Royal Docks Business School

UEL University of East London

MKM227 Postgraduate Dissertation

Student Number:…U8804117……

	Comments	Max Mark	Actual Mark
Introduction *Identification of a valid topic, research question and objectives framed to Masters Level standard with academic rationale developed, clear industry contextualisation of the research topic*	**Supervisor Comments:**	**10%**	
	2nd marker Comments:		
Critical Literature Review *Depth and breadth of literature search, engagement with seminal authors and papers, evidence of a critical approach toward the scholarly literature*	**Supervisor Comments:**	**25%**	
	2nd marker Comments:		

Research Methodology *Evaluation of research philosophies and perspectives. Justification of methodological approach, sampling strategy, data analysis and reliability and validity measures as applicable*	**Supervisor Comments:** **2nd marker Comments:**	**15%**	
Data Analysis and Interpretation *Evidence of rigor in data analysis and interpretation procedures, identification of key patterns and themes in the research data, integration of academic theory into explanation of findings*	**Supervisor Comments:** **2nd marker Comments:**	**35%**	

Conclusions and Recommendations *Research question and objectives addressed with implications to theoretical and managerial concepts considered. Recommendations provided for theory, practice and future research*	**Supervisor Comments:**	**10%**	
	2nd marker Comments:		
Organisation, presentation and references. *Well structured and ordered dissertation with correct use of grammar and syntax. In-text citation and bibliography conforming to "Cite Them Right"*	**Supervisor Comments:**	**5%**	
	2nd marker Comments:		

Total	**First Marker Total**	**100%**	
	Second Marker Total		
Supervisor General Comments:		**Agreed Mark:**	
2nd Marker General Comments:			

Supervisor's Name: …….. **Signature: ……**

2nd Marker's Name: …… **Signature: ……**

What are the Factors that Influence the Application of Lessons Learned, and how does this Impact on Project Success or Failure?

A dissertation submitted in partial fulfilment of the requirements of the Royal Docks Business School, University of East London for the degree of **MSc Project Management**

September 2014

[14,038]

I declare that no material contained in the thesis has been used in any other submission for an academic award

Student Number:_U8804117_____ Date:__9th September 2014__

Dissertation Deposit Agreement

Libraries and Learning Services at UEL is compiling a collection of dissertations identified by academic staff as being of high quality. These dissertations will be included on ROAR the UEL Institutional Repository as examples for other students following the same courses in the future, and as a showcase of the best student work produced at UEL.

This Agreement details the permission we seek from you as the author to make your dissertation available. It allows UEL to add it to ROAR and make it available to others. You can choose whether you only want the dissertation seen by other students and staff at UEL ("Closed Access") or by everyone worldwide ("Open Access").

I DECLARE AS FOLLOWS:

- That I am the author and owner of the copyright in the Work and grant the University of East London a licence to make available the Work in digitised format through the Institutional Repository for the purposes of non-commercial research, private study, criticism, review and news reporting, illustration for teaching, and/or other educational purposes in electronic or print form
- That if my dissertation does include any substantial subsidiary material owned by third-party copyright holders, I have sought and obtained permission to include it in any version of my Work available in digital format via a stand-alone device or a communications network and that this permission encompasses the rights that I have granted to the University of East London.
- That I grant a non-exclusive licence to the University of East London and the user of the Work through this agreement. I retain all rights in the Work including my moral right to be identified as the author.
- That I agree for a relevant academic to nominate my Work for adding to ROAR if it meets their criteria for inclusion, but understand that only a few dissertations are selected.
- That if the repository administrators encounter problems with any digital file I supply, the administrators may change the format of the file. I also agree that the Institutional Repository administrators may, without changing content, migrate the Work to any medium or format for the purpose of future preservation and accessibility.
- That I have exercised reasonable care to ensure that the Work is original, and does not to the best of my knowledge break any UK law, infringe any third party's copyright or other Intellectual Property Right, or contain any confidential material.
- That I understand that the University of East London does not have any obligation to take legal action on behalf of myself, or other rights holders, in the event of infringement of intellectual property rights, breach of contract or of any other right, in the Work.

I FURTHER DECLARE:

- That I can choose to declare my Work "Open Access", available to anyone worldwide using ROAR without barriers and that files will also be available to automated agents, and may be searched and copied by text mining and plagiarism detection software.
- That if I do not choose the Open Access option, the Work will only be available for use by accredited UEL staff and students for a limited period of time.**/cont**

Dissertation Details

Field Name	**Details to complete**
Title of thesis *Full title, including any subtitle*	What are the Factors that Influence the Application of Lessons Learned, and how does this Impact on Project Success or Failure?
Author *Separate the surname (family name) from the forenames, given names or initials with a comma, e.g. Smith, Andrew J.*	Leworthy, Brigid Elizabeth
Supervisor(s)/advisor *Format as for author.*	Unhale, Manish
Author Affiliation *Name of school where you were based*	Royal Docks Business School
Qualification name *E.g. MA, MSc, MRes, PGDip*	MSc
Course Title *The title of the course e.g.*	Project Managment
Date of Dissertation *Date submitted in format: YYYY-MM*	2014-09
Do you want to make the dissertation Open Access (on the public web) or Closed Access (for UEL users only)?	Open [Yes] Closed [ ]

By returning this form electronically from a recognised UEL email address or UEL network system, I grant UEL the deposit agreement detailed above. I understand inclusion on and removal from ROAR is at UEL's discretion.

Name:

Signature: .B.Leworthy..... Date: .09-09-2014....

Module Programme: MSc Project Management

Module Code: MKM227

Module Title: Postgraduate Dissertation

Module Leader: Aidan Kelly

Supervisor: Manish Unhale

What are the Factors that Influence the Application of Lessons Learned, and how does this Impact on Project Success or Failure?

Royal Docks Business School Dissertation

September 2014

Student No: U8804117

Submission Date: 09/09/2014

ABSTRACT

The concept of lessons learned is an idea that is used in all areas of life. Within project management it is presumed to be a useful tool to make sure that knowledge and ideas are utilised effectively. By doing this we hope to guarantee the most successful project outcomes and from each successive project, the knowledge of the individual and the organisation should expand.

However, it seems that actually fully utilising lessons learned is an inexact science. So much so in project management, that the likelihood of failure is twice as high as success for project outcomes. Identifying and dealing with all those potential pitfalls that keep on recurring, doesn't happen quite as smoothly as anticipated, if at all.

Perhaps the measuring mechanisms are wrong or perhaps we do just keep "re-inventing the wheel" but not with any great improvements.

Trying to determine what the factors are that influence the application of lessons learned, to see what stops them being utilised in project management, is an area that could provide some new insights as to what goes wrong or why the learning doesn't happen.

This research aims to identify why lessons learned get "lost" and provides a original perspective to the lessons learned journey. It identifies what the key influencing factors are for the application of lessons learned and contributes significantly to the debate around why lessons seem to have to be learned again and again and again.

Table of Contents

LIST OF TABLES

LIST OF FIGURES

Chapter 1

1.0 Introduction

The concept of lessons learned is a much discussed and promoted idea within the world of project management. However, the issue that it throws up is that if we are all learning lessons when doing projects, and all of the information is readily available to access, then why do so many projects fail?

Initial studies carried out on this were by Standish in 1995 and almost 20 years on the same things are reported. Even the most recent Association of Project management (APM) articles suggest that not only do upwards of 70% of projects fail, but they fail for the same reasons again and again, (Dale, 2014). The reasons quoted are exactly those identified by Standish back in 1995. They include a lack of clear objectives ,lack of management support, poor leadership skill, to name but a few.

It is in the light of this mystery that the research for this study was developed. It is generally acknowledged that using lessons learned does contribute to improved outcomes for projects. Whole methodologies, such as PRINCE2, (OGC, 2009), have been created from practitioners experiences of carrying out project work, and so there is definitely some credence to the concept. In addition, the literature identifies that ideally there is a logical progression for lessons learned. They are identified at the start of a project, lessons are learned and applied during a project and then all the lessons are summarised and logged for future use at the end of a project.

The gap in the literature seems to be that although lessons learned is a beneficial concept, there appears to be a disconnect of how it is actually applied in practice.

Having been a practitioner in this area previously for a number of different organisations, it will be particularly interesting to see if the current practices with regard to lessons learned are similar to my experience or if it has significantly changed given the advances in technology and business practice.

The intention in this study therefore is to critically evaluate how the idea of utilising lessons learned works in everyday projects, and assess if it really is useful for projects of different size and type, or whether there are limiting factors that come into play.

The research is therefore based around the theme of lessons learned and the question posed is: "What are the factors that influence the application of lessons learned, and how does this impact on the project success or failure?"

The objectives of the research are:

(i) To identify if 'lessons learned' is really a concept used by project managers and for all projects both large and small;

(ii)To identify/investigate the key influencing factors that may hinder/increase the knowledge that can be put to use for project success;

(iii)To identify if there really is a lessons learned "journey" and if and where in that journey lessons stop being learned.

In order to gather this data it was decided to undertake a qualitative research study and this would consist of two components. The first stage was to evaluate two secondary data case studies based on the extreme ends of project success and failure. The data collected from stage one would then inform the data collection for stage two. The second stage was to collect primary data from a sample of project managers, involved in a range of everyday projects, by carrying out in-depth, semi-structured interviews.

Overall, the two stage method worked successfully as the data collected from stage one did provide a framework for the questioning in stage two. The iterative analysis anticipated was able to be carried out.

Stage one demonstrated that on large high profile successful projects the lessons learned are investigated before starting and are also logged along the way. The knowledge is used, and, as in the case of the London 2012 Olympics, a whole knowledge database can then be created to inform future projects. The London 2012 Olympics is a great example of this.

However, for other large projects such as the Government National programme for IT in the NHS, the concept is understood, but lessons learned were often either ignored, or "lost" along the way.

Therefore the framework for the interview questions in stage two were based around the lessons learned journey of the successful project as this did seem to provide a logical successful process for learning lessons.

The second stage of the research then provided the data to compare what happens in everyday projects as opposed to very high profile projects. Whether they did actually use lessons learned from previous similar projects and what happened during the lifetime of a project to support or nullify the knowledge provided by lessons learned.

Overall all the objectives of the research were achieved. The research did provide a good insight into the lessons learned journey. A number of themes emerged some of which coincided with the literature research but also highlighted other key influences.

This research may not be a definitive answer to the question posed. It is clear however, that the governance and the processes employed in projects within an organisation, have to allow for utilisation of lessons learned to lead to improved project effectiveness and increased project success rate. If the right processes are employed then access to all the expert knowledge and organisation knowledge can be tapped and utilised leading to better project outcomes.

The chapters that follow will describe the process of completing this research study. A critical review of all the relevant research is carried out in chapter2, identifying the key areas of influence believed to have an impact on lessons learned. Chapter 3 provides an outline of the research methods employed for the two stage study and Chapter 4 then follows analysing the data obtained. This chapter identifies the emerging patterns and links the data to the objectives of the study. Chapters 5 and 6 provide an overall conclusion as to how well the research question and objectives were achieved and offer specific recommendations that can be taken forward.

Chapter 2

2.0 Literature Review

Project management in its broadest terms is an area of increasing interest for both practitioners and academics. If done well it leads to greater efficiency and effectiveness and adds value to the projects being undertaken. "No two projects are ever exactly alike" (Lock, 2013, p.1) but the experience gained during a project, both good and bad, can be useful knowledge for other similar projects.

Lessons learned is a well-used phrase when carrying out projects. However, although it is a recognised term and acknowledged as a sensible thing to do it often seems to get "lost" along the way when actually carrying out projects.

Lessons learned, as a concept in itself, is open to interpretation as to what is meant. The debate seems to be whether the identification and recording of useful information is a lesson, or whether it is the change that results from using the lesson, is a lesson learned, (Milton, 2010).

There is a wide range of literature on the topic but it varies significantly from individual case studies in various industry sectors, to methodologies to organisation behaviour and even details of complete knowledge management systems.

A survey carried out on 70 organisations by Milton in 2010 suggests that there seem to be five elements that are the main barriers or problems to learning lessons. These were identified as: lack of follow through and application; senior management; culture; time Issues and miscellaneous other.

This partly corresponds with other research such as that by Milway and Saxton (2001) that states in order for learning to take place four elements must be in place which are: supportive leaders; culture; knowledge

processes and learning structure. Both acknowledge governance structures and support as key elements.

However it seems that numerous aspects can impact on whether lessons learned are considered or applied in organisations.

Different themes emerge but some of those overlap and can be grouped under a number of key categories. Therefore this literature review has considered five key aspects of what impacts on the utilisation of lessons learned in organisations: project methodologies, project success and failure, organisation culture, governance and application of lessons learned.

2.1 Project Management Methodologies

Project management is now a recognised field of practice, in a wide range of companies and organisations (Crawford, 2000). It is relatively new as a whole organisation concept, but essentially it has always been around, albeit in a less formalised context.

It was realised by proponents of project management, such as the UK government in 1996, (Pharro, 2007), that in order to carry out project management effectively, a more rigorous and consistent process should be used to try and improve the outcomes of projects. Since then a whole raft of methodologies, and the setting up of international bodies such as the Association of Project Management and the Project Management Institute, has taken place.

