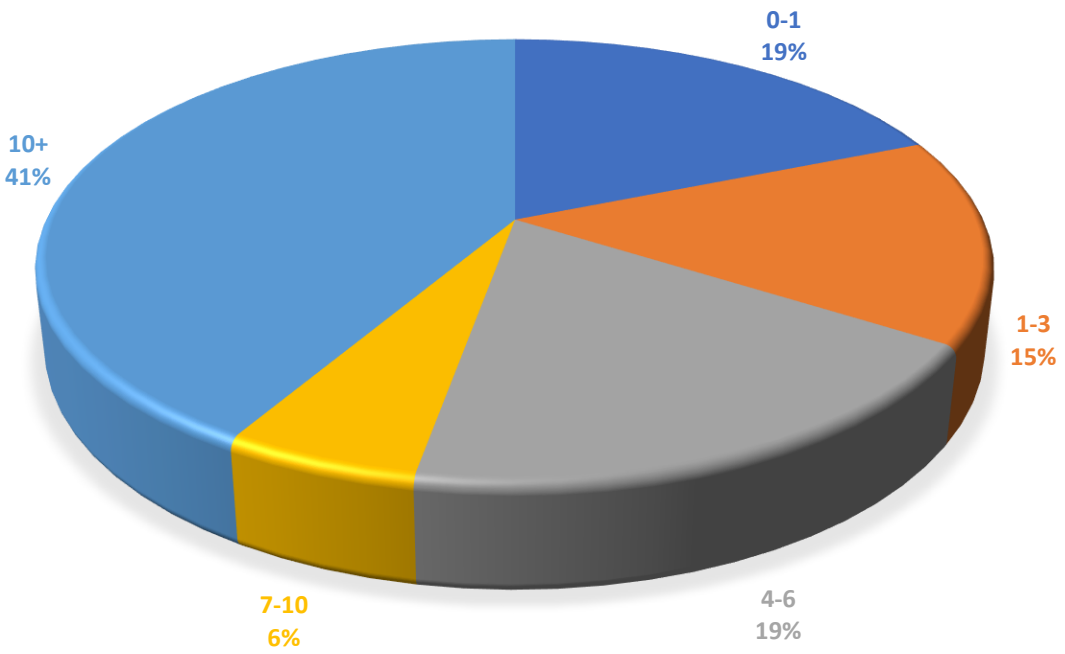
Risk Management Qualifications

This was set as a text field so any value could be entered. With so many Risk Specific qualifications ranging from full Masters to in-house training the responses were varied. By far the largest response to the question was None with 55% (29). The next significant result at 6% (3) was generically labelled ‘Certificate’. The other results were made up from a varied source of Risk specific qualifications, this ranged from MSc’s to in-house training.



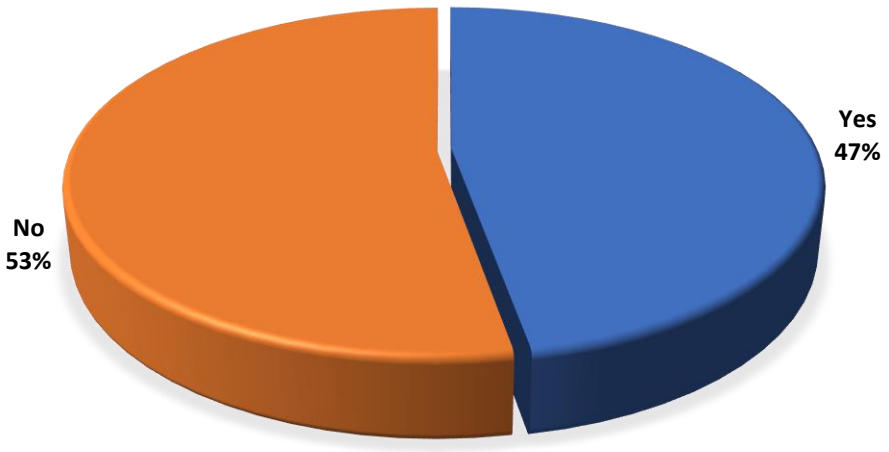
Experience

Experience was grouped into ranges of 0-1, 1-3, 4-6, 7-10 and 10+ years. It was decided that these bands would allow sufficient scope to draw conclusions from. By far the biggest proportion was 10+ years with 42% (22). This was followed by 0-1 and 4-6 getting 19% (10) a piece. Group 1-3 made up 15% (8) of the responses with 7-10 getting 6% (3).



Has your organisation adopted ISO 31000?

As can be seen from the chart below the survey determined that of those that took part only 47% worked in an organisation that had adopted ISO 31000 with 53% working for organisations that had not.



In your organisation, what are the major challenges in Risk Assessment and treatment?

The filtered raw data is displayed in the table below.

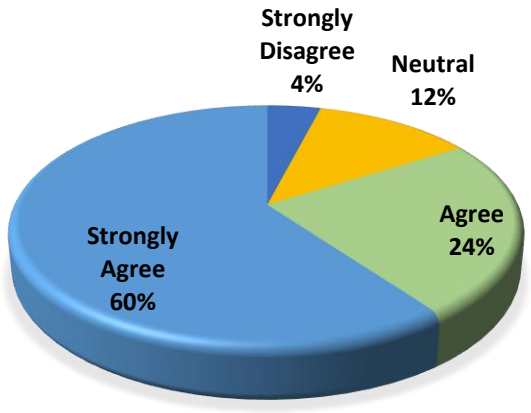
Major challenges in Risk Assessment and Treatment within organisations that have adopted ISO 31000 against those that have not.

Yes	No
Adapting to changing policies and regulations in a politically unstable country	It varies from one project to another.
Embedding Risk Management in daily activity	Buy-in from lower manager
Yes	Stakeholders, treatment was involved from initiation of the project
Human nature	Diverse behavioural norms influenced by cultural diversity
Common view	Credibility of data
Training in understanding risk management principles	No consideration of risks in planning and operations
Clarity on roles and responsibilities	Cost
Measuring the impact	Adopting a control centric approach
Measure risks	Implementation of treatment action
Training and awareness	Unconsciousness of top management
Understanding of Enterprise Risk	Risk
Appropriate risk assessment correlation between business units / Believable ROI for treatment options	Information
Effective buy-in from senior management	Low capacity of managers, kinetic environment, multinational staff from multiple clan and tribal backgrounds, habituation
Support sustainability and growth	People, culture
Impacts and likelihood are subjective measures	Organisational culture
Detailed Risk Identification by thinking very much ahead in project execution and developing a consensus on the appropriate controls/opportunity exploration	Handling the risk from inside of the organisation (customer service)

Organisational culture	Projects change. Assess risk against in changes in project. Follow up of mitigating measures.
Understanding of the efficacy of controls	Commitment to resolving risks post identification
Status quo	Quantification of risk!
Risk culture	Some of the major challenges is denial. Second biggest is budget, 3 biggest is multiple layers of management.
Lack of ownership of the risk management process	Collection of required data
Embedding throughout the organisation	Integrating it as part of the company culture
Subjectivity/heuristics in risk assessment, too much emphasis on risk assessment/not enough on risk management	Operational risk (human error)
Money	Risk assessment is often paper exercise and lacks follow up and management of risk required
Strategic risks	Assessing the various levels of risk intelligence.
	Identification
	No proper focus on risks

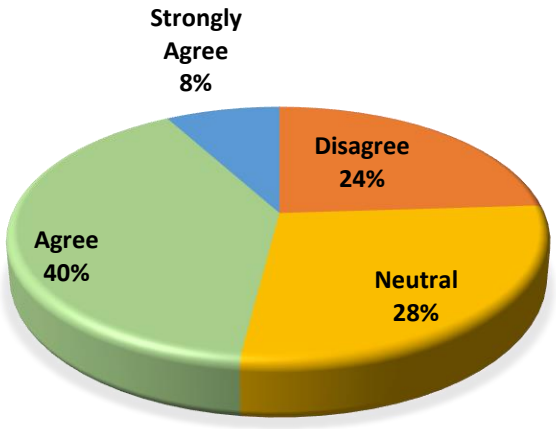
Implemented ISO 31000

Q1) I Am Familiar with ISO 31000 Standards?



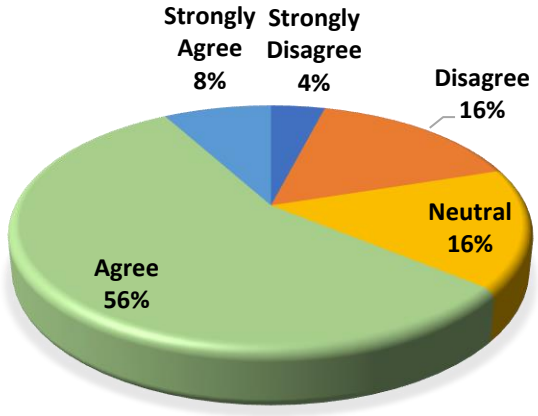
According to the survey, 60% of the 25 project management professionals strongly agree that they are familiar with the ISO 31000 standard which is being implemented by their various organisations. This is a very positive indicator in to the popularity of ISO 31000 amongst project management professionals. However, there was a small percentage of 4% who strongly disagreed with being familiar with the ISO 31000 standard even though their organisations were implementing it. 12% of the respondents having a neutral view could mean that they have not received training on the standards

Q2) ISO 31000 was easily implemented?



From the statistical diagram, close to half of the respondents agreed that the ISO 31000 standard was easily implemented. A figure of 24% disagreeing indicated that there is difficulty in implementing the system coupled with the fact that a further 28% of the professionals are indecisive as to the ease of implementing the standard.

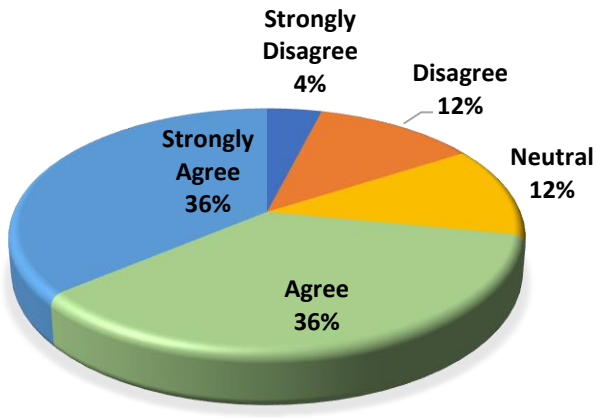
Q3) My organisation is committed to following ISO 31000 guidelines?



Some 64% of the 25 professionals who took part in the survey agreed that their organisations are committed to following the ISO 31000 guidelines, in which 8% are strongly in agreement. Around 20% of the project management professionals however are not in agreement with the fact that their organisations show commitment in following the guidelines. There is some doubt about organisations commitment to following ISO guidelines. But with 16% being neutral, there is a likelihood

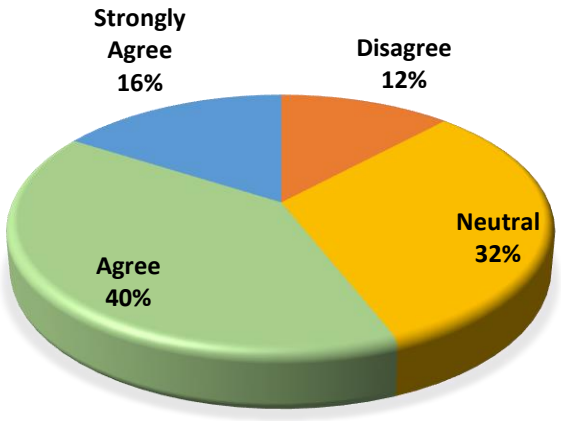
that around 80% of the respondents are in agreement that organisations are committed which shows over 75% positivity to the ISO 31000 standards.

Q4) ISO 31000 defines risk in a logically consistent way?



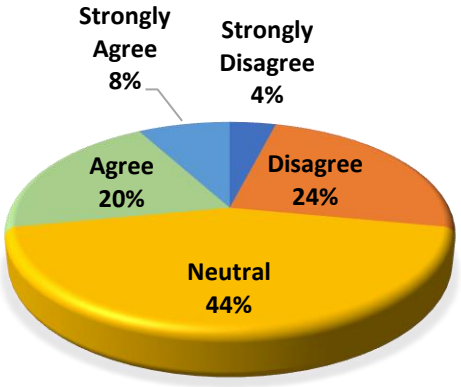
An overwhelming 72% of the project management professionals agreed and strongly agreed with the consistency of the ISO 31000 management system's definition of risk. In effect, there is a general consensus that the ISO 31000 system defines risk in a logically consistent way. A small minority of 16% however disagreed with how the ISO 31000 system defines risk. Perhaps they are not trained on the system and are therefore not finding it very useful in that regards. However, the 72% agreeing is another big positive for the ISO 31000 system.

Q5) Managers in my organisation are supportive of Risk Management?



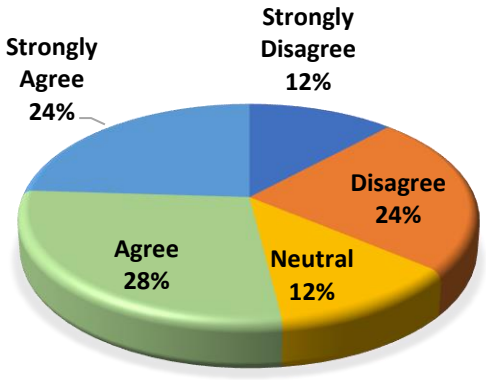
After the survey, 40% of the project management professionals agreed that the management are supportive of Risk Management, with 16% in strong agreement. Only 12% of the respondents disagreed with the fact that their management are supportive of Risk Management. From the survey statistics and graphical presentation in Q5 above, it is generally agreed that management knows the importance of Risk Management and are supportive. It is also worth noting that a significant 32% of the respondents are undecided about the level of support management gives to Risk Management. It could be noticed that there is no strong disagreement to this point.

Q6) ISO 31000 aids integration with other organisations?



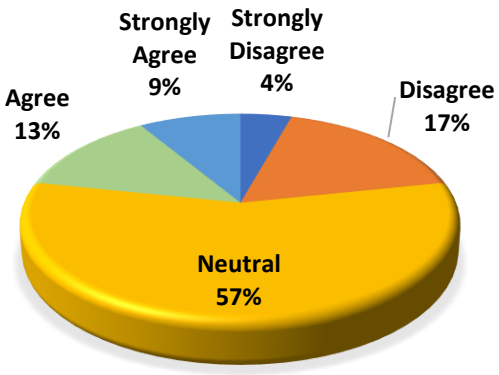
The graphical presentation above shows that 28% of the project management professionals who participated in the survey agreed that the ISO 31000 standard integrates well with other standards. However, 28% disagreed and a significant 44% neither agreed nor disagreed. Considering the results, there is a split view on this issue. Close to half of the respondents taking a neutral position cannot be overlooked.

Q7) My organisation focuses more on Risk Management when preparing for audits?



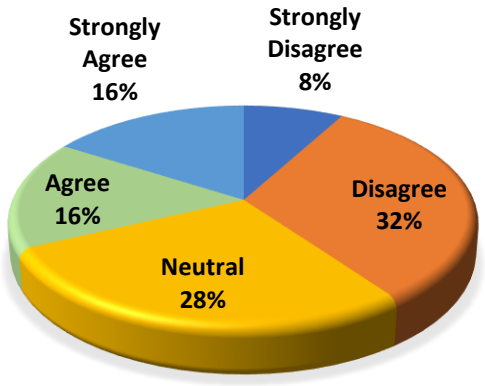
From the statistical presentation above, over 50% of the respondents agreed that their organisations focus more on Risk Management for auditing purposes. However, a significant 36% did not agree to that assertion. There is a slight indication that organisations practice Risk Management for the purpose of documentation and other benefits such as recognition and standardization, thereby creating a form of tick box culture. It is also noteworthy that 12% of the respondents had a neutral view about the situation. In effect the respondents see it as a paperwork exercise

Q8) My organisation implements Risk Management into all decisions?



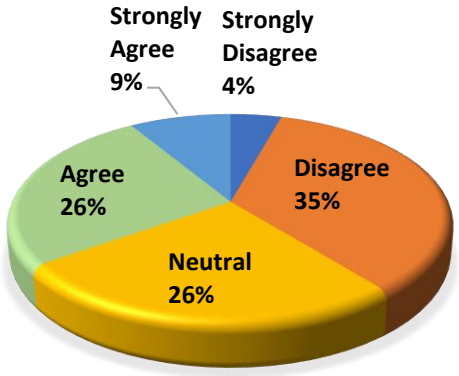
Looking at the graphical presentation above, surprisingly, 57% of the project management professionals had a neutral standpoint when it comes to whether their organisations consider Risk Management in decision making. With 22% agreeing that their organisations integrate Risk Management into all decisions. Combined together 21% of the respondents disagreed with organisations implementing Risk Management into all decisions. The overall picture painted here is that people are not fully aware of whether organisations implement risk management as it is not their department. They are not just aware of it that it could be implemented in decisions.

Q9) There is a consistent level of training for those implementing Risk Management?



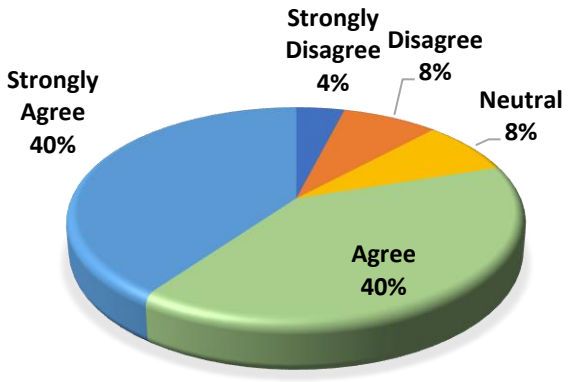
In all, 32% of the project management professionals agreed that there is a consistent level of training. Disagree was a majority however with 40% concluding there wasn't. In general, it could be said that, the level of training does not depend on whether a Risk Management system is being implemented or not. There was also a notable 28% of the respondents who had a neutral view to this issue. As compare to Q1 and Q4, the level of training is clearly an issue and it has influenced the decisions of the respondents

Q10) Do you think there is a consistent standard in organisations using ISO 31000?