Many of the project management methodologies such as PRINCE2(OGC,2009) and the Project Management Institute Body of Knowledge (PMI, 2012) are, in effect, whole methodologies based on the lessons learned from projects that have been carried out in the past. They have been put together to try and provide a consistent and efficient way to carry out projects based on previous learning.

PRINCE2 (Projects in a controlled environment) was a methodology developed by the UK government but is now used in upwards of 150 countries around the world in both public and private sector organisations.

The manual is introduced as "a structured project management method based on experience drawn from thousands of projects" (OGC, 2009) and has been compiled from contributions of many practitioners, managers and academics.

Even within the methodology there are sections dedicated to incorporating lessons learned within a particular project and it is seen as an ongoing process within any project. In effect it provides a lessons learned lifecycle or journey. Figure 1 outlines what that journey is as described in the PRINCE2 methodology.

LESSONS LEARNED JOURNEY

Figure 1: OGC Lessons Learned Journey (*Adapted from OGC, 2009)*

PRINCE2 and PMBOK are two of the most widely known project management methodologies, but there are numerous methodologies now available for reference. Whole training industries have been set up to deliver this type of learning but so far there still seems to be a lot of inconsistency and failure to deliver projects efficiently or effectively. If the processes are adopted and lessons learned from previous projects taken into account - why is there still such a high failure rate?

2.2 Project Success or Failure

In much of the literature on project management the topic of good project performance and how and why projects succeed or fail (Lock 2013,chapter 2,

Papke-Shields et al, 2010, Larson & Gray, 2011). Much of it focuses on project failure as it has been identified that the project failure rate is extremely high (Standish Chaos reports). The first Standish Chaos report was carried out in 1995 and became a landmark paper, specifically for IT projects, concluding that only 16% of projects would be classified as successful. These became regular reports. The following Table outlines their results:

Table 1 Standish Chaos Report Summary - Project benchmarks

Year	Successful % *	Challenged % **	Failed % ***
1994	16	53	31
1996	27	33	40
1998	26	46	28
2000	28	49	23
2004	29	53	18
2006	35	46	19
2009	32	44	24

* Successful - Completed on time, on budget with required features and functions
**Challenged - finished late, over -budget or with fewer than required features and functions
***Failure - project cancelled before completed or delivered but never used

(Source: Standish.com)

Still, today, it is thought that, as a general outcome, up to 70% of projects are still classified as unsuccessful (Dale,2014). If the concept of lessons learned is really put into practice then it seems inexplicable that the failure rate of projects remains at such a high level?

It is even more puzzling to read that the reasons given for failure keep reoccurring time and again. The reasons mostly comprise of: Ill-defined roles and responsibilities; a high turnover of senior staff; corporate amnesia with lessons not being learnt or applied; skills gaps; poor stakeholder engagement; poor financial management; inadequate risk management and misunderstanding the cultural challenges (Dale, 2014).

If this is the case then lessons are not being learned or there are fundamental reasons why they cannot be, or are not taken into account.
It is ironic that the UK government who developed the PRINCE2 project management methodology should then be highlighted in a National Audit

Office (NAO) report for an improvement in the need for professionalism in project management (NAO, 2011). The litany of government project failures is highlighted even more in the book "Conundrum Why every government gets things wrong and what we can do about it" (Bacon and Hope, 2013). On looking at the detail of each of the projects described it is clear that lessons are not learned. On some projects, even when advised not to do things, based on previous experience and knowledge, the advice is blatantly ignored.

Having identified "a lack of project management skills across the civil service: too fast a turnover of project leaders; inadequate assurance processes and institutional knowledge...",(Cabinet Office, 2014), the UK government has tried to address the issue by setting up the Major Project Authority and the Major Projects Leadership Academy. The aims are to improve project performance, instil a project culture and to empower leaders with clear accountability and responsibilities. It is noted that this list of inadequacies includes almost all of the reasons for project failure outlined previously by Dale (2014). The identified areas also link with the barriers to learning lessons highlighted from Milton's survey (2010).

The high failure rate of projects is not however confined to the public sector. As outlined in the Standish Chaos reports, (Standish, 1995-2009), the majority of projects do not achieve what they set out to do in the given timescale. Many high profile projects in the private sector have failed to deliver the expected outcomes in a given timeframe. For example the Channel Tunnel ended up significantly behind schedule and is still struggling to be financially viable (Anderson and Roskrow, 1994 and CILT, 2005). Heathrow Terminal 5, although in the main was a successful project, it had a spectacular project launch disaster with worldwide coverage, (CILT, 2008).

It seems inconceivable that such a high profile project as Heathrow Terminal 5, would not take into account previous lessons learned, particularly with regard to baggage handling (DeNeufville,2008) and yet it seems it did not.

In 2013 the PMI conducted a survey among 277 project, program, and portfolio management directors, managers, and practitioners who make or strongly influence hiring decisions for project, program and portfolio managers for their organization. The high performing companies and low performing companies do overlap in the talent management processes that they put in place but it is noticeable that for the high performing companies seem to demonstrate a much higher commitment to having the processes in place, (PMI, 2014). Interestingly formal knowledge transfer processes and effective knowledge transfer process were identified as two separate categories. Table 2 below shows the six talent management processes identified amongst both the high and low performing organisations.

Table 2: PMI Talent Management Processes

Process In Place	Of the High Performing Companies	of the Low Performing Companies
Ongoing Project Management Training	77%	51%
Formal Process toDevelop Project Management Competency	68%	36%
Formal Process to Mature Formal Project Management Practices	66%	35%
Formal Knowledge Transfer Process	66%	33%
Defined Career Path	62%	32%
Effective Knowledge Transfer Process	29%	5%

(Adapted from PMI, 2014)

For formal knowledge transfer processes 66% of the high performance companies had these in place, whereas, only 33% of the lower performing thought this to be important. Surprisingly, only 29% of the high performing companies had an effective knowledge transfer process in place, but this was almost six times greater than the low performing companies at 5%.

The effective knowledge transfer processes have the lowest figures. So although it seems to be recognised in this PMI survey by quite a number of organisations that these elements should be in place to ensure better performance and to achieve more successful outcomes, even the high performing companies struggle to implement effective knowledge transfer processes. In effect, it would seem to imply that they have difficulty embedding lessons learned.

All in all, there is much debate both professionally and academically about why projects succeed or fail (Cooke-Davis, 2002, Zwikael and Globerson, 2006). Rhodes and Dawson (2013) identified that lessons learned can make a significant difference and save a lot of time and wasted resource. Being able to use others experience "to leverage against the future" (Berkun, 2005) and not having to keep re-inventing the wheel is something that most people would want to do. Having clear goals, incentives and well developed processes were identified by Millway and Saxton (2011) as the key elements for organisational learning. However, the elusive factor for both organisations and project teams seems to be how to harness the knowledge and embed a process that enables project managers and project teams to benefit from lessons learned and improve project success.

2.3 Organisation Culture

There are many factors that may influence the re-occurring reasons for project failure. One area that is often quoted and seems to influence the implementing of lessons learned from previous experience is the organisation culture. This has been quoted in literature as "the way we do things here" (Perkins and Arvinen-Muodo, 2013). The culture of organisations has been studied for some time. Edgar Shein developed the theory that there are three levels of culture in an organisation and by that he meant the three levels at which observers can see how an organisation operates. Figure 2 illustrates the levels that Shein identified.

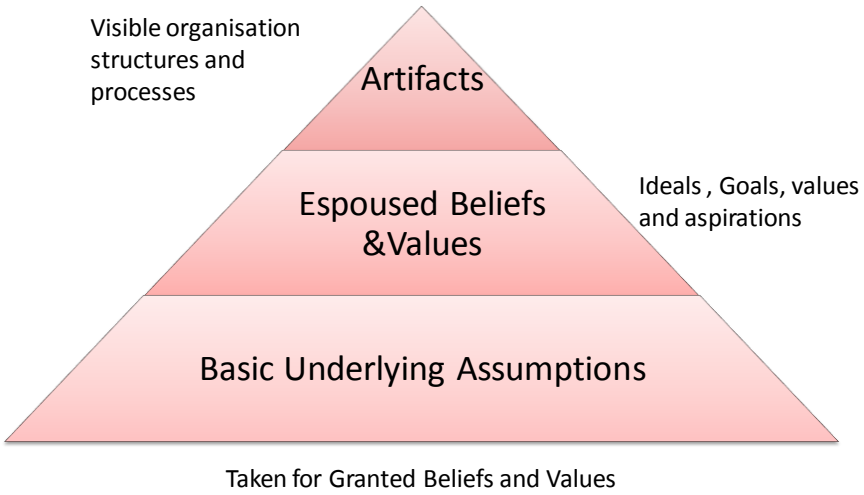


Figure 2: Schein's Three levels of Culture *(Adapted from Schein, 2010)*

Schein (2010) provides examples of how the culture of an organisation can influence how it operates and how the leadership style can have a significant effect. However, as this area of research has developed further, there are now many factors on many different levels. Perkins and Arvinen-Muondo (2010, p.216) state that establishing a direct link between culture and performance has been difficult to prove.

Nevertheless, there are some examples which do demonstrate that the culture of an organisation can influence whether lessons are learned and how they are used. Maya, Rahimi, Meshkati, Pope and Schulte (2005) carried out an in depth study on a programme at NASA which concluded that they "...successfully implemented a comprehensive lessons learned process addressing technical and cultural change challenges", (Maya et al, 2005).

Another example is British Petroleum PLC (BP). This company is a well-known example of an organisation that totally reorganised and implemented a whole new knowledge management system. It put in place structures, systems and processes to ensure utilising lessons from previous projects and capturing lessons from ongoing projects (Ahmed et al, 2011, pp156-164). This lead to very high savings in methods of operation and efficiencies

within the organisation. The main driver for this approach was unwavering support from the top of the organisation (Gorelick and Milton, 2004). So we can conclude that lessons learned is a serious area for consideration in some large high profile organisations but needs senior support.

Given that different organisations exhibit different types of cultures it is not surprising that some companies use project methodologies but many don't. This may demonstrate the relative immaturity of project management as a credible part of an organisation structure. However, those that do use a specific methodology often tailor the project management approach to "suit" their own company. Tailoring is promoted within many of the methodologies (OGC, 2009, pp215-231). It may be that certain company cultures enable them to be more effective using lessons learned and capturing knowledge in order to improve performance and produce more positive outcomes.

Whether using lessons learned is linked to the culture of the organisation is hard to say. It does seem that there are influencing factors such as leadership, governance, and processes which, according to Schein, Perkins and Arvivnen-Muondo, all influence an organisation culture which can have a knock-on effect on whether an organisation is open to the concept of utilising lessons learned.

2.4 Governance

Linking back to the leadership style of an organisation, which can impact on the culture, this can, in turn, greatly affect the governance structures within an organisation.

Roles and responsibilities are a big part of any project. PMI suggests that having an actively engaged sponsor is the top driver of project success. However, from their research, (PMI, 2014), organisations report that less than two in three projects have actively engaged sponsors. If the governance and leadership support the efforts linking to lessons learned the likelihood is that time will be allocated to learning from previous experience

and knowledge. Utilising this experience can then contribute significantly to the positive outcomes for the projects and the organisation. However, if the leadership and governance has no time for this then a lesson learning culture would seem to be much harder to instil. Being motivated to challenge ideas and address shortcomings based on previous experience without this type of supportive management is very much harder.

Governance of projects is a critical success factor. "Effective governance of project management ensures that an organisations project portfolio is aligned to the organisations objectives, is delivered efficiently and is sustainable" (OGC 2009). There are different levels of governance in play as the project manager needs to lead and motivate the team but then is accountable to the project sponsor. However the APM states that for effective project management the organisation should "seek to ensure that project sponsorship is the effective link between the organisation's senior executive body and the management of each project" (APM, 2011). The sponsoring role has decision making, directing and representational accountabilities.

What the methodologies and guidance on governance does not explicitly say is that lessons learned from the projects should be incorporated and promoted. It is included in all the project methodologies. What seems to be missing is that link between senior management being made aware of lessons along the way. With regard to governance, PRINCE 2 encourages open reporting and the APM says the organisation should "foster a culture of improvement and frank internal disclosure of project information" but very often in organisations this does not happen. Leadership styles and governance processes within organisations can clearly impact on whether learning is shared at this level because how good and bad information is received, can influence whether, and how, it is disclosed.

As previously mentioned in Ahmed et al (2011), BP was held up as a leading example of implementing a lessons learned focussed organisation but it is acknowledged that the project was sponsored and driven from the top of the

organisation. Without that strong support it is likely that the project would not have been so successful.

2.5 Application of Lessons Learned

Academic research very much links with the project management methodologies with regard to lessons learned in that it is believed that there is a lessons learning continuum through the life of a project. Figure 3 below shows the journey as described by Milton (2005). It identifies that lessons can be learned at the start, during and at the end of a project. This concurs with the lesson learned journey promoted in the PRINCE2 methodology outlined previously (OGC, 2009).