From the data above, 35% of the respondents agreed that there is a consistent standard in organisations using ISO 31000. However, there was a strong 39% who did not agree that assertion. With more people disagreeing, it further validates the point about organisations taking ISO 31000 more seriously when preparing for audits. This also translates to the fact that the majority of the respondents think the consistency of the ISO 31000 standard needs improvement.

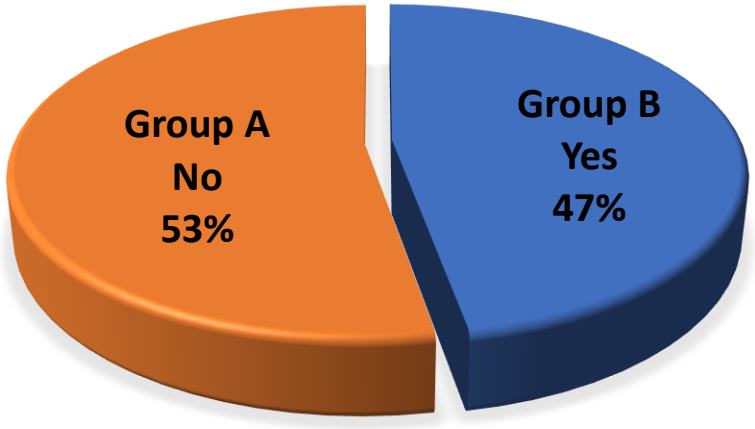
Q11) Consistency in Risk Management could be improved by increased training?



From the survey results above, about 80% of the respondents agreed that increasing the level of training will increase the consistency of Risk Management. There is also a small number of the respondents, 12% who disagreed. But in general, these figures prove with little doubt the point that Risk Management systems can be improved by providing the required level of training. This validates the facts in Q10, with more training the consistency of the ISO 31000 standards could be improved

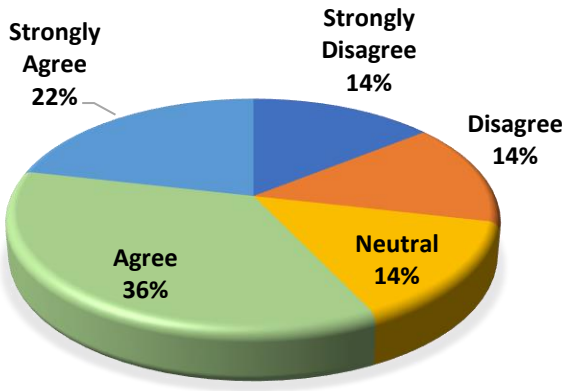
Not Implemented ISO 31000

Out of the people who responded to our survey it was quite an even split 53% worked for organisations that have not implemented ISO 31000 and 47% for organisations that have. We shall refer to those who have not implemented ISO 31000 as Group A and those who have implemented the standards as Group B.



Q1). I am familiar with ISO 31000 standards.

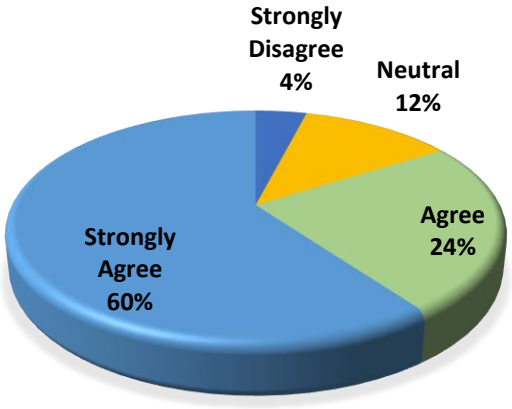
Not implemented ISO 31000



The majority of those who hadn't implemented ISO 31000 are familiar with the standards, this is probably higher than the average population as we targeted risk and project management forums to propagate our survey. This does however indicate that ISO 31000 has become a prominent standard within the Risk Management community.

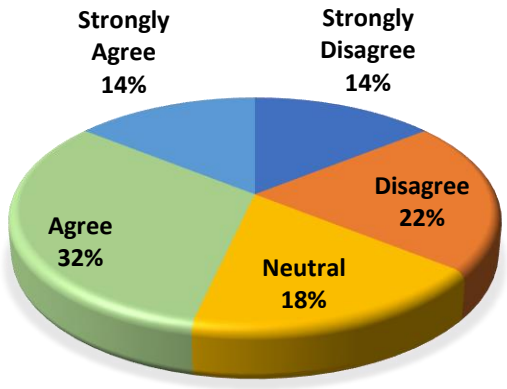
Implemented ISO 31000

When compared with Group B who had implemented ISO 31000 we see only a 24% increase in those who are not familiar with the standards.



Q2). Managers in my organisation are supportive to Risk Management.

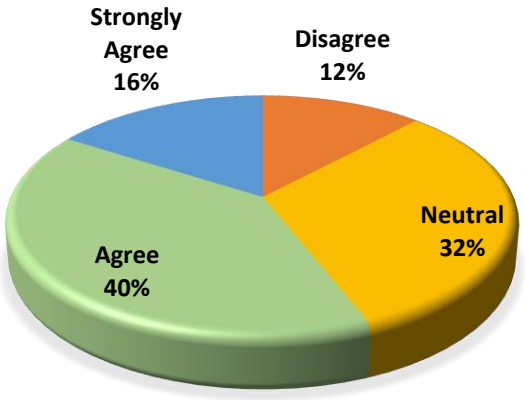
Not implemented ISO 31000



Out of Group A, 36% of respondents felt their management was unsupportive of Risk Management. This is much higher than the 12% of those who had adopted ISO 31000.

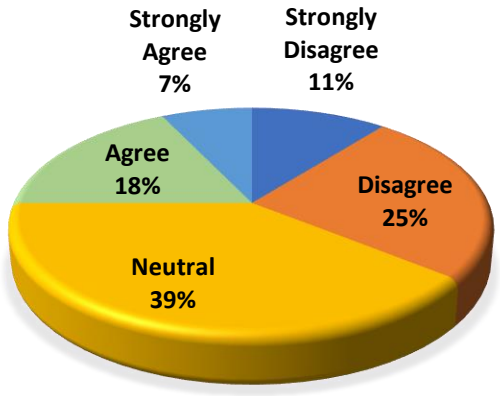
Implemented ISO 31000

Group B also had a stronger showing in members who felt their management was supportive of Risk Management, with a majority of 56% supporting this statement.



Q3). My organisation focuses more on Risk Management in preparation for audit

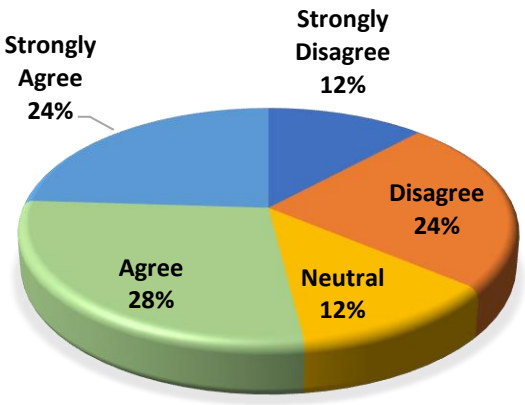
Not implemented ISO 31000



In Group A the majority 39% took a neutral view on this statement compared to only 12% of those in group B. This is likely a reflection of respondents whose organisations don't audit taking a neutral view.

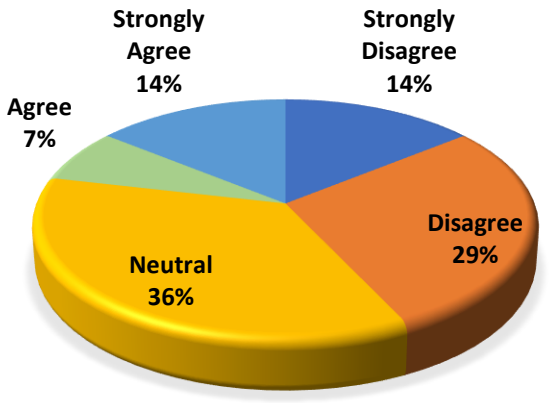
Implemented ISO31000

There is a significant increase in Group B of those who feel their organisation focuses more on Risk Management in preparation for audit with a combined 52% agreeing or strongly agreeing to this statement compared to 25% of Group A.



Q4). My organisation implements Risk Management into all decisions.