Figure 3: Milton's Organisation Lessons Learned Potential *(Milton, 2005)*

Lessons learned has become an area of academic research, often via the topic of knowledge management, so much of it leads into methods for organisation learning. Also, many of the studies carried out on lessons learned are industry specific. As outlined in the Standish Chaos reports most of the project management case studies are more prevalent in construction and IT than elsewhere, as these are the traditional areas where project management techniques have been established. However, information from the PMI (2013), would indicate that although these traditional areas are maturing in their project management strategies there are now seven industry sectors that the PMI define as "project intensive industries". "Project-intensive industries" describe those in which occupational employment has a high level of project-oriented work, (PMI 2013). From the

PMI research the key industries that are actively employing project managers within their organisations are shown in Figure 4 below:

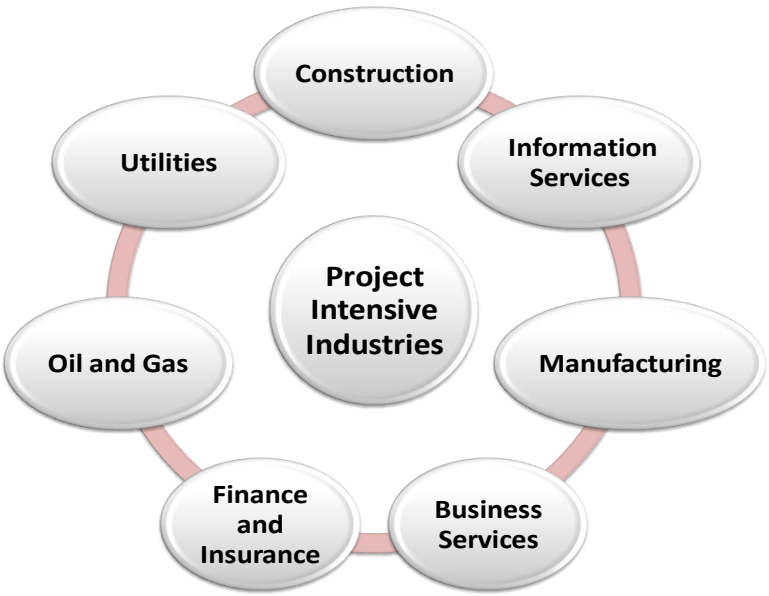


Figure 4: PMI Project Intensive Industries *(Adapted from PMI, 2013)*

This list covers a wide range of industries, many more than just a few years ago as predicted by Crawford, (2000). Therefore, the importance of utilising lessons learned within organisations increases. Within organisations competitive advantage is much sought after, and if there are avenues that can be followed that will increase performance or enhance efficiencies then surely the focus will be on them. One such area is the application of and utilising lessons learned.

In the case study of BP when they announced savings of £200m with a potential further saving of £450m. This was achieved by redesigning its knowledge management system and embedding processes within the organisation to ensure lessons were shared and learned, (Gorelick and Milton 2004). This was an impressive case study for other organisations to look at.

However, having invested heavily in embedding learning processes in over more than a decade it seems that many of the lessons were "lost" or forgotten during the Deep Water Horizon catastrophe. It has subsequently

been discovered that the company did not heed its own processes and had taken short cuts, which they knew to be risky, when delivering this project (Li-Hi and Blumberg, 2011). It knew of many of the pitfalls but either chose to ignore them or failed to acknowledge them. That single project almost led to the demise of the company and so they now have a raft of new lessons learned which they have incorporated into their processes "through co-operation with the official investigations and actively sharing the lessons learned..." (BP Summary Review 2011, p6).

The problems and difficulties faced trying to capture and disseminate lessons learned from projects is highlighted in the study by Rhodes and Dawson, (2013). This is a case study on a project management department in a large information intensive organisation, (undisclosed for reasons of confidentiality). It looked at why their lessons learned process was not effective and provides another insight into what the barriers are. In this study, culture, motivation and lack of process were identified and it offers a number of steps to try and improve the situation. However, even from this study, the similar themes seem to recur again and again with no really new insights.

The literature review has revealed that there is a lot of information on lessons learned within organisations. Project success and failure are attributed to many various aspects but there seems to be no real answer as to why projects fail for the same reoccurring reasons.

The gap in the literature seems to be that although lessons learned is a beneficial concept, there appears to be a disconnect between how it is viewed and how it is actually applied in practice. As this seems to be the case, this study is aimed at trying to see if the same barriers exist in large organisations as well as smaller organisations and if the application of lessons learned is different within different projects. The question to be posed is: "What are the factors that influence the application of lessons learned, and how does this impact on project success or failure?"

The research objectives are:

(i) to identify if ‘lessons learned’ is really a concept used by project managers and for all projects both large and small;

(ii) to identify/investigate the key influencing factors that may hinder/increase the knowledge that can be put to use for project success;

(iii) to identify if there really is a lessons learned "journey" and if and where in that journey lessons stop being learned.

Lessons learned is a concept that is used in many professions. The value that can be added can enhance any project if previous knowledge gained is harnessed and shared effectively. Identifying and understanding what can impact on this would be valuable learning for any future project management work in any field.

This study aims to identify why lessons are not learned and contribute some insight as to what the factors are that influence the application of lessons learned and what can be done to address these issues.

Chapter 3

3.0 Research Methodology

Given the information available from the literature review it was identified that there seems to be a gap in the knowledge with regard to how different organisations actually apply the process of "lessons learned".

The literature available clearly outlines that the majority of projects are regarded as failures. That is, from the project management perspective of achieving stated outcomes and benefits in a specified timeframe and within allocated costs, (Atkinson, 1999). Milton (2010) acknowledged that the concept of incorporating lessons learned would go some way to improving project success. However, it would seem that many organisations do not incorporate a process for doing this and do not give enough credence or time to this concept in order to establish it as an embedded working process. Therefore the question posed for this research was:

"What are the factors that Influence the application of lessons learned, and how does this impact on project success or failure?"

The objectives of the study are:

(i) To identify if 'lessons learned' is really a concept used by project managers and for all projects both large and small;

(ii) To identify/investigate the key influencing factors that may hinder/increase the knowledge that can be put to use for project success;

(iii) To identify if there really is a lessons learned "journey" and if, and where, in that journey lessons stop being learned.

When approaching how to address the question and the objectives that were set, the first decision was to ascertain whether it could be best investigated using a quantitative or qualitative approach.

Quantitative research is very much focussed on gaining factual data that can be measured and analysed to provide specific answers which can be corroborated with numbers. From an epistemological stance it is a more positivist approach whereby it uses the application of natural science methods to test a social reality. This type of research therefore would tend to generate hypotheses that can then be tested numerically with the data collected. It would normally assume that the data collected is not influenced by pre-existing theories.

Qualitative research is far more intuitive and based around gaining information from a more inductive type of approach using description and words to gain an insight into what is actually happening in a real world situation. As opposed to quantitative research it is an interpretivist stance in that it accedes to the idea that in the real world things aren't always constant and scientific methods cannot always capture what is required. It recognises that the differences between people can very much influence the data collected and that it is an understanding of individuals that can generate the data.

Therefore for this research it was decided that a qualitative approach was the optimum method to apply. Due to the real life nature of the topic, and the fact that many theories seem to apply, it is the understanding of why the concept of lessons learned is not always applied effectively that is not fully understood.

As the literature suggested that there may be different approaches to lessons learned from large projects or organisations, compared to smaller ones, it seemed appropriate to carry out the research in two stages.

Stage one would obtain information from secondary data using detailed existing case study information on two large projects. Stage two would involve obtaining primary data from individuals. This would be obtained via in-depth interviews from practising project managers from a range of organisations.

This conforms to the interpretivist paradigm of qualitative research as it allows comparison between information that is known and well documented for large projects, with examples of smaller everyday projects which have to operate in a more practical and real world environment.

The research therefore would be guided by the literature review initially. The results from the information gained from stage one, the secondary case study information, would then be compared and assessed with information from the existing literature theories. This data would then be used to inform the design of the research for the primary data collection. Thus it would be an iterative process.

This suggests a more deductive approach in that the initial guide for the interviews will be informed and developed by existing theory and information. But then a more inductive approach would have to be used when gathering the primary data.

The initial guidance for the interview questions would be themed, based on information already known. The semi-structured nature of the interviews, would then allow the participants to develop areas of interest. Also the interviewer would be able to include supplementary questions where appropriate to allow for more inductive conclusions to be explored.

It was felt that this combined approach would provide an interesting and insightful outcome. In order to understand the research process fully, the methodologies for stage 1 and stage 2 will now be described in detail.

3.1 Methodology Stage 1 Secondary Research

3.1.1 Case Study Selection

To start the data collection process two large project case studies, one good, one bad, were identified. These provided extreme examples of a successful project and a failed project. This secondary research was carried out to highlight how lessons learned can be implemented and what happens if they are not taken into consideration or ignored. It was hoped to clearly

demonstrate the impact of using and applying the concept of lessons learned and also to identify what, if any, the processes were.

The extreme cases identified were the London 2012 Olympic programme, which has been hailed as one of the UK's greatest project management successes, (APM,2012), and the NHS IT government project which has been identified as one of the UK government's more spectacular project failures, (Bacon & Hope, 2013).

3.1.2 Case Study Data

This research was carried out using existing literature and case study material that is generally in the public domain. The London Organising Committee for the Olympic Games (LOCOG) as part of its legacy has left a knowledge management legacy which provides a vast database of information (LOCOG, 2012, Volumes1, 2, &3). As the Olympic programme covered a vast number of projects it was decided to narrow the focus to the just the construction projects because these were areas where more detailed information was available, due to having also obtained some case study material from individuals involved in the projects.

With regard to a failed government project a number of cases were considered but the National programme for IT in the NHS was the case assessed. Again, there is much information in the public domain from the government and the Department of Health, as well as a detailed information from the National Audit Office.

Each of these projects was assessed and then a matrix array of key data compiled to identify key learning for the research question. A narrative analysis could then be compiled. Combined with the information from the literature review these secondary case studies provided information to confirm if lessons learned are applied specifically on large high profile projects and if any benefits resulted. So this provided a baseline on which the semi- structured in-depth interviews were framed.

3.2 Methodology Stage 2 Primary Research

3.2.1 Primary Research Framework

Having assessed the lessons learned experience from the two extreme case studies, and combined this with the theory outlined from the literature review, a framework was established for this more detailed stage of the research.

The framework was based around the lessons learned journey. The literature and the case studies had confirmed that the concept of the lessons learned journey was indeed valid. Therefore the question design needed to be structured around lessons learned the start of a project, during the project and at the end of a project. Within this, the idea was to establish what happens to the application of lessons learned during each of these phases.

3.2.2 Interview Question Design

With the framework established it was necessary to design a set of appropriate questions for the interview guide for the participants. It was essential to ensure that although the questions asked weren't too rigid they would provide enough of a prompt to the participant to keep them focussed on the areas that would generate information for the research question and objectives to be achieved.

The focus of the primary research questions was to look at whether in everyday smaller projects the concept of lessons learned was taken into account at the start of a project. If it was, what happens along the way to mitigate or impact the project, or how this knowledge is used, or ignored. Thus in order achieve the objectives of the research it was intended for the research questions to be able to identify if lessons are learned along the whole lifecycle of the project, what impacts on projects at the different phases and if this has a positive or negative influence on the outcome. Depending on the results a comparison could then be carried out to ascertain if utilising lessons learned does have a positive impact and if the processes employed on large high profile projects can be applied in the same way in everyday projects.

A set of questions was therefore devised, to ask a sample of everyday project managers, working in a range of organisations. These were designed to try and elicit appropriate information in a consistent manner so that the responses could be compared and analysed. This would enable the researcher to be able to compare the responses from the individual participants and then further compare with the secondary data gathered in stage 1. Having developed an appropriate set of questions, structured around learning at the beginning, during and at the end of a project, they were then tested on a sample of colleagues from both an educational and project management background. The questions were slightly refined and then used as the basis for the interviews. The set of questions are outlined in Appendix 8.1. The next stage was to identify the sample of project managers to be interviewed.

3.2.3 Interview Sample

Having worked previously in a number of organisations, in a project management role, the starting point for the interview sample was to contact two of the project managers within these organisations. I was also involved in a major project being undertaken by my current employers and so contacted the consultant project manager for that project. That provided three project managers who then were able to recommend another four from different organisations that I had had no experience of.

This type of sample would be considered a non-probability sample in that it has not been selected randomly. However, due to the time constraints of the dissertation process this was a combination of convenience sample from known project managers which then developed into a snowball sample as those project managers recommended other project managers. This did provide a good range of organisations and people with varying degrees of project management experience. The organisations involved covered companies such as Serco, BT, The London Fire Brigade, The NHS, Independent Consultant, Ofcom, and City of London Corporation. Thus there was a range of private companies, public sector, National government departments and local government. The representatives were not picked to

represent the views of the organisation itself but the perspectives gained from their individual situation which would be affected by the nature of the organisation itself and from their own experiences. This mix of PMs therefore provided a range of perspectives with different organisation cultures, different processes and would provide an insight into the different, or similar, application of lessons learned.

In qualitative research, particularly business research, this type of sampling is a common approach (Bryman and Bell, 2007, p.198). Thus, although only a small sample (due to the time constraints of the dissertation), it was a good sample of everyday project managers (PMs) dealing with projects of various sizes.

The sample size itself was not large enough for population generalisations but, combined with the secondary data, it would be quite acceptable to make analytical generalisms, (Yin, 2009). This type of data can contribute significantly to further research.

3.2.4 Interview Process

Ethical approval for the proposed interviewing had to be sought from the university in order to ensure a responsible and valid approach to the research. Once ethical approval for the process had been gained, each of the PMs was contacted and asked if they would be happy to undergo an in-depth interview based on the umbrella theme of lessons learned.

Each participant was sent an information letter explaining the nature of the interviews, a consent form and a copy of the proposed questions, (see Appendix 8.1), with the proviso that depending on the direction of the interview there may, or may not, be supplementary questions. Because of the nature of the interviews and to ensure that the participants were comfortable with the questioning, the candidates were also advised that their identities would be kept anonymous and in some cases it was agreed that the actual project would not be named in order to maintain anonymity.

Before the start of the interviews permission was also sought to digitally record the interview in order that no information was forgotten or overlooked.

The interviews were carried out on a one-to -one basis either at the PM's office or in a mutually convenient location, and where this was not possible the interviews were carried out by telephone. All were recorded and lasted between one to one and a half hours.

3.2.5 Data Collection

Processing of the interview data commenced as soon as possible after each interview had taken place in order to amass all the data together ready for the overall analysis.

The first part of the data collection analysis was to transcribe all the interviews. A copy of the transcripts from each of the interviews is included in Appendix 8.2. This provided a great deal of information and the next step was to collate the information in such a way as to try and identify any emerging patterns.

Initially a data reduction exercise was carried out manually in the form of a matrix array. The data provided by each of the participants for all of the questions could then be analysed. It was decided to do this manually rather than with computer aided qualitative data analysis software (CAQDAS) because having carried out the interviews and done the transcriptions the researcher was completely familiar with the data obtained. It was felt that this would overcome some of the limitations often associated with CAQDAS in that it only uses the data as input and cannot "interpret" the nuances that may have been apparent when the data was obtained, or the complete context in which some elements of the interview were discussed. The researcher on the other hand is able to critically assess the data, based on the correct perspective, and having a greater understanding. In this way it is likely to generate a more valid matrix and enables the key elements to be included in the right context in the matrix.

The matrix information was therefore assembled by the researcher identifying all the key phrases and words used to answer each question. This information was then imported into NVivo, which is a very powerful CAQDAS system. This then allowed the researcher to progress to carrying out a detailed analysis on the words used by the interviewees.

The more powerful aspects of the NVivo package were not fully utilised. However, given the relatively small sample size, much of the complex analysis afforded by Nvivo would not be appropriate. It was, however, a very useful tool to carry out the time-consuming element of coding and classifying the data that had been generated from the interviews. It also very much contributed to the reliability of the analysis, as a more manual method of coding and classifying is difficult to do as accurately and consistently.

Thus Nvivo allowed the data to be coded and collated in various ways in order to generate some meaningful outcomes and to assess the information data collected against the theory in the literature and the secondary data collated in stage 1. This type of analysis is known as open-coding (Bryman and Bell, 2007, p.586) and is aligned to grounded theory of analysis in that it is an iterative process of coding and comparing.

The detailed analysis of all the data collected is outlined in the following Chapter.

Chapter 4

4.0 Data Analysis

The relevant findings from the research will be discussed here. Just to clarify the process: the secondary case study analysis is more of a narrative analysis, whereas the primary data analysis is linked to grounded theory which involves the coding of data and using an iterative approach. Analysing qualitative data from semi structured interviewing is an iterative process in that the data obtained from the initial interviews can inform the subsequent interviews if interesting areas are highlighted. Also there can be multiple forms of coding applied in order to try and gain a fuller understanding of the data collected.

As outlined in the previous research method chapter, the data analysis was carried out in two stages. The first stage involved secondary case study research on two large projects, namely; the London 2012 Olympic programme of projects and the Government National programme for IT in the NHS. This process identified the extreme ends of the spectrum for successful and unsuccessful projects and the analysis was carried out on two specific cases to try and identify the lessons learned processes and evaluate whether or not they contributed to the success or failure of the projects.

Based on the outcomes of the analysis in stage 1 a set of questions was devised to use for stage two of the analysis. Stage two consisted of carrying out seven in-depth semi-structured interviews, with a range of project managers from different organisations. The interviews were transcribed and subsequent analysis was carried out. The data was collated and cross-referenced and any emerging patterns identified. The results of these analyses is outlined in the following sections.

4.1 Lessons Learned Case Study Secondary data

4.1.1 London 2012 Olympics

The London 2012 Olympics has been described by various people, government departments and private organisations as the "greatest show on earth" (APM 2011, 2012). It was one of the largest programme of projects undertaken in the UK and has been hailed as one of the most successful programmes undertaken. It successfully delivered not only construction projects but also customer service and social projects that have had a lasting effect.

It is too vast a programme of projects to look at the whole programme so in this paper the area of construction was considered. The construction data was mainly collated from the London 2012 legacy site, the Association of Project Management, the new version of the Office of Government Commerce (Axelos), the Olympic Delivery Authority (ODA), The Department for Culture Media and Sport (DCMS), The East London Research Institute and Mark Townley who worked for the project management construction consortium. For ease of access, all of the relevant references are listed in the Olympic Case study Analysis, Appendix 8.3.

Linking to the literature previously considered, the approach to assessing the projects was to identify the lessons learned journey for securing the games and then to identify if the application of lessons learned impacted on the final outcomes of the construction projects within the London 2012 programme.

Due to the amount of data compiled, Appendix8.3 shows the matrix array of information developed from the case study material available. The analysis of the data clearly shows a lessons learned journey and highlights that processes were put in place to make sure that lessons were identified at the start, were captured during the projects and a legacy of learning was provided. It is clear that in all areas of the lessons learned journey, Before, During and After, the Olympic programme delivered.

There is clear Information on the processes used to ensure the bid development took on board lessons from previous Games. There were knowledge platforms developed for information sharing throughout the project and not only did LOCOG provide a knowledge management legacy for the IOC but the construction project teams linked with the Association of Project management to provide a legacy learning programme for use during and after the Games

(i) 2012 Construction Key Learning Before

For the construction projects the Olympic delivery Authority bought-in its lessons learned not only by employing experts from the 2000 Sydney Games, which was acknowledged as the best for its construction projects, but also by engaging a project delivery partner. It was a project management consortium called CLM which was a specially formulated group from project management and construction experts CH2M Hill, Laing O'Rourke and Mace (APM, 2012). This consortium had unrivalled expertise in both project management and construction. One key element of learning brought in right from the start was from the experience of the group on Heathrow's Terminal 5 project. Although a smaller project, it was very much used as it had a number of similar requirements such as: river diversion and clean-up, innovative engineering and technology, huge logistic problem, complex contractual arrangements, public awareness, transport infrastructure (Townley, 2012).

In addition, the Olympic Games committee provided key lessons learned from the Olympic projects that had gone before. In particular the urban regeneration from Barcelona in 1992 was a benchmark along with the Sydney 2000 construction projects (IOC, 2012). In fact, they keep a whole knowledge database management system available for host countries to access that is continuously updated (IOC, 2014).

(ii) 2012 Construction Key Learning During

The "Yellow Book" was identified as a critical element to the success of the construction projects (Townley, 2012, APM, 2012). This logged all the changes and elements that needed review throughout the construction projects and was disseminated to all the teams and senior management. It was a key learning and communication tool. The projects were constantly reviewed as they progressed and amendments were made based on experience judgements and a full picture of what was happening. An example of this was the changes to the aquatic centre and the introduction of temporary seating additions rather than the initial full build as it was highlighted and recognised that in order to meet the timescale it was the only way to proceed (Townley, 2012, LOCOG, 2012).

(iii) 2012 Construction Key Learning After

Appendix 8.4 details the LOCOG knowledge management process. In addition, the Association of Project management teamed up with the Olympic Delivery Authority (ODA) to develop a "learning Legacy "series. Many of the key tools and techniques used in the construction projects are logged. The ODA also produced a paper outlining the legacy learning from London 2012 construction projects (ODA, 2012) which outlines how successful and how well used the legacy learning from the project has been. Even 2 years after the end of the official programme of construction projects was completed there is access to a whole database of learning (APM, 2012). The sustainable building techniques used in London 2012 have become a benchmark standard and the UK Green Building Council promotes the London 2012 legacy learning techniques, (UKGBC, 2012).

The key elements that were recognised by LOCOG as vital to successful project delivery and to make sure that the lessons learned were applied were: leadership; roles and responsibilities; own the project; planning; partnerships and relationships (see Appendix 8.4).

We can deduce from the analysis of this data that the application of lessons learned was a vital and integral part of the whole success of the project.

4.1.2 Government National Programme for I.T in the NHS

This programme was due to be the largest civilian computer project undertaken. It had a budget of approximately £12billion in the end and was to be completed in under three years. The complete project and the disastrous results are outlined in detail in Bacon and Hope (2013, pp174-201) but a chronological summary of the key elements of the project are outlined in Appendix 8.5, (as for the previous case study, the Appendix also includes the full list of references used). Compared to the Olympic project, the analysis of this project is summarised by the fact that it did not utilise the lessons learned before, lessons weren't applied during and no lessons have yet been taken forward as the 3 year project has not yet been finalised 11 years on.

It appears that the whole project was ill conceived from the start. The original concept was perhaps a good idea but as outlined in the data in Appendix 8.5 the delivery of the project seemed to start badly and then just got worse. Trying to apply a lessons learned journey, as for the Olympic project, the information did not clearly fall into place but to keep the analysis technique consistent, the analysis can be summarised as follows:

(i) NHS IT Project Before

Meetings were held to explore the feasibility and advice given by both Microsoft and Cisco. These were not necessarily experts in the healthcare sector but based on their advice a plan was drawn up. Once the plan was delivered the timescale advice was not accepted and reduced significantly. This was probably one of the most critical elements that hindered the project success from the very start.

The blueprint plan determined it to be a very high risk project and project profile costs of £5billion were estimated. This cost and risk information was not published when the plan was launched.

The classic list of lessons learned about why IT projects fail (Standish,1995) including not having clarity of objectives, no end-user involvement, avoid the pitfalls of previous similar projects were all in evidence. Even when expert opinion was sought it was ignored and any lessons that may have been learned from previous "bad" government IT projects, of which there were many, (Bacon and Hope, 2013), was not utilised.

(ii) NHS IT Project During

Having been given the go ahead, at the highest level, the project started with the budget reduced to £2.3Billion, (50% reduction on the original £5billion estimate), and the timescale almost halved (from five years to under three years). A market study was then commissioned for external consultants to look at the IT healthcare market. This report was never published but seemingly it concluded that no existing company had the capacity to deal with a project of this size and complexity. So, based on "other" (unknown) information the contracts were let at high speed to four different contractors, within a few months, with no consultation with end users.

It was identified during the project that not involving the end-users was a critical error, so a clinician group was set up to identify key requirements and they created a working mechanism for delivering clinician input into the programmes. However, there was no time to include their consultation prior to the contracts being awarded. As a gesture afterwards they were consulted again, but their input couldn't be accommodated into the contracts that had already been "agreed" and signed

The track records of any of the four contractors was not proven in any hospital IT systems and this was yet another lesson which should have been obvious. Also, the fact of splitting the country into five regions and giving the contractors the flexibility to use different software options from untested providers in the UK, was another basic lessons learned mistake.

The contracts ran into problems quickly. The timescales to deliver what had been asked were going to be missed by the contractors. What had been

asked to be delivered was not going to work for those using the system, or deliver what the original vision had been (Hendy et al, 2005).

All in all, no lessons learned seemed to be employed during this project whatsoever. All of the classic IT failure problems that keep being repeated, as outlined in the Standish reports from 1995 through to 2009, were repeated for this project too. Locke (2013, P.19-21) identifies exactly the steps to follow, but even the idea of re-assessing the project at key intervals, knowing that it was going badly wrong, did not seem to happen.

(iii) NHS IT Project After

Six years into the 3 year programme the National Audit office issued a report concluding that the programme had "largely failed to deliver on its central objective" (Bacon and Hope , 2013p p198). Nine years after the start of the programme it had cost £2.7 billion with still nothing to show for it and there are contractual court cases looming. As the project is still dragging on there are no lessons after to consider. This project may well be used subsequently of how "not" to do a project which will contribute to the lessons learned on IT projects. This is an extreme example of no lessons being learned or seemingly taken on board at any time during the project.

It is clear from the case study that the concept of learning lessons from previous experiences and consulting experts for their opinions was understood. Experts were consulted and brought in, studies were carried out and the risks of large IT projects were identified. They knew that consultation with the end users should be part of the implementation (Pagliari, 2005).However, all of this knowledge was ignored, and the reasons are not clear why. It could be assumed that the political nature of the project, (Humber, 2007), undermined the whole idea of any sensible project management as no processes and project methods seemed to be employed This in turn lead to the fact that no lessons learned were respected and any challenges were completely rejected, even to the point of omitting difficult

issues for example the very high risk rating and removing unpalatable facts such as the true costs (Bacon and Hope, 2013, p.176).