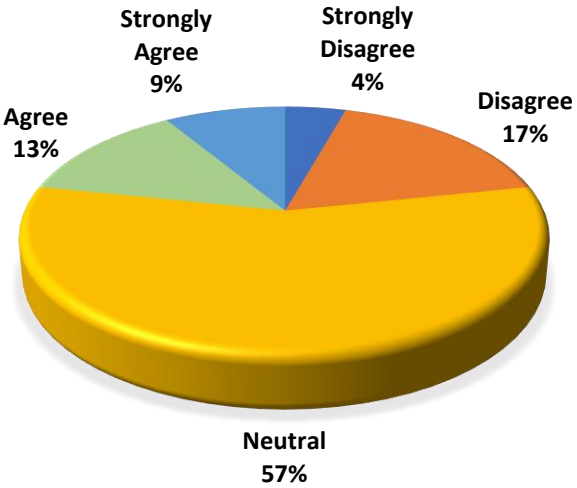
Not Implemented ISO 31000



In both Groups the majority of respondents expressed a neutral opinion with 36% of Group A and 57% of Group B being neutral on this subject. There was an almost even level of support for this statement with 21% of Group A and 22% of group B agreeing that their organisations incorporated Risk Management into all decisions.

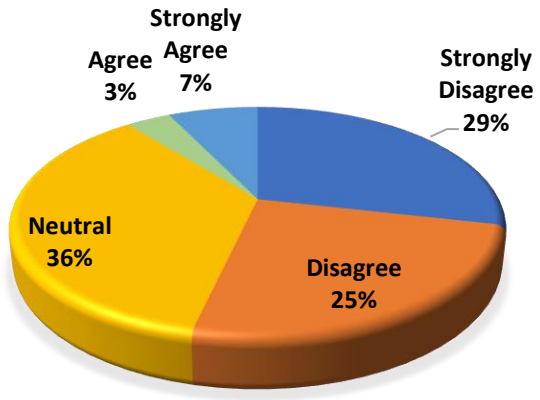
There is however an increase in Group A of those who disagree with this statement with 43% disagreeing with this statement compared to 21% of group B.

Have Implemented ISO 31000



Q5). There is a consistent level of training in Risk Management

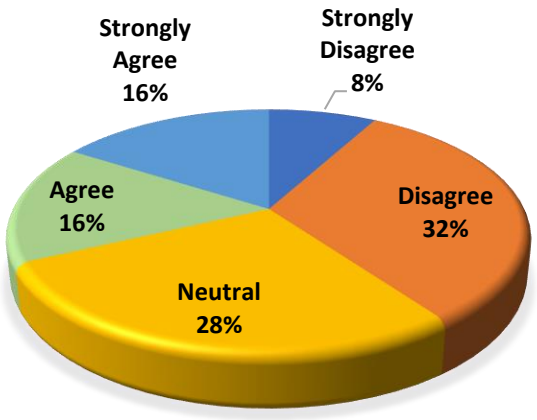
Not Implemented ISO 31000



A larger section of both groups did not believe there is a consistent level of training in risk managers with 54% of Group A and 40% of Group B disagreeing with this statement.

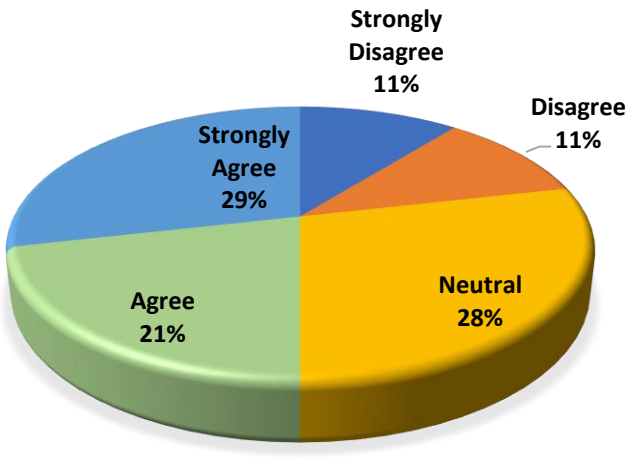
Few people in group A thought there was a consistent level of training in Risk Management practitioners with agree and strongly agree getting a combined 11% compared to 32% of Group B.

Implemented ISO 31000



Q6). Consistency in Risk Management could be improved by increasing training.

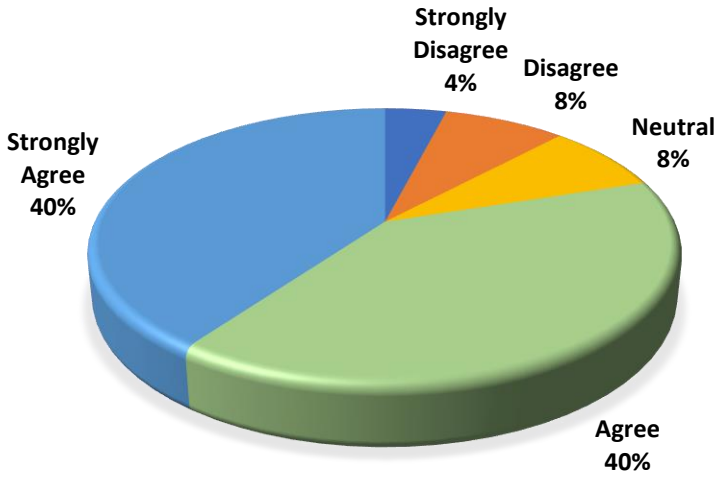
Not implemented ISO 31000



50% of respondents in Group A agreed or strongly agreed that consistency could be improved by increasing training compared to 22% who disagreed.

Implemented ISO 31000

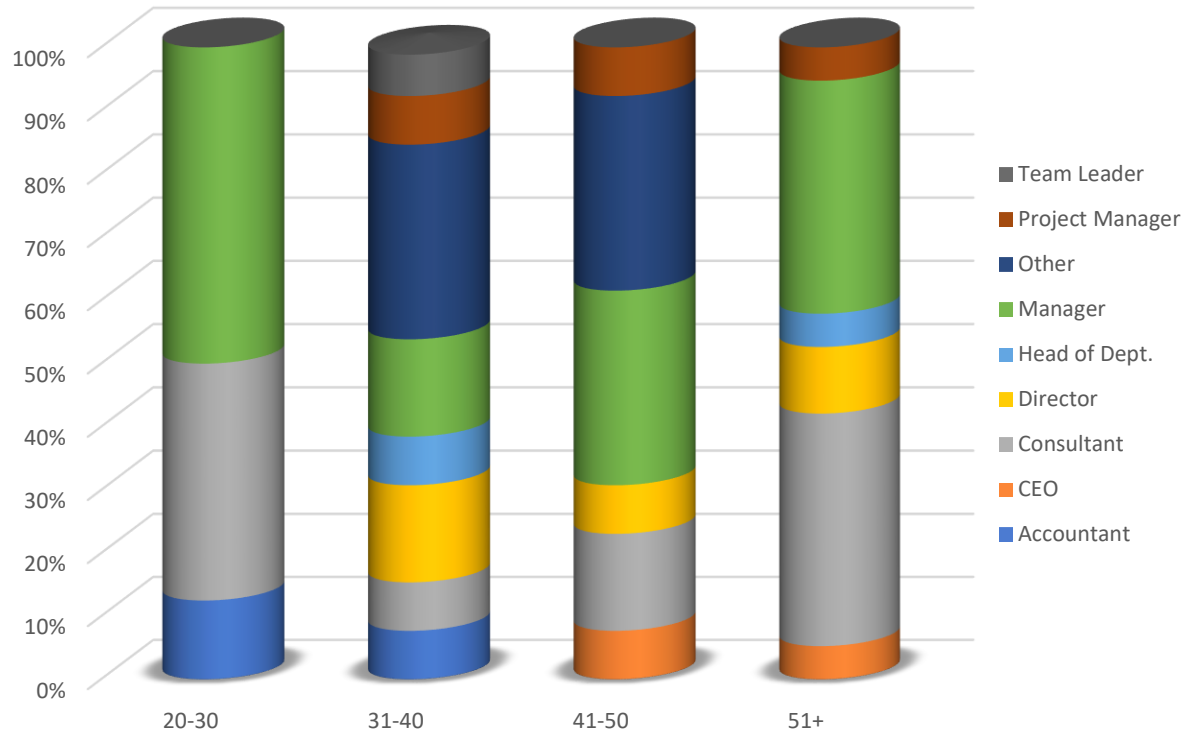
There was a much higher consensus in Group B where 80% agreed or strongly agreed that increased training could improve consistency in Risk Management.



Analysis

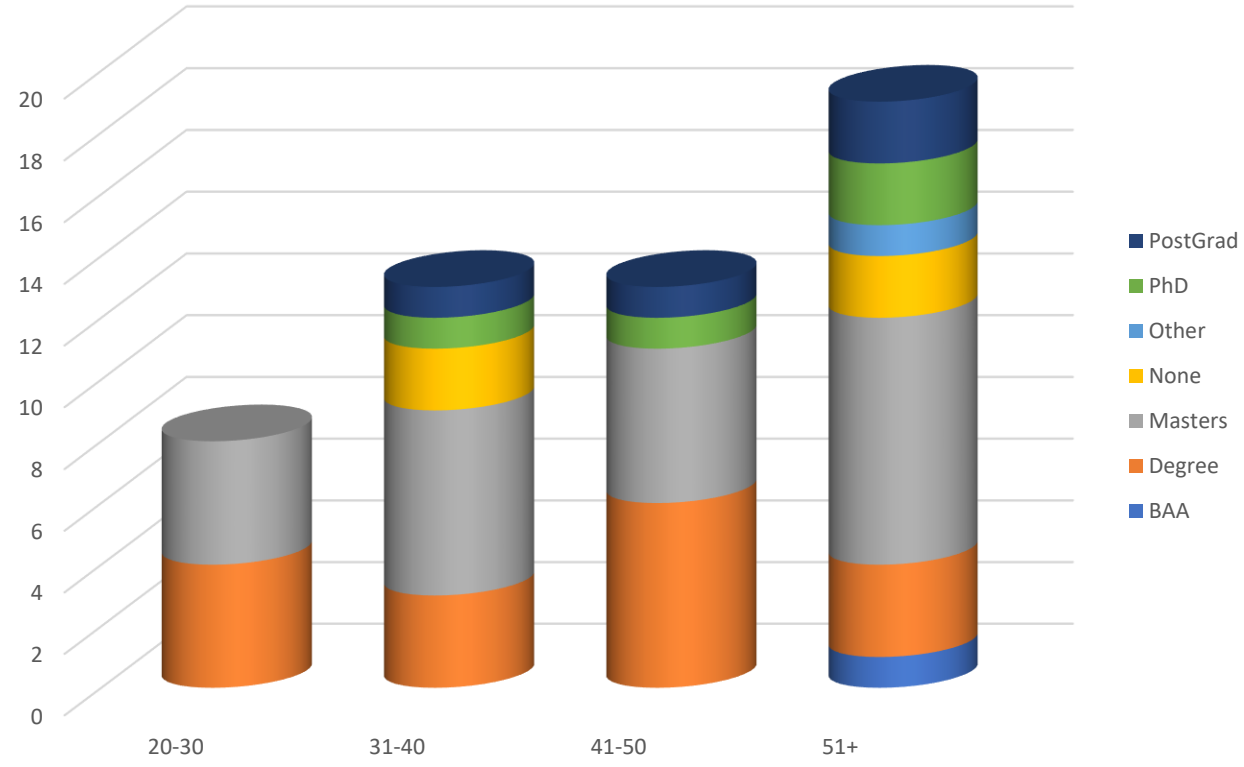
Age / Occupation

As was seen in the results, Manager and Consultant were the two major titles in Occupations. Group 51+ whilst containing a few higher profile titles, which you would expect, holds a very similar ratio of Manager / Consultant titles to group 20-30. Some may see this as strange however, as we all know both Manager and Consultant titles are very loosely used nowadays. It would seem that 31-40 is the area that people move to perhaps more specialised roles, before they move back into mainstream management or consultancy. It could be concluded that experience is the major difference in all these roles. The younger respondents whilst having the same titles lack experience, move along to other roles between 31 and 50 at which point they move back into Management/Consultancy hopefully armed with a lot more knowledge. The Project Management Benchmark Report 2016 (Arras People, 2016) showed that the average age of Project Managers was around 42, our results reflected this statement with no one in the 20-30 listing their occupation as that.



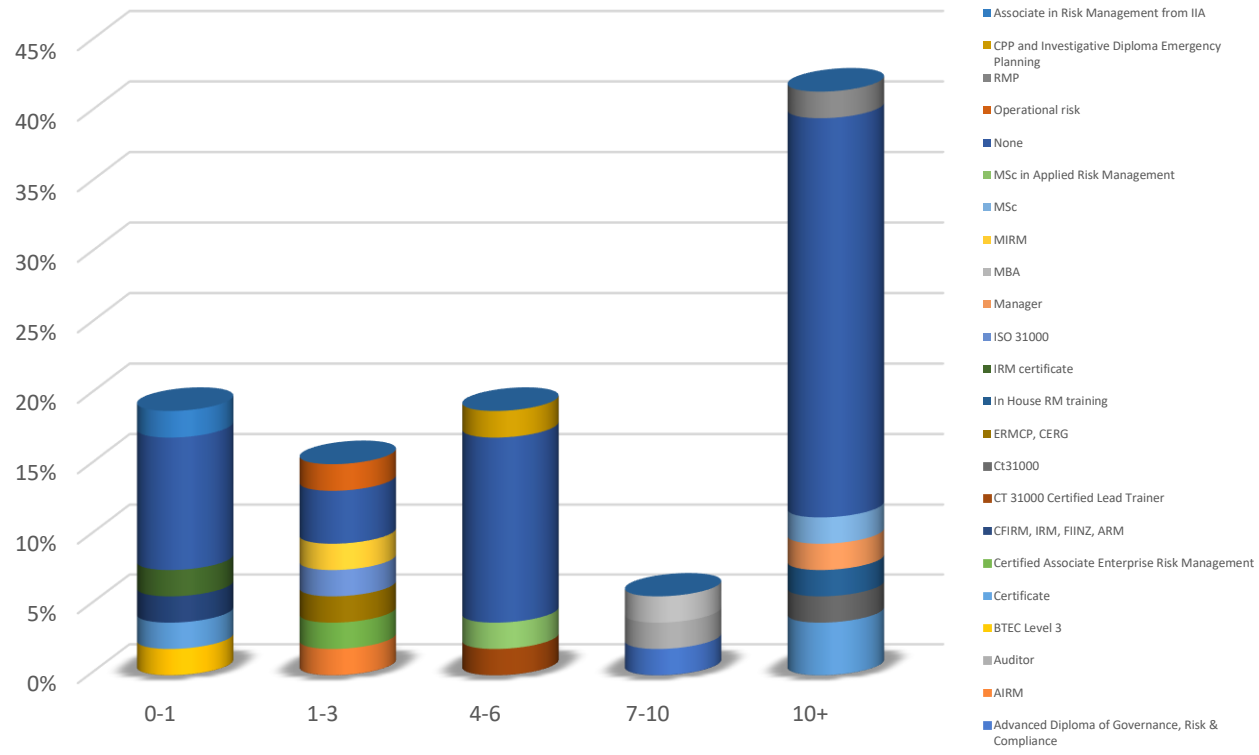
Age / Qualifications

Surprisingly 20-30 group had a good mix of Degrees and Masters qualifications meaning that age group is well qualified for the occupations they work in. The average age for Graduate Degrees is around 33 years old (Grad School Hub, n.d.). In the survey, 50% (4) of the 20-30 group had a Master's degree potentially contradicting the average age. Strangely, none of the same age group had any Higher Educational qualifications, whereas both 31-40 and 51+ groups did. This could be for two reasons, firstly with the global economy these days, qualifications are one of the most important elements to making yourself more employable. Graduation numbers in the UK for instance have been on the rise since records began, briefly levelling off between 2007 and 2009 (Bolton, 2012). Secondly, years ago, experience was accepted as a valid way into an industry. Certain industries e.g. Banking / Finance and Pharmaceutical require educational qualifications as a minimum. Construction and Consultancy for instance do not necessarily require educational qualifications however, experience can be essential.



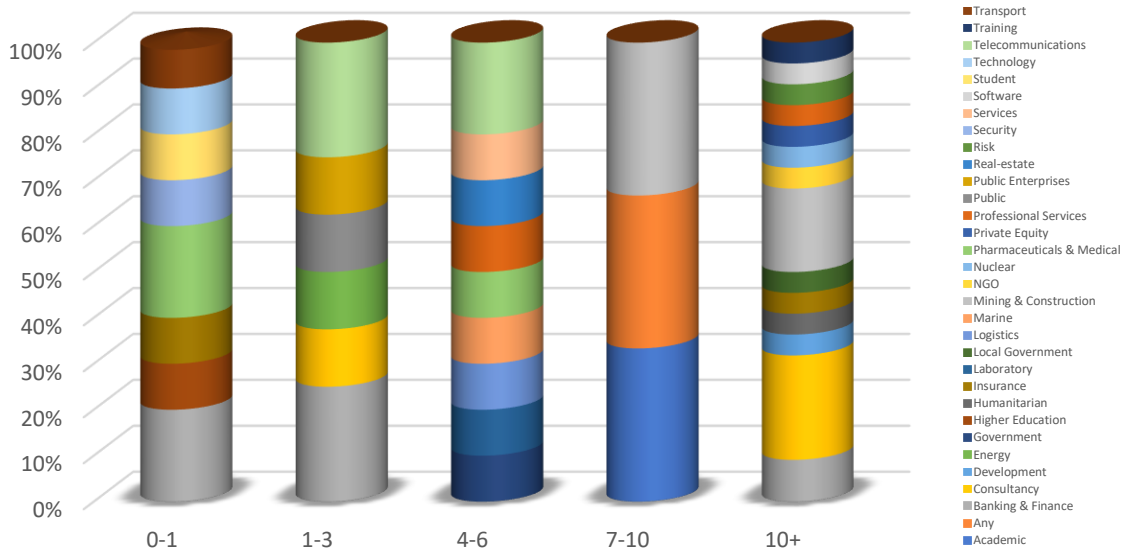
Experience / Risk Management Qualification

As can be seen the largest proportion of the graph is ‘None’ as we identified in the initial results. As said before, there are many Risk Qualifications with varying levels of depth. It would seem from the results though that Risk is seen as an experience gained subject as opposed to qualification learnt. The qualifications set forward by the respondents cover both generic and very specific risk based qualifications. In other words, some industries may require very specific training i.e. Insurance or Pharmaceutical where employees are expected to complete in-house or other qualifications in order to remain in their position. Removing ‘None’ from the results, the graph shows that not one age group stands out with more qualifications than any other. This would suggest that risk specific training is industry led as opposed to generationally led.