4.2 Lessons Learned In- Depth Interviews Primary data

From the analysis of the two extreme case studies above the data has shown that successful projects and failing projects do exhibit different lessons learned journeys. If a project has clear leadership, clarity of objectives, roles and responsibilities, processes in place and a culture of wanting to succeed then lessons are learned and applied usefully as for the Olympics. From the data analysed for the Olympic project the data matrix (see Appendix 8.3) was able to demonstrate a logical progression and the lessons learned at the start, during, and at the end, all fitted into a coherent pattern. This could not be achieved for the NHS IT project. There was a chronological timeline but with no ongoing evaluation and objectives, processes not being applied, in obviously too tight a timescale, it only provided haphazard data. Therefore the set of questions devised for the interview guide for the primary research interviews were designed to follow a logical progression as for the London 2012 projects. It was felt that this would get the best information available and allow for a reliable, systematic analysis when all the data had been collected.

4.2.1 Background on Interview Sample

In order to provide some background to the interviewees, (although keeping their anonymity and confidentiality intact), the first few questions during the interview were asked just to put in context where the interview data was coming from and the type of experience that the interviewees had.

The sample of project managers interviewed were all middle to senior project managers, two females and five males, aged between 35 and 64 and currently working for a range of organisations. The organisations included Serco, BT, The London Fire Brigade, The NHS, an Independent Consultant, Ofcom, and City of London Corporation. Thus there was a range of private companies, public sector, National government departments and local government.

The project managers were asked to identify either a successful or unsuccessful project that they had project managed in the last three to five years and in some cases they chose to discuss a project that was not carried out in their current organisation.

It was interesting to note that six out of the seven identified what they considered to be successful projects and only one identified an unsuccessful project in order to demonstrate a good lessons learned project.

Of the projects discussed the value of the projects to the various organisations ranged from £1.4million up to £250million. Four of the projects were under £5million and three were between £25million and £250million.

The types of projects discussed included: part of a transformation programme; to Increase Capability/Win more business; Cost Cutting/Increase efficiency; part of an Improvement Programme; Compliance; New Product/Service and Cost minimisation

This provides a context for the sample of project managers interviewed, maintaining their anonymity, but demonstrating the wide range of projects considered. The data has been provided generally above in order to maintain confidentiality of the PMs and projects discussed. It was not intended to make population generalisations or trends based on the information but it gives the context of the projects that the project managers were dealing with as part of their everyday role. From their ages it can be inferred that they weren't new to project management but had varying degrees of experience.

4.2.2 Phase one - Manual Data Reduction

The seven interviews were carried out over a 4 week period. Each of the interviews was transcribed by the researcher. This generated a lot of data to assess, (see appendix 8.2). A manual data reduction exercise was then carried out to complete the first phase of the analysis. This data was then imported into the computer aided qualitative data analysis software (CAQDAS) package, Nvivo, for the second phase. The data imported is shown

in Appendix 8.6. The manual data matrix provided 119 references, 7 of which were blank due to the addition of some supplementary questions asked later in the interviewing process. This provided 112 references to assess and code.

4.2.3 Phase two - Coding

As the questions had been deliberately framed to follow the lesson learned journey the data could then be further coded into responses relating to Lessons Before, Lessons During and Lessons After. Appendix 8.7 gives the breakdown of these references. Lessons before has 35 references, Lessons during 35 references and lessons after has 21 references.

From this data there were some initial observations made. Table 3 below outlines the findings:

Table 3: Initial Interview Observations

Data Section	Initial Observations
Lessons before	No mention of project methodology
	Project management Office only mentioned twice
	Guidance from similar projects was available for the majority of participants
	Just over half the participants Considered lessons from previous internal Projects
	The majority did not look at best practice externally
	Overall only two participants explored all avenues for lessons learned
	Good governance structure and early planning were also highlighted
Lessons During	Key elements repeatedly mentioned were Team, Governance, Culture, Processes and Planning
Lessons After	In addition to the elements identified in Lessons During, Support and Managment Buy-in and Relationships were highlighted. Also ALL PMs used lessons learned in their next projects

This Table shows that for the first section of questions there were some which were a yes/no response that was subsequently expanded upon. However this allowed a few analytical generalisations to be made such as the breakdown of what variation of project lessons were accessed at the very start of a project. Broken down into these umbrella themes of lessons before, during and after, the data could be more easily analysed to try and

identify themes emerging in the separate sections. It was interesting to note that all of the project managers interviewed said that personally they had all taken and used lessons learned from the projects. So individual learning seems to take place on all projects.

The findings from these initial observations enabled the next phase of the analysis to be developed.

4.2.4 Phase Three - Further Coding Analysis

From the information above in phase two, the categories, or Nodes as they are called in NVivo, for the next stage of coding were derived. The data was grouped into a number of nodes categories: Processes, Governance/Sponsors, Relationships/Networks, Team, Culture and Methodology. Any references relating to any of these nodes was grouped together to see exactly how often these elements were mentioned or discussed. In addition overarching nodes of lessons learned and lesson ideas were also created.

The breakdown of how often each of these nodes was referenced is shown in Table 4, taken from the coding summary report attached in Appendix 8.8. (The number of references for Other Miscellaneous not counted as includes spurious topics and not meaningful).

Table 4: Breakdown by Nodes

Node	Coverage	Number of references
Lessons Info	23.57%	73
Processes	14.44%	49
Team	12.88%	43
Other Miscellaneous	11.60%	-
Governance_Sponsors	10.90%	44
Relationships_Network	10.52%	44
Culture	7.77%	38
Methodology	6.65%	28
Lesson Ideas	1.67%	9

The reference coverage is better demonstrated pictorially in Figure 5. This shows that the node of lessons learned is referenced most often, as would be expected in a discussion on Lessons learned.

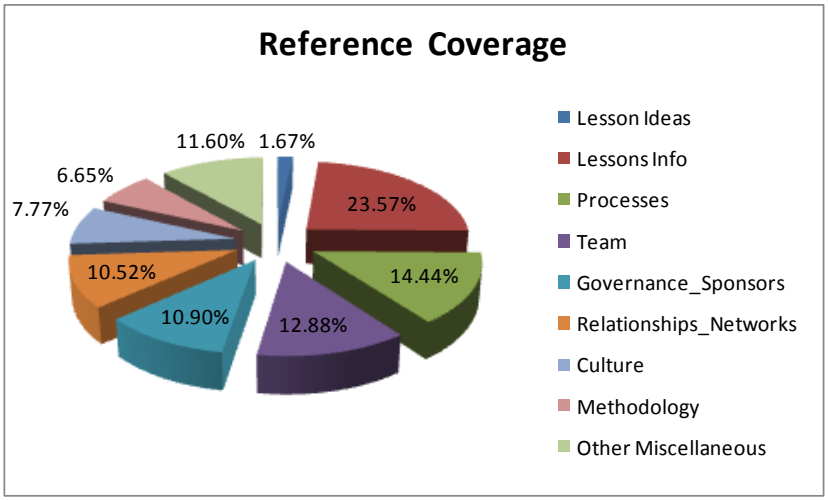


Figure 5: Reference Breakdown by Nodes

In all, the eight main categories in Table 3 account for just over 88% of the references within the data collected, leaving just under 12% as "other miscellaneous" references.

48.74%, just under half of all the references, relate to the themes of Processes, Team, Governance and Relationships.

Within the coding process there will be some overlap of references for nodes, as often the same quote can contain references to multiple nodes. Overall, for the project managers interviewed, it would appear that Processes, Team, Governance and Relationships are the key categories that have an impact when considering or trying to apply lessons learned.

Referring back to the literature review in Chapter two, the key areas identified as relevant to lessons learned were: methodology; success or failure; culture; governance and application of lessons learned. If we assume that application of lessons learned refers processes used then all of these categories were highlighted in the data from the interviews. Table 5 shows the prevalence of these specific topics within the references:

Table 5: Literature review categories

Node	Coverage	Number of references
Lesson Ideas	1.67%	9
Lesson Ideas	1.67%	73
Methodology	6.65%	49
Culture	7.77%	44
Governance_Sponsors	10.90%	38
Processes	14.44%	9
Lessons Info	23.57%	28
	66.67%	250

The bar chart representations below in figures 6 and 7 show the increasing relevance of each of the categories as outlined in the literature review compared to the interview research. It would appear that from the primary data collected that team issues and relationships are key additional themes that were not investigated in the literature review but, in everyday projects, would appear to be more relevant issues than culture and methodology.

Figure 6 Literature Review Categories

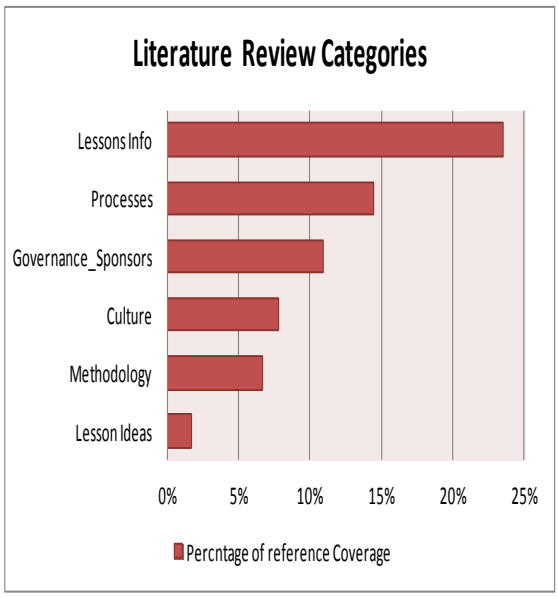
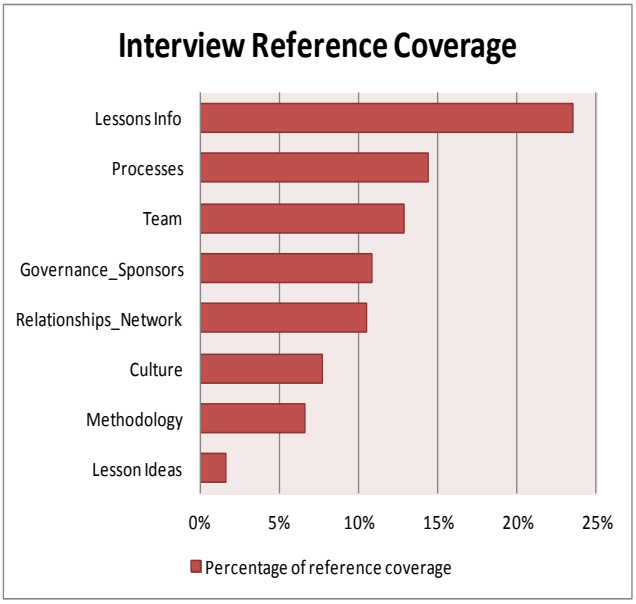


Figure 7 Interview Categories


Interview Reference Coverage
Lessons Info
Processes
Team
Governance_Sponsors
Relationships_Network
Culture
Methodology
Lesson Ideas
0%
5%
10%
15%
20%
25%
Percentage of reference coverage

A further comparison, linking to the secondary data analysis, is that the key elements highlighted from the London 2012 successful projects were: leadership; roles and responsibilities; own the project; planning; partnerships and relationships (LOCOG, 2012)

The overlap here would seem to be Governance_Sponsorship (this would encompass leadership and roles and responsibilities) and relationships_networks. It is interesting to note that Planning was mentioned much more by the project manager who described an unsuccessful project as it was felt that this would have made a significant difference to the outcome of the project if it had been addressed at the outset. The actual quote was" ...big lesson is [-] put the planning in first..." It certainly would have made a difference to the unsuccessful NHS IT project too.

4.2.5 What does the data tell us?

So what can we infer from the data? The literature review and the secondary case study data did provide a good basis for the primary data collection. It was satisfying to see that many of the themes discussed in the literature review were pertinent. But did the data provide what was needed to fulfil the objectives of the research and more importantly did it answer the question "What are the factors that Influence the application of lessons learned, and how does this impact on project success or failure?"

4.2.5.1 Objective (i) - To identify if 'lessons learned' is really a concept used by project managers and for all projects both large and small

From the data it is very evident that the concept of lessons learned is used by project managers for all types of projects. How well and how effectively they are applied does seem to be influenced by a number of factors. Some of these were discussed in the literature review and others were highlighted specifically from the research carried out.

Of the literature review themes, the most common categories to be referenced from the primary data sample, were governance and processes. This links in with OGC (2009), PMI (2014) and Gorelick and Milton (2004).

From the data collected and analysed the most prominent data lists not only governance and processes but the additional themes of team and relationships and networks which were not themes identified in the literature.

Looking at the data from the primary research, the most telling comments on the most highlighted themes of governance, processes, team and relationships are shown in Table 6 on the following page (page54).

From the quotes included in the table it starts to emerge that all of the themes are interlinked and that it starts from the top of an organisation. "Putting in a governance structure" based on lessons learned previously implies a solid process. "Applying appropriate processes" would infer that "the right people" are assigned to the team and so "the importance of relationships" is established from the start.