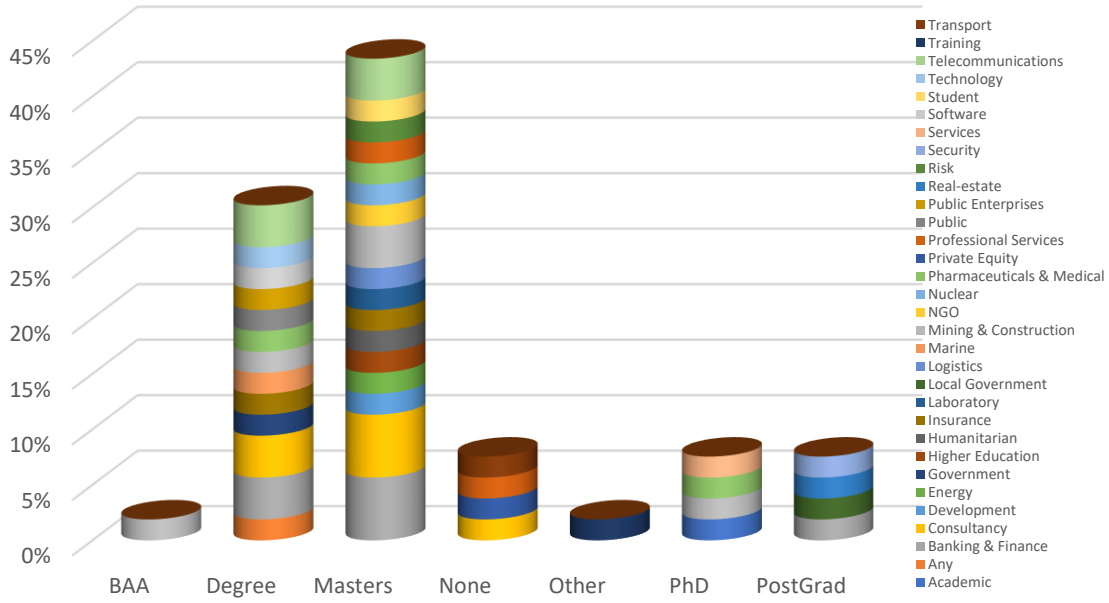
Experience / Industry

Comfortingly, Consultancy seems to have the largest proportion of experience, backing up our conclusion drawn in Age / Occupation. Telecoms and Finance have a surprisingly low level of experience in industries that you would assume needed as much insight as possible, especially related to Risk. Mining and Construction which again is related to Risk, you would expect a high level of experience showing just that. Our respondents in this industry had no less than 7 years' experience. When linking this to the age groups you can see that the younger groups lack the experience but hold the same or similar qualifications to the older groups. In the 2016 Benchmarking Report (Arras People, 2016) under the 'Age and the PPM Practitioner' section a piece called 'Ticking Time Bomb' was written addressing the increased age of people in Project Management. This is linked to experience or lack of as has been identified. Not enough new people are coming into industries that run projects and are therefore not having the chance to gain experience before the older generation retire.



Qualifications / Industry

As can be clearly seen MSc's and Degrees are the most common qualifications for most of the respondent's industries. In this day and age, it's to be expected as this is the most standard university route, distance learning has also allowed a lot more people to work and gain these qualifications. Banking / Finance and Consultancy showed the highest level of qualified respondents, certainly to be expected Banking / Finance as they require a high level of education due to the nature of the business. Especially when dealing with Risk, Banking / Finance need a strong understanding which can only be started by higher education. PhD's were identified in Academic and Pharmaceutical industries which again was to be expected and fitted with the norm. Out of the total respondent only 8% (4) had no qualifications however, 25% of them did have a Risk Specific Qualification.



Major Challenges in Risk Assessment and Treatment

Culture is mentioned by a number of participants on both those that had adopted ISO 31000 and those that had not. Risk culture, organisational culture and human nature, which could be classed as culture are all given as challenges to risk assessment and treatment within organisations that that adopted ISO 31000. People & culture and organisational culture are given as challenges to risk assessment and treatment within organisations that have not adopted ISO 31000. It can be deduced from this that whether an organisation has adopted ISO 31000 or not culture still remains a challenge to risk assessment and treatment.

Also, listed in both sides of the table is buy in from the organisation. This again suggests that adopting ISO 31000 does not guarantee buy in from the organisation and that this aspect must still be pushed. Whatever risk management framework the organisation uses it will only succeed if the entire organisation is bought in to the process.

Cost and Money is given as a challenge to risk assessment and treatment from both organisation but this is not readily explained. It is undetermined if this means that the organisations have failed or are unable to dedicate an appropriate budget to Risk Management whether they have adopted ISO 31000 or not. Or if the cost of managing risks remain too high regardless of the Risk Management framework used. It would have been more beneficial to the report had the participant expanded upon this challenge.

Participants from organisations that had adopted ISO 31000 and those that hadn't listed risk identification without any real Risk Management as a challenge. From this it can be deduced that adopting ISO 3100 does not ensure that risks will be efficiently managed throughout the Risk Lifecycle. Using ISO 31000 to identify and make assessments of the risks is not all that is required. The risks must also be managed throughout regardless of the framework adopted.

Participants from organisations that had adopted ISO 31000 have not given any one sufficiently recurring challenge to risk assessment and treatment to determine if ISO 31000

was a contributing factor to that challenge. This is the same for participants from organisations that have not adopted ISO 31000. Therefore, it cannot be determined if ISO 31000 has any real effect upon risk assessment and treatment within an organisation.

Not Implemented ISO 31000

We targeted project management and Risk Management forums to propagate our survey, this gave us a pretty even split with 47% working for organisations that have implemented ISO 31000 and 53% working for organisations who haven't. The popularity of the ISO standards was also reflected in our survey with 58% of those who had not implemented ISO standards agreeing that they were familiar with them. Comparing organisations that had adopted ISO 31000 with those who hadn't did provide some insights, however it would have been beneficial to broaden the question to encompass other commonly used frameworks of standards such as COSO 2004, OCEG "RedBook" 2.0: 2009 and IRM/Alarm/AIRMIC 2002, in order to give a broader perspective and more concise comparison between standardised and non-standardised organisations.

Organisations who have adopted ISO have higher levels of managerial support compared with organisations who haven't adopted the standard. The survey also highlighted that respondents in Group B were more likely to feel their management was supportive of Risk Management. When asked if managers in their organisation were supportive of Risk Management 56% of Group B agreeing this to be the case, which is markedly higher when compared to Group A's 36%, it's also worth noting that, only 12% of Group B felt their management was unsupportive compared to 36% of Group A.

The survey did provide some empirical evidence that supported our initial theory that standardisation provides an environment where a 'Tick Box Culture' may develop. Organisations that have adopted ISO 31000 do focus more on Risk Management in preparation for audit, despite the fact the ISO state the standard is not designed for certification purposes. When asked if their organisation focused more on Risk Management

in preparation for audit, 52% of Group B agreed to this statement compared to 25% of Group A.

One aspect both groups agreed on was that there is not a consistent level of training in Risk Management with only 10% of Group A and 32% of Group B agreeing there was a consistent level of training. This was also reflected in the number of respondents who held Risk Management qualifications, 55% of respondents had no specific Risk Management qualification and of the 45% who did we identified 22 different qualifications. Both Groups also thought that consistency in risk management could be improved by increasing the level of training in Risk Managers, 50% of Group A and 80% of Group B supported this.

Implement ISO 31000

Per the survey results, most of the respondents are familiar with the ISO 31000 standard, which reflected into a figure of 60%. This is a very positive indicator in to the popularity of ISO 31000 amongst Project and Risk Management professionals. However, there was a small group of 4% who strongly disagreed with being familiar with the ISO 31000 standard even though their organisations were implementing it. 12% of the respondents having a neutral view could mean that they have not received training on the standards. Due to the small sample size, these results cannot be very accurate in the global context but it's a positive indication of the popularity of the ISO 31000 standard.

There has been a positive response to the ease of implementation of the ISO 31000 standard. With close to half of the respondents agreeing that it was easily implemented. A figure of 24% disagreeing indicated that there may be difficulties in implementing the system coupled with the fact that a further 28% of the professionals are indecisive as to the ease of implementing the standard. But in all, there is a positive response to its implementation. However, the result could have been more conclusive if we had less neutral decisions.