4.2.5.2 Objective (ii) - To identify/investigate the key influencing factors that may hinder/increase the knowledge that can be put to use for project success

From the discussion in the interviews it was clear that all of the themes in Table 6 were relevant in varying degrees. These appear to be the key elements that the project managers identified that they felt impacted on the opportunities for applying lessons learned. The team and relationship themes were more prevalent at the start of learning lessons (Before) but the governance and process themes emerged as the biggest hindrance or help for achieving project success in the lessons learned "during" phase of the journey as identified. This was not brought out in the literature review as the key phase and so indicates that this may be where the gap needs to be filled.

In some organisations there were recognised strict governance procedures and the organisations were quite process driven. These were not necessarily the bigger organisations but those that had stronger incentives to get the projects right as the ramifications would have significant impact on organisation reputation as well as possibly financially.

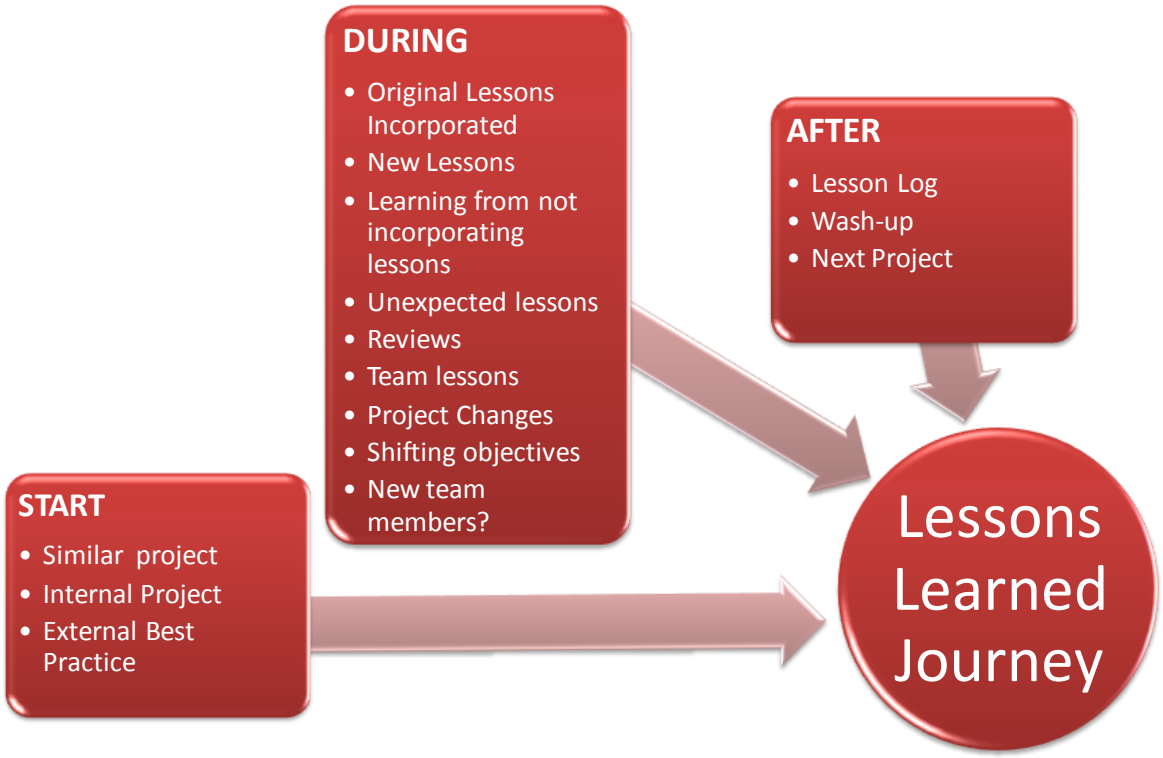
Table 6: Project Manager Key Quotes on Most Relevant Themes

Theme	Key Quotes
Governance	"Putting a governance structure in that managed the risks already known from problems in the past"
	"Get the right support at the right level" "Get people involved if they have a vested interest"
	"...because of lack of support credibility was compromised..."
	"If lessons learned not used project board not right..."
	"big reality check for project board who realised that they could not incorporate what they wanted in the timescale available"
	"realised it was a brave decision to stop..."
	"Committment by organisation to try and support makes a difference"
Processes	"Within IT projects experience states that processes need to be formalised..."
	"Introducing good processes makes things happen Better"
	"Knew process must include talking to the right people..."
	"Put in place appropriate processes"
	"Lessons log has been used to develop new guidance on how investigations are conducted and processes involved"
Team	"Having the right people assigned to the team"
	"Internal organisation prevented good teamwork..."
	"Be very strategic with selection of team members"
	"boils down to competent people with relevant experience"
	"need experienced people around to challenge approaches and point out pitfalls"
	"Make up of the team was critical. Innate knowledge already gained meant proposals were sensible..."
	"Project team selection could have been more strategic"
	"...people are allocated projects on their availability rather than skill and expertise"
Relationships	"At the start of a new project individual relationships are key"
	"personal networks most useful"
	"Put in place regular meetings with a network of contacts"
	"relationships developed with people...this was enabled by knowing what does and doesn't work from previous projects"
	"...carrying forward recognition of the importance of relationships"
	"persuading teams internally that it wasn't just another layer of bureaucracy"

4.2.5.3 Objective (iii) - To identify if there really is a lessons learned "journey" and if and where in that journey lessons stop being learned.

With regard to the lessons learned journey this did seem to be apparent, as outlined in the PRINCE2 methodology (OGC, 2009). However, from a lot of the literature and probably in a lot of people's minds, it is assumed that "lessons learned" are all accessed and used at the beginning of a project, a few things are learned along the way and then all the learning is stored and accessible from "somewhere" for future projects. From the analysis of the data from this research, it would indicate that a few lessons learned are available at the start of a project and then there is a great deal of learning taking place during and then, if you are lucky, a few things are logged at the end. Figure 8 shows how the journey looked for the project managers interviewed for this research:

Figure 8: Lessons Learned Journey for Interviewees:



Even looking at the case study analysis for the successful London 2012 project (see Appendix 8.3), many of the lessons are learned and utilised in the "during" phase of that project. Therefore it becomes clearer that the importance of having the governance and processes in place allow for this to happen. From the primary data the processes, or lack of processes, were referenced frequently, but for the Olympic project it was recognised that because of the size and scale of the project these elements had to be embedded from the start, (LOCOG, 2013), in order to keep the project under control and to create an awareness of any changes improvements throughout the project. This focus is not always as prominent for smaller scale everyday projects and yet it is a vital ingredient for the application and utilisation of lessons learned.

Given all these findings the data did reveal that lessons learned is a concept used and applied in all types of projects. However it would seem that the application of lessons learned is directly affected by organisational factors of governance and processes with the additional factors of teams and relationships having a significant impact too. This may be the key to why in most everyday projects applying and effectively using lessons learned becomes too difficult on a practical basis and the benefits are never fully utilised.

4.2.6 Additional Learning from the data

Although the research was specifically carried out to answer the research question and objectives, with qualitative research a lot of data is generated but only some is needed to answer the initial gap identified.

One of the more interesting comments from one of the participants was the comment that it seems "for Public sector/local government often projects are run by consultants - they use their own lesson logs and bring their [own] lessons learned. In a way they are buying their lessons learned and avoiding / transferring the risks. "

Looking at the case study data even for the Olympic project it seems that it was a key strategy to "bring-in/buy-in" expertise and previous Games

knowledge from individual venue designers, to end-user knowledge (athletes), to the whole project management construction consortium (CLM).

This would seem to throw up a whole new lessons learned research question on the benefits of "in-house" project management vs "bought-in" consultancy services.

Perhaps that's why National and local government don't perform well on project management. In the past they have often relied on consultants so they don't generate lessons learned within their own organisations. There is no organisation "memory" and no internal data source - people or databases to refer to. So all in-house projects are starting from scratch with no in house expertise to use and thus no lessons to draw on...

On the other extreme, with regard to how to embed lessons learned for the organisation, another participant suggested that just before project closure, from the log and team analysis of lessons learned to ask the key question "What would you communicate to others?" This provides key learning, both positive and negative, which can then be presented creatively to departments or even the whole organisation to pass on the lessons.

Chapter 5

5.0 Conclusion

This study was borne out of the fact that projects are more likely to fail than succeed, and when they do fail, they fail again and again for the same reasons. This prompted the question as to why this happens, and on identifying the gaps in the relevant literature the study focussed on investigating: "What are the factors that influence the application of lessons learned, and how does this impact on the project success or failure?"

A combined study of secondary and primary research was carried out as this provided an opportunity to compare very large scale projects with a sample of everyday projects.

For the dissertation submission there were pre-determined timeframes and so due to this constraint, the interview sample size was limited and also it was not a random sample of project managers which may have altered the outcomes. However, the CAQDAS NVivo software assisted greatly with overcoming this constraint for the analysis.

The analysis of the data generated from the research definitely confirmed the concept of a lessons learned journey. The primary data obtained from the interviewees gave a good insight into the journey associated with everyday projects and certainly defined it more fully than had emerged from the literature review.

The themes of governance, processes, teams and relationships were emphasized as the key factors that impacted on the successful application of lessons learned. Although this is considered in some of the literature, the actual relevance of having lessons learned processes embedded in an organisation does not seem to be appreciated fully and this was iterated time and again from the interview data and is a key finding from this study.

From the case study material, particularly the Olympic case study, it was clear that the processes applied throughout the whole project were a key factor to success. Due to the nature of the Olympic project with its history in

the Olympic movement, the application of learning as an entire organisation was understood. This is the key element that seemed to be missing in many of the organisations that the interviewed project managers came from.

From the research it also became apparent that the majority of lessons learned occurred while the project was ongoing or “during”. Therefore to apply lessons learned effectively, the processes and governance have to be in place and this is a critical factor. It was clear that a number of the project managers had recognised this themselves and it was acknowledged that "commitment by [the] organisation to try and support makes a difference".

Thus the key learning from this research is that If lessons learned is taken seriously as an organisation function from the outset, and not considered "a nice idea" or concept that can be implemented, or not, as time permits, then it can make a significant difference to the outcomes of projects.

It can be done, as the Olympic case study demonstrated, but the will of the organisation has to support it, otherwise it is down to individual project managers to try and implement "as best they can". This can be a real struggle if the organisation doesn't recognise the benefits to be gained. This may be the reason as to why, in most everyday projects, applying and effectively using lessons learned becomes too difficult on a practical basis, and the benefits are never fully utilised. Leaving it to individuals raises all the issues on governance, teams, processes and relationships that we have seen highlighted. Having management "buy-in" to a lessons learned process, as well as the concept is vital, as then all the other elements will logically fall into place.

One of the quotes obtained from the primary data that seems to encapsulate how seriously lessons learned should be taken was: "... because of the type of organisation [it is], need to take more account of lessons learned - Someone could die!”

This is a very extreme example but it does demonstrate that depending on the responsibility and accountability that people have, the organisation has a

responsibility to support its employees in being able to utilise lessons learned. If people's lives depended on a successful project outcome then the same mistakes would not be made over and over again. It seems that the rigour that is applied to projects and how they are run can be vastly different in different organisations, and that can lead to vastly different outcomes.

If an organisation doesn't recognise the benefit of lessons learned and thus no processes exist to capture the benefits, it is a struggle for the project manager to encompass all the lessons that could be applied. This may be why, in most everyday projects, applying and using lessons learned can be just overlooked in the day to day implementation of the project. If it is too difficult to incorporate the benefits, the lessons are "lost" till the next project, or forever.

It was interesting to note in the additional data highlighted that the idea of buying-in lessons was a well-used method by national and local government, and other organisations. Depending on the nature of the organisation, or more probably the project, it may make sense to do this. However if the organisation frequently does similar projects, it must make more sense to build organisational knowledge and processes.

The research may not have provided a definitive answer to the question posed but the key influencing factors have been identified. There is a clear lessons learned journey and the governance and the processes have been identified as having a significant impact on the application of lessons learned for a specific part of that journey. It is the governance and processes in place, when a project is underway, that appear to be most vital. This, In turn, can affect team motivation and can impact on the relationships that need to be developed. It would provide authority to the whole process thus encouraging the team to work effectively, utilising lessons learned and reaping the benefits as the project progresses. None of these elements work in isolation but sometimes adjusting one critical element can have a dramatic effect on a whole project. If the right processes are employed, then access to expert knowledge, individual knowledge and organisation

knowledge can be combined and utilised, leading to better project outcomes.

Identifying these influencing factors and more fully understanding the lessons learned journey offers some insight to both project management practitioners and the academic community to see where the focus of lessons learned should lie in everyday project management. As well as identifying the critical area for organisations to understand and address, it has also formed some interesting areas for theorists and academics to investigate. The “outsourcing” of lessons learned and also perhaps widening the scope of lesson learned for project management to incorporate the whole field of learning. Lessons learned can be applied to every field of operation. If it can be identified how best the process for this can be achieved, its applicability should cut across all areas not just project management.

"For academic knowledge to be useful it must illuminate experience and provide explanations for what we observe that puzzles or excites us" (Schein 2010, p2). Hopefully, to some extent, that is what this research has provided.

From the research analysis and conclusions a number of recommendations are proposed in the next chapter.

Chapter 6

6.0 Recommendations

Following on from the data analysis and conclusions drawn in the previous chapters a number of recommendations can be made. Two recommendations can be identified directly relating to the conclusions drawn in answer to the research question. These are that:

1. Organisations need to recognise and incorporate “lessons learned” as a serious organisation function
2. Organisations need to commit to supporting the lessons learned process, particularly when a project is underway. Governance and processes need to be right. This is the critical time to capture and use key lessons and if they can be easily captured and disseminated with the support of the organisation, the outcome of the project is likely to be more successful. These can then be fully utilised in the next projects creating a virtuous circle, which could feed through the whole organisation.

The nature of qualitative research generates extensive data and often unexpected and original information can come to light unrelated to the specific area being investigated. In this instance there were a number of supplementary questions which were discussed that provided additional information to that used in this report. Just because it was not incorporated in this study does not mean it was not useful information. It is this type of data that can generate ideas on areas of further study.

In the data analysis of the primary research alone, some interesting observations were made and these would definitely provide the topics for further research in the future. The concept of "Buying-in" lessons learned and how and why that is done would be a relevant, possibly contentious, area to investigate, particularly within the public sector. It may go some way

to explaining why public sector projects often seem to have very poor outcomes (cabinet office, 2014). If lessons are never generated and kept within an organisation then that knowledge is always “lost” and internal employees never expand their own learning.

Leading on from the above it was also interesting to note that all of the project managers interviewed confirmed that, whether the projects they discussed were successful or unsuccessful, they all used some of the learning from that project in the next project they did, and have personally logged those lessons for future use. This would link closely to experiential learning theory with the idea that learning by doing, embeds the learning (Kolb, 1984). Therefore, perhaps lessons learned for Project management, should not be considered in isolation – personal learning, educational learning, knowledge management, experiential learning are all areas that have a vast amount of theory and practical knowledge of how we learn, and combining them together may provide an enlightened approach that could perhaps be used in any field.

Many of the project managers interviewed also had ideas on how to disseminate and find creative ways of sharing the knowledge gained from their projects and “sharing it practically” came up a number of times. This too would be a really interesting area for further investigation.

The lessons learned journey doing this dissertation project has been challenging and valuable. The processes throughout were in place but timeframes "during" were probably the most demanding in the whole process. The results have definitely been worthwhile and hopefully provide some insights on applying lessons learned in the future.

[Word Count 14,038]

7.0 Bibliography

Ahmed, P.K.,Lim, K.K. and Loh, A.Y.E (2011) *Learning through Knowledge Management.* Oxford: Routledge

Anderson , G. and Roskrow, B. (1994) *The Channel Tunnel Story.* Spon (E&F)

APM (2006) *Association for Project Management (APM) - Body of Knowledge*. 6th Edition UK: Association for Project Management.

APM (2011) *Directing Change A guide to governance of project management*. 2nd Edition. UK: Association for Project Management.

APM (2012)' Delivering the greatest show on earth' *APM Legacy Learning* [Video and podcast]. 30 March 2012 Available at: http://www.apm.org.uk/news/delivering-greatest-show-earth-video-and-podcast#.U_x0SvldWuI (Accessed August 2014)

APM Group and the Stationary Office (Axelos) (2011) "*Organizing the "greatest show on earth*". Best Management Practice Case Study" [Online] Available at: http://www.axelos.com/gempdf/Greatest_Show_on_Earth_Case_Study_Nov11.pdf (Accessed August 2014)

APM (2014) *'Peeling back the covers on government programmes event"[Video]:*18 June 2014 Available at: http://www.apm.org.uk/news/peeling-back-covers-government-programmes#.VA5TqPldWuI (Accessed 21 August 2014)

Atkinson, R. (1999) Project management: cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteria, *International Journal of Project Management* Vol. 17, No. 6, pp. 337-342 [Online] Available at: http://www.sciencedirect.com/science/article/pii/S0263786398000696# (Accessed on 1 September 2014)

Bacon, R. and Hope, C. (2013) *Conundrum: Why every government gets things wrong and what we can do about it* **.** London: Biteback publishing.

Berkun, S. (2005) *The Art of Project Management.* Sebastopol, USA: O'Reilly Media Inc

BP PLC (2011) *Summary review 2011* [Online]. Available at: http://www.bp.com/content/dam/bp/pdf/investors/BP_Summary_Review_2011.pdf (Accessed 1 September 2014).

Bryman, A. and Bell, E. (2007) *business research methods.* 2nd Edition, New York: Oxford University Press

CILT- Chartered Institute of Logistics and Transport (2005) Economic case for the UK Chunnel rail link'marginal' *CILT World,* 12, p.8, Business Source Complete, Ebscohost (Accessed august 2014)

CILT -Chartered Institute of Logisitics and Transport (2008) RIVAL AIRLINES UPSET AS BRITISH AIRWAYS DELAYS LONG HAUL SWITCH TO LHR'S NEW TERMINAL 5 , *CILT World*, 18, pp. 5-6, Business Source Complete, EBSCO*host.* (Accessed August 2014)

Cleland, D. and King, W. (1998) *Project Management Handbook.* 2nd Edition, pp275-301, John Wiley & Sons, New York: Van Nostrand in Reinhold

Cooke-Davis, T. (2002) "The ''real'' success factors on projects" *International Journal of Project Management* 20 (2002) 185–190 [Online] Available at: http://www.sciencedirect.com/science/article/pii/S0263786301000679# (accessed August 2014)

Crawford, L. University of Technology, Sydney (2000) Project Management Competence for the New Millennium. In: Proceedings of 15th World Congress on Project Management, London, England, IPMA

Dale, J. (2014) "Learning from the misfortunes of others" *APM Programme Management specific interest group,* 24 April 2014 [Online} Available at: http://www.apm.org.uk/blog/learning-misfortunes-others (Accessed 5 May 2014)

Deneufville, R.(1994) The baggage system at Denver: prospects and lessons*, Journal of air transport management.* Vol.1(4),p.229-236 [Online] Available at : http://www.academic.marist.edu/~jzbv/SoftwareDevelopment/Crisis/DenverAirportBaggage.pdf (Accessed August 2014)

Gray, D.E. (2004) *Doing Research in the Real World* London: SAGE Publications Ltd

Great Britain. Cabinet Office (2014) *Major Projects Authority Annual report 2013-14.*[Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/315777/MPA_Annual_Report_2013-14_publication.pdf (Accessed July 2014)

Great Britain. Department for Culture Media and Sport (2013) "Report 5: Post-Games Evaluation Meta-Evaluation of the Impacts and Legacy of the London 2012 Olympic Games and Paralympic Games SUMMARY REPORT" [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224181/1188-B_Meta_Evaluation.pdf (Accessed May 2014)

Great Britain. Department of Health (2002) Delivering 21st Century ITSupport for the NHS National Strategic Programme [Online] Available at: http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4067112.pdf (Accessed August 2014)

Great Britain. Department of Health (2012) The power of information**:** Putting all of us in control of the health and care information we need [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213689/dh_134205.pdf (accessed August 2014)

Great Britain. Office of Government Commerce (1999) *Managing Successful Programmes*. London: The Stationary Office 1999, ISBN 0 11 330016 6

Great Britain. Office of Government Commerce (2009) *Managing Successful Projects with PRINCE2*. Norwich: The Stationary Office 2009, ISBN 978 0 11 331059 3

Gorelick, C. and Milton, N. (2004) *Performance Through Learning: Knowledge Management in Practice.* UK: Routledge

Hayes, F. (2004) Chaos Is Back, *Computerworld*, 38, 45, p. 70, Business Source Complete, EBSCO*host*. (Accessed 25 August 2014).

Hendy J, Reeves, B.C., Fulop, N., Hutchings, A. and Masseria ,C. (2005) Challenges to implementing the national programme for information technology (NPfIT): a qualitative study *British Medical Journal(International edition)* 2005, Vol 331 (7512) P331-336 Academic Search Complete, EBSCO*host*, (Accessed 2 September 2014)

Humber, M (2007) BMJ National programme for information technology Is sorely needed and must succeed—but is off to a shaky start, *British Medical Journal*. May 15, 2004; 328(7449): 1145–1146.doi:10.1136/bmj.328.7449.1145 (Accessed 1 September 2014)

International Olympic Committee (2012) Factsheet Legacies of the Games Update 2012. [Online] Available at: http://www.olympic.org/Documents/Reference_documents_Factsheets/Legacy.pdf (Accessed 5 May 2014)

International Olympic Committee (2014) Factsheet OGKM Update 2014. [Online]. Available at: http://www.olympic.org/Documents/Reference_documents_Factsheets/OGKM_UK.pdf (Accessed 5 May 2014).

Kintrea, K. Law, D. Argent, N. Organ, L. (2011) *Lessons learned from the London 2012 Games construction project: Learning Programme assurance on the Olympic Delivery Authority construction programme*. UK: Olympic Delivery Authority. [Online] Available at: www.learninglegacy.independent.gov.uk (Accessed 27-8-14).

Kolb, D. (1984).*Experiential learning : Experience as the source of learning and development*. Englewood Cliffs, [N.J.] ; London: Prentice-Hall.

KPMG (2013) Avoiding Major Project Failure – Turning Black Swans White [Online] Available at:http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/avoiding-major-project-failure.pdf (accessed August 2014)

Larson, E. and Gray, C. (2011) *Project Management: The Managerial Process*. London: McGraw-Hill

Lin-Hi, N. and Blumberg, I. (2011): The relationship between corporate governance, global governance, and sustainable profits: lessons learned from BP, Corporate Governance, VOL. 11 NO. 5 2011, pp. 571-584, [Online] DOI: 10.1108/14720701111176984 (Accessed 1 April 2014).

Lock, D. (2013) *Project Management*. 10th Edition. Surrey, UK: Gower Publishing Limited.

London East Research Institute of the University of East London (2007) *A Lasting Legacy for London? Assessing the legacy of the Olympic Games and Paralympic Games*. London: Greater London Authority. [Online] Available at: www.uel.ac.uk/londoneast/research/documents/lasting-legacy.pdf (Accessed 5 May2014).

London Organising Committe of the Olympic Games (LOCOG) (2013) London 2012 olympic Games Official Report (volumes 1,2,3) [Online] Available at: http://www.olympic.org/Documents/Reports/Official%20Past%20Games%20Reports/Summer/2012/ENG/2012-RO-S-London_V3_eng.pdf Accessed 5 May 2014

Maya, I., Rahimi, M., Meshkati, N., Madabushi, D., Pope, K. and Schulte, M. (2005) Cultural Influence on the Implementation of Lessons Learned in Project Management, *Engineering Management Journal*, 17, 4, pp. 17-24, Business Source Complete, EBSCO*host*. (Accessed 21 May 2014)

Milton, N. (2005) *Knowledge Management: for Teams and Projects.* Oxford: Chandos Publishing

Milton, N. (2010) *The Lessons Learned Handbook: Practical Approaches to Learning from Experience.* Oxford: Chandos Publishing

Milway, K. and Saxton, A. (2011) THE CHALLENGE OF ORGANIZATIONAL LEARNING, *Stanford Social Innovation Review*, 9, 3, pp. 44-49, Business Source Complete, EBSCO*host.*(Accessed August 2014).

MPMM (2012) *Project management best practices*. [Online] Available at: www.mpmm.com/project-management-best-practices.php (Accessed 5 May 2014)

Morris, P. and Pinto, J. (2011) *The Wiley guide to Project Organisation and Project Management Competence*. Hoboken: Wiley, ISBN: 9781118276860

ODA -Olympic Delivery Authority (2010) *The Big Build :Completion*

Olympic Delivery Authority (2012) *Learning Legacy Lessons learned from the London 2012 Games construction project* [Online] Available at: http://learninglegacy.independent.gov.uk/documents/pdfs/programme-organisation-and-project-management/426289-2012-ll-construction-tagged.pdf (Accessed August 2014)

Olympic Delivery Authority (2013) London 2012 Learning Legacy [online]. Available at http://learninglegacy.independent.gov.uk/themes/programme-organisation-and-project-management/index.php (Accessed 5 May 2014)

Papke- shields, K.E., Beise, C. and Quan, J. (2010) Do project managers practice what they preach, and does it matter to project Success *International Journal of Project Management* 28 (2010) 650–662 [Online] Available at : http://www.sciencedirect.com/science/article/pii/S0263786309001239# (Accessed August 2014)

Perkins, S. and Arvinen-Muondo, R. (2013) *Organisational Behaviour: People, Process, Work and Human Resource Management* London: Kogan Page. e-ISBN 9780749463618

Pharro, R., APM Group Limited, (2007), 'Position of PRINCE2™ in the World of Programme and Project Management.

PMI - Project Management Institute (2013*) A guide to the Project Management Body of Knowledge (PMBOK Guide)*. 5th Edition. Pennsylvania: Project Management Institute.