On the issue of organisational commitment to following the ISO 31000 guidelines, the majority of the respondents replied to the affirmative. That was to be expected, because in

a logical sense, the system cannot be implemented without following the laid down guidelines. One positive factor is that the organisations are committed to making the system work. Around 20% of the Project and Risk Management professionals however expressed some doubt about the commitment to following the guidelines. However, this is on the minor side and has little effect in the big picture. But with 16% being neutral, there is a likelihood that around 80% of the respondents are in agreement that organisations are committed which shows over 75% positivity to the ISO 31000 standards.

There was an overwhelming 72% of the respondents who agreed with the consistency of the ISO 31000 management system's definition of risk. In effect, there is a general consensus that the ISO 31000 system defines risk in a logically consistent way. A small minority of 16% however disagreed with how the ISO 31000 system defines risk. Perhaps they are not trained on the system and are therefore not finding it very useful in that regards. However, the 72% agreeing is another big positive for the ISO 31000 standard.

More than half of the respondents, precisely 56% agreed that the managers are supportive of Risk Management. Only 12% of the respondents disagreed with the fact that their various management are supportive of Risk Management. It could be concluded, that management knows the importance of Risk Management and are supportive. It is also worth noting that a significant 32% of the respondents are undecided about the level of support management gives to Risk Management. It could be noticed that there is no strong disagreement to this point. Again, we could have arrived at a better conclusion if the 32% neutral group agreed or disagreed. Regardless, there is a strong point that respondents truly believe that managers are supportive of Risk Management.

There was a divergent view when it came to how the ISO 31000 standard integrates with other organisations. 28% of the respondents agreed that the standard integrates well with other organisations, while another 28% disagreed. There was a significant 44% who neither agreed nor disagreed. Considering the results, there is a split view on this issue. Close to

half of the respondents taking a neutral position cannot be overlooked. Therefore, it is not clear how well the ISO 31000 standard integrates with other organisations.

From the survey results, over 50% of the respondents agreed that their organisations focus more on Risk Management for auditing purposes. However, a significant 36% did not agree to that assertion. There is a slight indication that organisations practice Risk Management for the purpose of documentation and other benefits such as recognition and standardisation, thereby creating a form of 'Tick Box Culture'. It is also noteworthy that 12% of the respondents had a neutral view about the situation. In effect the respondents see it as a paperwork exercise.

It was a bit of a surprise that 57% of the Project and Risk Management professionals had a neutral standpoint when it comes to whether their organisations consider Risk Management in decision making. With 22% agreeing that their organisations integrate Risk Management into all decisions. Combined together 21% of the respondents disagreed with organisations implementing Risk Management into all decisions. The overall picture painted here is that people are not fully aware of whether organisations implement Risk Management as it is not their department. They are not just aware of it that it could be implemented in decisions.

In all, 32% of the respondents agreed that there is a consistent level of training. Disagree was a majority however with 40% concluding there wasn't. In general, it could be said that, the level of training does not depend on whether a Risk Management system is being implemented or not. There was also a notable 28% of the respondents who had a neutral view to this issue. As compared to Q1 and Q4, the level of training is clearly an issue and it has influenced the decisions of some of the respondents.

From the survey data, 35% of the respondents agreed that there is a consistent standard in organisations using ISO 31000. However, there was a strong 39% who did not agree to that a point. With more people disagreeing, it further validates the point about organisations taking ISO 31000 more seriously when preparing for audits. This also translates to the fact

that most of the respondents think the consistency of the ISO 31000 standard needs improvement.

Analysing the survey results, it is clear that training is a major tool for improving the consistency and better implementation of the ISO 31000 standard. About 80% of the respondents agreed that increasing the level of training will increase the consistency of Risk Management. There is also a small number of the respondents, 12% who disagreed. But in general, these figures prove with little doubt the point that Risk Management systems can be improved by providing the required level of training. This validates the facts in Q10, with more training the consistency of the ISO 31000 standards could be improved.

Conclusion

The results only needed changing by 1 or 2 responses in order to give a completely different outcome, this was due to the relatively low number of responses. This did pose some problems when analysing the data due to not having too many significant differences. From the research conducted in our literature review, supported by the empirical evidence gathered in our survey we can see that ISO 31000 is widely recognised within the Risk Management community and that those who have adopted the standards support the ISO's definition of risk. Taken relatively however, the results showed what could be called 'common deduction' in most areas. We've seen that both Organisations that have adopted ISO 31000 and the ones who haven't, classed Culture, Buy-In, Cost and Risk Management as their main areas of concern. Obviously and as to be expected the older respondents had the most experience however they did not hold more or higher qualifications than the other groups. When dealing with risk especially, experience seemed to be a big player. After all risk cannot necessarily be taught through a class room, it has to be experienced and coupled with operational knowledge of the chosen subject. It is experience like this that can potentially help driver ISO 31000 forward. With a new revision due at the end of 2017 it would be interesting to know how much consultation has taken place with the people on the coal face. The crucial driver in these changes should be acknowledged as the people carrying out the day to day implementation. These people who work within the standard are without a doubt the best critics.

There is evidence to support the theory that organisations that have adopted the standard focus more on risk management in preparation for audit. This could be down to how the standard is implemented by management. Typically, ISO would be a top down decision, top down or Autocratic leadership defined by (Duverge, 2015) as "the process of upper management or the chief executive officer reaching independent conclusions that change or improve the workplace or business systems". Ideas implemented from the top may lose support further down the chain if lower level management don't share the vision or not had it

fully explained to them. For example, people may resent having to devote time and resources to Risk Management, if they aren't involved in the process, they may see time and assets used to mitigate risk as wasted resources. We are all aware too of the 'paperwork exercise' a lot of audits can look like. We all see more and more in are differing industries the trail created that on closer inspection doesn't actually achieve anything. This sort of management also hinders the buy-in of staff, as they are the people expected to complete the work. It is said however, by staff, that organisations are committed to following guidelines. This is evidence that perhaps ISO isn't just a paperwork exercise and that in fact it is been used to full potential. The key here though is to ensure ISO 31000 evolves and changes in line with accepted practices.

Three industries stood out as having more people with higher education qualifications than any others, it does not necessarily a good reflection of a global trend however. Due to the number of respondents, a solid conclusion cannot be drawn in this respect. What can be shown from further research though is that these industries require their staff to have higher education qualifications. Mining and Construction for instance require geologists, surveyors, architects, engineers etc., all titles that require degree level as a minimum. Consultancy was very difficult to draw any conclusions from due to it covering all industries, what was clear was the level of higher and specific risk qualifications respondents had. Consultancy was in the top few of most qualified respondents along with a good level of experience.

Age is clearly a concern, not just in Risk Management but the Project Management industry as a whole. Our results were in-line with other research done into the age demographics in Project Management, referring back to Project Management Benchmarking Report 2016 (Arras People, 2016) again. The danger of not having younger people coming through is the experience of the older generation is not being passed on, therefore when they retire it is too late and the experience is lost.

It can be inferred that ISO 31000 does not sufficiently address the challenges an organisation feels toward risk assessment and treatment. It would seem that users still feel that the issues ISO 31000 was designed to solve continue to exist. It is more important to ensure that the framework adopted is fully supported throughout the organisation and proper attention is paid toward risk management as a whole. Worryingly some hard-hitting views show that organisations do see ISO 31000 as a paperwork exercise. These views can be said damage the integrity of the standard and beg the question, 'Is it worth implementing?'. Coming back to the Buy-In issue, you can clearly see the problem some people have with upper managements decisions. Equally, as mentioned, with a revision coming, if the correct consultation has been carried out and a vested interested applied, ISO 31000 can become exactly what its vision was in the first place. It would seem that within Project Risk not just a few challenges exist but in fact a myriad of them.

However, improvements could be made in the implementation of standardisation by combining monitoring with auditing, a combination of the two would ensure systems were continuous and eliminate the possibility of complacency causing a pre-audit paperwork exercise. Also, as with many industries around the world, Project Management seems no different in respect to training. At the moment, there is such a wide range and misaligned set of qualifications within the Risk Management element that there is no consistency. An increase in the standard of training would improve the consistency of Risk Management throughout the global sector that encompasses Project Management. There is the potential to carry out in depth research into standardising the methodology of training.

Recommendations

General

It's clear, not only from this research, that standardisation can help streamline processes and after all has been used for years throughout the Project Management world. What has been shown though is that whilst standards can be put in place to facilitate this, initially they can miss the mark with reference to their scope. These standards actually rely on being implemented and used by professionals in order to be revised into a useful tool. Unfortunately, during this phase that buy-in to the standard can be lost resulting in a vote of no confidence.

It is therefore essential that whenever new standards or ways of working are developed, the maximisation of relevant knowledge and input is used. This enables a tool to be produced that allows the people using to get on with just that and not have to adapt it to suit. A lot to do with this seems lack of consultation during development. Everyone welcomes elements that make their job easier especially proformas, checklists etc. What is not welcomed though is these elements that are sold to them as streamlining their work but in fact add to it.

Survey

In order to better understand the challenges to risk assessment and treatment within organisations it would be necessary to further expand the initial question. Using the answers given in this survey a second survey could be produced that focused on the challenges analysed here. Culture, buy in, cost and risk management should be further surveyed in order to determine exactly what these challenges entail. Culture should be further broken down into people and organisational. Questions around ethnicity, education and background should be asked to determine if attitudes towards risk stem from any of these aspects. Organisational culture should also be expanded upon with questions on industry, business type and size should be asked to further differentiate between organisations and

their risk attitude. Cost could be expanded upon to verify where these costs associated with risk assessment are coming from and who is paying them. Does the cost come from the assessment or the management of the risks? This question has demonstrated that a question within a survey that relies upon the participant typing an answer is very unreliable. The participants that did answer the question did not always write enough to be of any real discernible use, with one particular individual simply typing “yes”. If the survey was to be repeated in order to expand upon the question of risk assessment and treatment in organisations who have adopted ISO 31000 over those that have not, then questions with a typed answer should be avoided. Participants are more likely to give an answer to a question with a simple click option, such as a yes no or scale type question

These further surveys would be best carried out once the next revision of ISO 31000 has been released and allowed to come in to service. This is projected to be towards the end of 2017 / early 2018.

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Appendix 1

Group Research Proposal for

MSc in Project Management

Consent form for participation in the Group Research Proposal for

MSc in Project Management

Please read the statements below and tick the final box to confirm you have read and understood the statements and upon doing so agree to participate in the project.

I confirm that the Group Research Proposal for MSc in Project Management: '**Project Risk Management: Has standardization resulted in organisations adopting a tick box approach to risk management' h**as been explained to me. I have had the opportunity to ask questions about the project and have had these answered satisfactorily.

I consent to the material I contribute being used to generate insights for the research project

I understand that my participation in this research is voluntary and that I may withdraw from the study at any time.
I consent to allow the fully anonymised data to be used for future publications and other scholarly means of disseminating the findings from the research project.
I understand that the information/data acquired will be securely stored by researchers, but that appropriately anonymised data may in future be made available to others for research purposes only.

☐ By participating in the Group Research Project I confirm that I have read and understood the above statements.

Questionnaire				
Age:	20-30	31-40	41-50	50+
Nationality:				
Occupation:				
Industry:				
Educational Qualifications:				
Risk Management Qualifications:				
Years of Experience:				
In your organisation, what are the major challenges in risk assessment and treatment				
Has your organisation adopted ISO 31000			-If Yes direct to Implemented ISO 31000 Section -If No direct to Not Implemented ISO 31000 Section	

Implemented ISO 31000 Section					
Rate the following questions on a scale of 1 Strongly Disagree to 5 Strongly Agree					
How many years has your organisation used ISO 31000					
How is ISO 31000 compliance measured within your organisation	Internal Audit		External Audit		Other
I am familiar with ISO 31000 standards	1	2	3	4	5
ISO 31000 was easily implemented	1	2	3	4	5
My organisation is committed to following ISO guidelines	1	2	3	4	5
ISO 31000 defines risk in a logically consistent way	1	2	3	4	5
Managers in my organisation are supportive of risk management	1	2	3	4	5
ISO 31000 aids integration with other organisations	1	2	3	4	5
My organisation focuses more on risk management when preparing for audit	1	2	3	4	5
My organisation integrates risk management into all decisions	1	2	3	4	5
Do you think there is a consistent level of training in those implementing risk management	1	2	3	4	5
ISO 31000 aids integration with other organisations	1	2	3	4	5
Consistency in risk management could be improved by increasing the level of training required	1	2	3	4	5

Not Implemented ISO 31000 Section					
Rate the following questions on a scale of 1 Strongly Disagree to 5 Strongly Agree					
I am familiar with ISO 31000 standards	1	2	3	4	5
Managers in my organisation are supportive of risk management	1	2	3	4	5
My organisation focuses more on risk management when preparing for audit	1	2	3	4	5
My organisation integrates risk management into all decisions	1	2	3	4	5
Do you think there is a consistent level of training in those implementing risk management	1	2	3	4	5
Consistency in risk management could be improved by increasing the level of training required	1	2	3	4	5

Appendix 2 - Project Plan

Scope

This is covered in the proposal documentation. Once the Proposal is submitted however, the scope will not be changed and the question will not be revised.

Schedule

Date	Event
Monday 6th Feb	Group submit proposal
Monday 27th Feb	Submit draft literature review
Monday 27th Feb	Submit initial peer review
Monday 27th March	Submit overview of results
Monday 10th April	Submit draft (optional but recommended)
Friday 28th April	Submit final document
Friday 28th April	Submit final peer review

Due to the unpredictable nature of the team members jobs other milestones will be set, however they will be set on a short-term basis. A constant overview of each member's situations will be kept by all members.

Financial

There are no financial constraints on this project.

Quality

Quality will be monitored throughout the project by individual members, Peer Reviews, but also with the input of the designated supervisor. The measure will in the first instance be feedback from team members, secondly from supervisor. Overall quality will be measured by the final mark achieved.

Resources

IT

Online tools will be used extensively throughout this project due to the geographical constraints imposed. A list of these resources are and not limited to:

Asana – Project Management Online Tool

Dropbox – Online Shared Storage

Email – MyAberdeen Student Mail

Microsoft Office – Word Processing and Spreadsheets

Equipment

Each team member will be responsible for their own resources.

Literary

Each member however will share their literary resources to ensure other members have the same access to the knowledge been used. All literary resources will be referenced in the final document.

Communications

Internal

Initial communications are to be handled through email until all members are assigned to Asana. Once this stage is complete, a conversation will be started in Asana for each package of work designated for the final document.

External

Communications will be via MyAberdeen submission links and email.

Management of Change

Any change required will be handled with consultation from the designated supervisor. All members must agree on the change and full details must be included in the final document.

Annex 3 – WBS

WBS ID	Predecessor	Task	Start	End	Duration (days)
1	**-**	**Submit Group Proposal**	**30/01/2017**	**06/02/2017**	**7**
1.1		Draft Proposal	30/01/2017	04/02/2017	5
1.2	1.1	Sign off Final Proposal	04/02/2017	06/02/2017	2
1.3		Create WBS	30/01/2017	06/02/2017	7
1.4	1.2	Submit	06/02/2017	06/02/2017	1
2	**1**	**Construct draft literature review**	**06/02/2017**	**27/02/2017**	**21**
2.1	1.4	Write Introduction	06/02/2017	27/02/2017	21
2.2		Collect Review Data	06/02/2017	27/02/2017	21
2.3	2.2	Write Review	06/02/2017	27/02/2017	21
2.3.1		For topic	20/02/2017	27/02/2017	7
2.3.2		Against topic	20/02/2017	27/02/2017	7
2.3	2.3	Submit	27/02/2017	27/02/2017	1
3	**1**	**Initial peer review**	**06/02/2017**	**27/02/2017**	**21**
3.1		Submit	27/02/2017	27/02/2017	1
4		**Survey**	**07/02/2017**	**24/03/2017**	**45**
4.1		Design Research Methodology	07/02/2017	22/02/2017	15
4.1.1		Create list of questions	08/02/2017	22/02/2017	14
4.2	4.1	Submit Questionnaire to Ethics Committee	20/02/2017	20/02/2017	1
4.2.1		Change survey if required by Ethics Committee	22/02/2017	22/02/2017	1
4.3		Choose platform to disseminate through	09/03/2017	11/03/2017	2

4.4	4.3	Distribute survey	14/03/2017	24/03/2017	10
4.5	4.4	Monitor respondents	14/03/2017	24/03/2017	10
5	**2,4**	**Overview of results**	**27/02/2017**	**27/03/2017**	**28**
5.1	4.4	Conduct Quantitative Research	08/03/2017	24/03/2017	16
5.1.1	5.1	Collect survey results	24/03/2017	26/03/2017	2
5.2	5.1.1	Submit	27/03/2017	27/03/2017	1
6	**5**	**Draft Document**	**27/03/2017**	**10/04/2017**	**14**
6.1		Agree format of document	27/03/2017	29/03/2017	2
6.1.1		Construct template	29/03/2017	29/03/2017	1
6.2	5.2	Quantify data analysis	30/03/2017	10/04/2017	11
6.2.1	5.2	Display data in correct formats	30/03/2017	10/04/2017	11
6.3	6.2	Justify data collected with discussion points	30/03/2017	10/04/2017	11
6.4	6.3	Conclusion	05/04/2017	10/04/2017	5
6.5	6.3	Recommendations	08/04/2017	10/04/2017	2
6.6	6.4, 6.5	Abstract	09/04/2017	09/04/2017	1
6.7	6.6	Submit	10/04/2017	10/04/2017	1
7	**6**	**Final Document**	**10/04/2017**	**28/04/2017**	**18**
7.1	6.7	Review submitted Draft for any changes	10/04/2017	24/04/2017	14
7.1.2	7.1	Implement changes	24/04/2017	27/04/2017	3
7.2	7.1	Submit	28/04/2017	28/04/2017	1
8	**6**	**Final Peer Review**	**10/04/2017**	**28/04/2017**	**18**
8.1		Submit	28/04/2017	28/04/2017	1