PMI - Project Management Institute (2013) *Project Management Talent Gap Report* [Online] Available at: http://www.pmi.org/~/media/PDF/Business-Solutions/PMIProjectManagementSkillsGapReport.ashx (Accessed August 2014)

PMI _ Project Management Institute (2013) *The competitive advantage of EFFECTIVE ORGANIZATIONAL TALENT MANAGEMENT.* [Online] Available at: http://www.pmi.org/~/media/PDF/Business-solutions/PMExecutiveSummaryTalentMgmt.ashx (Accessed August 2014)

PMI - Project Management Institute (2014*) The High Cost of Low Performance 2014* [Online] Available at http://www.pmi.org/~/media/PDF/Knowledge%20Center/UK/2014-pulse-of-profession-report.ashx (Accessed August 2014)

Pollard, C. E. (2012) Lessons Learned from Client Projects in an Undergraduate Project Management Course, *Journal Of Information Systems Education*, 23, 3, pp. 271-282, Business Source Complete, EBSCO*host*. (Accessed 21 May 2014)

Rhodes, L. and Dawson, R. (2013) *Lessons Learned from Lessons Learned*. Knowledge & Process Management, 20, 3, pp. 154-160, Business Source Complete, EBSCO*host* (Accessed 21 May 2014)

Sanderson, J. (2011) *Risk, uncertainty and governance in megaprojects: A critical discussion of alternative explanations*. International Journal of Project Management, 30(2012), pp.432-443, Elsevier (Accessed 5 May 2014).

Saunders, M., Lewis, P. and Thornhill, A. (2007) *Research Methods for Business Students.* 4th Edition. UK: Pearson Education Limited.

Shein, E. H. (2010) *Organisation, Culture and Leadership.* 4th Edition. San Francisco, USA: Jossey Bass Publishing.

Silverman, D. (2001) *Interpreting Qualitative Data Methods for Analysing Talk,Text and Interaction* 2nd Edition, London: SAGE Publications Ltd

Taylor, L. (2012) 'Delivering the Olympics' *Project* (May 2012). [Online] Available at: http://www.apm.org.uk/news/delivering-olympics#.U_yKR_ldWuI (Accessed August 2014)

Taylor, L. (2012) 'Right First Time' Project (July 2012). [Online]. Available at http://www.apm.org.uk/news/right-first-time (Accessed 5 May 2014)

The Standish Group report (1995) 'Chaos' [Online}. Available at: http://projectsmart.co.uk/docs/chaos-report.pdf (Accessed 5 May 2014)

Townley, M. (2012) *Project and Programme Management* [UEL SMM213 Lecture 10, CLM guest Speaker]. 23 October 2012

Yin, R. K. (2009) *Case Study Research* . 4th Edition, London: Sage

Yin, R. K. (2010) *Qualitative Research from Start to Finish.* New York: Guilford Publications. eISBN 9781606239797

Zwikael, O. and Globerson, S. (2006) From Critical Success Factors to Critical Success Processes, *International Journal Of Production Research*, 44, 17, pp. 3433-3449, Business Source Complete, EBSCO*host*. (Accessed 1 September 2014).

8.0 Appendices

8.1 Participant Questions, Information Letter and Consent Form

Proposed Questions

Name:	
Company:	
Nationality:	
Age (optional):	

Q1. Can you think of a project undertaken in the last 3-5 years which has been particularly successful or particularly unsuccessful?

Q2. Reasons/objectives of the project? to expand the organisation/business/, a cost-cutting exercise, to create better performance, to increase efficiency, develop a new product/service?

Q3. What was the monetary value in very broad terms?

Q4. When planning the project was there an opportunity to obtain guidance from any similar type of project?

Q5. When starting the project was the concept of lessons learned considered? from any previous internal project?

Q6. Did you look at any best practice externally i.e outside of your company, say, from within the same sector, or from any other related type of project?

Q7.What, if any, were the key factors you identified from the information already available?

Q8.How were these incorporated into the project?

Q9. One of the often reoccurring reasons for poor project performance is:
"corporate amnesia with lessons not being learnt or applied"
In your experience, if having done the research to identify best practice and guidance from previous projects/sector experience, was it possible to incorporate?

Q10. What key factors helped you incorporate the lessons learned?
(*good support/money/credibility of the source/idea.....)*

Q11. What key factors hindered or stopped you using what should be valuable knowledge/experience? *(lack of money/lack of support/ lack of expertise.....)*

Q12. What, if any, were the benefits gained by using lessons learned?

Q13. What, if any, were the consequences of not using lessons learned?

Q14. With no Constraints what could/would you have done differently?

Q15. What overriding elements do you think improved the project that was a result of utilising lessons learned?

Q16. What were the three key factors that stopped you using some form of previous knowledge that you think would have increased the success or improved the project?

Participant Information Letter

Programme of Study: MSc Project Management

Dissertation Title: What are the factors that influence the application of lessons learned and how does this impact on project success or failure?

Dear Participant,

You are being invited to take part in a research study. Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and please ask if there is anything that is not clear, or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

- The study is related to MSc programme in Project management. The questions relate to the concept of lessons learned when carrying out project. The study will look at 2 cases studies and then a series of interviews with project managers. All the participants have managed projects within their organisation and the study aims to identify the differences in different organisations and how using lessons learned influences their working practices and what, if any, the impact is on the outcomes of the projects.
- Personal data of age, ethnicity, gender, is to be collected as part of the research but no personal details will be disclosed to anyone and participants will be coded in order to maintain confidentiality.

What will I have to do if I take part?

- The methodology used is an in-depth interview lasting approximately 1 hour. The questions posed will be the same for each participant and a list of the proposed questions is attached separately. The interview can take place at your place of work, at the University of East London or any other location convenient to the participant usually during normal working hours.

What are the possible advantages of taking part?

- The participants will contribute to a relevant piece of research that could contribute to a wider understanding of how the application of lessons learned can impact on project success or failure. The summary report will be provided to all the participants if they require.

What are the possible disadvantages or risks of taking part?

- There should be no disadvantage or risk to any persons taking part in this research.

Do I have to take part?

You are under no obligation to participate in this study. If you do decide to take part, you are free to withdraw at any time without giving a reason. If there are any proposed questions you do not wish to answer these can be ignored or if there is any additional information you can add that is pertinent then this would be useful additional information.

If you change your mind and wish to withdraw from the study at any time, that is perfectly acceptable and any information provided will be excluded from the study.

What will happen to the information?

Your participation in this study and all information collected will be kept strictly confidential. Unless otherwise indicated, all personal information and data collected will be coded and anonymised so that you cannot be recognised from it. The results of this study will be reported as part of my degree programme and may be further disseminated for scientific benefit. The results will be available to you on request.

Who should I contact for further information or if I have any problems/concerns?

If you have any queries regarding the conduct of the programme in which you are being asked to participate, please contact:

Student : Brigid Leworthy – U8804117@uel.ac.uk OR

Student Supervisor: Manish Unhale, Senior Lecturer OR

Ethics Manager **:** Catherine Fieulleteau**,** Ethics Integrity Manager, Graduate School, EB 1.43

University of East London, Docklands Campus, London E16 2RD

(Telephone: 020 8223 6683, Email: researchethics@uel.ac.uk).

CONSENT FORM

Programme of Study: MSc Project Management

Dissertation Title: What are the factors that influence the application of lessons learned and how does this impact on project success or failure?

Supervisor: Manish Unhale – Senior Lecturer UEL

i.	I consent to the processing of my personal information for the purposes explained to me. I understand that such information will be treated in accordance with the terms of the Data Protection Act 1998'. (*Please tick in the case of questionnaires/interviews involving the collection of data falling under the Data Protection Act 1998 definition of '**sensitive personal data'***)	☐
ii.	I confirm that I have read the participant information sheet for the above study and I have been given a copy to keep.	☐
iii.	I understand what the study is about and I have had the opportunity to discuss with the researcher and ask questions about the study.	☐
iv.	The procedures involved have been explained to me. I know what my part will be in the study and how the study may affect me.	☐
v.	I understand that my involvement in this study and particular data from this research will remain strictly confidential. Only researchers involved in the study will have access to the data.	☐
vi.	It has been explained to me what will happen to the data once the study has been completed.	☐
vii.	I understand that I have the right to stop taking part in the study at any time without reason or prejudice to myself.	☐
		Please tick to agree

Participant's name:.....

Participant's signature:……

Date:……

Researcher's Name:…Brigid Leworthy…

Researcher's Signature:…….

Date:……..

Appendix 8.2 Interview Transcripts

8.2.1 Transcript of Interview with Participant A 9 July 2014 – 9am -10.15

Introductions: Explanation of paperwork and signing of consent form

Name: Job Title:

Company:

PartA: Identified project: Company had been acquired (yyy) and the project was to integrate the Company into XXX's business

Int: Reason for the project?

PartA: Buy Market Share, buy-in of capabilities (parking fines big area, lots of established business with Westminster council), led to expertise, market share and capacity for XXX, yyy – public sector business

Int: Monetary Value?

PartA: (Only integration, not acquisition) £2.5million

Int: Guidance? Similar internally

PartA:– NO

Team formed internally, RL project leader – no experience of integration. Not much dealing with mergers and acquisition team so starting from scratch. M&A happens quickly then team moves off. Not able to liaise subsequently.

Team formed internally plus one external contractor. Not one had done integration.

Internally – XXX v large (100,000 employees) and must have happened – but no database or formal knowledge bank of other integration projects. Based on knowing someone - no formal links.

XXX Consulting – they do business for external clients or internal work. They got involved and they had done integration but not after an acquisition.

There was a set of Due Diligence done on the Acquisition and there was access to this information.

All the legal docs and list of existing contracts within due diligence pack. That was all.

Int: Nothing internally – check externally?

PartA:– NO Reason being - team formed internally in a couple of weeks then the project was off and running. Stock market announcement was made and the team had to hit the ground running putting everything in place. Talks to happen with new staff the following week. No gaps

Schedule – list of senior people available to go and speak to newly acquired staff.

Int: Timescale for project?

PartA: Bought company in June. Announce in half yearly results end June, 6 months for initial integration - HR/Payroll/,

18 months for IT /technical integration

Int: So what were the Key factors Identified?

PartA: PAYROLL – big issue, Vertex pay until end December. Therefore 3000 staff onto system – HR/Pay – variable hours, weekly, monthly

IT – agreed because of continuing contracts – use Vertex IT system until Dec 2014 – big decision stay with Vertex – move to Serco. Less expensive to maintain existing contracts. Incorporated this into project.

Int: How was this incorporated?–

PartA: Went through due diligence + contract for purchase

2 workstreams – Immediate next 6 months payroll/novating contracts across to SERCO/ new staff – onto the system, new line management, welcome new contracts, induction,, bid pipelines

IT – decision on timescale in 3 months – slow or quick – went for slowly.

Used their knowledge assimilated to make these decisions

Some things were MISSED:

EG – in due diligence it was assumed that all the contracts COULD be novated to XXX at NO COST.

There was ONE that couldn't – not spotted until 5 months in (November) - supplier wouldn't do it and didn't have to. Vertex already just paid approx. £150,000 for licence, Bill to XXX was another £150,000 for same thing. Negotiated - it was essential software for going forward to have and they knew it!

LESSON – need to see every contract that deemed novatable and check. Timescale impacted

Int: What helped initial start?

PartA- everything/everybody 5/6 people was in place. Formed a PMO and had had methodology. Everyone on board. Good team established. Due Diligence and contract useful. Governance worked. Not perfect but worked. Chaired by MD of the business being integrated. He had approved the purchase and had a vested interest in it all working well. He and his senior team were the programme board. Monthly meetings were put in place.

XXX – experienced with change programmes. Very used to putting together teams – finance person, HR person,

Culture was one that encouraged identification of problems and raising them early as issues to the Prog board – we have a problem – it needs to get sorted and better to address the problem rather than assign blame. Sort it early and find solutions to work round the problems. What is the best possible outcome. Time was the biggest issue. When there decisions

Got resources, experienced people to create the teams and able to recognise what's needed for the project. Getting the lessons learned from the innate knowledge of the people assigned to the project.

Got allocated help. HR + Corporate systems so got their experience but doing 2/3 other projects so timing issues occurred and impacted the project.

Had just up graded the corp system internally – this was a big problem.

Corp systems didn't work as a team – lots of individual expertise but didn't work together coherently.

All areas had to work together but worked via the project team – big hindrance. Lessons learned at the end and internal audit too. Lessons passed on:

1 – one contact into corporate systems – should not be up to project team to contact each area separately but corp systems should manage that process of navigating their system

Int: Did the Timing make a difference?

PartA: - would have helped 6months later may have been smoother. As it turned out what was learned in this project immediately fed into following projects.

Int: Did anything really halt the project? – stopped you implementing. Knowing what you had to do – did anything else impact?

PartA: The culture and organisation of XXX itself didn't really allow for incorporating lessons learned – no knowledge bank/database available. The only place that the knowledge existed was with certain individuals and so the relative success of the project is totally reliant on getting the RIGHT PEOPLE assigned to your project.

Talk to senior people – need A, B, C - they then advise that Bob is really good at A, B has done this before and C would be a great asset in a project like this. If they are available then great but if not then it can be problematic – often individuals who are really good and its harnessing the information across the organisation. Sometimes it's just not as efficient if they have to refer to their own experts.

Other hindrance was that XXX had just completed its own re-structuring too and some teams were in different parts of XXX. These were set up as cost centres/business units in their own right so there was an internal market and internal charges. Ultimately only one external adding "cost" but other parts of XXX had to charged out too. This led to less of a "team" feeling in that rather than a project "team" it was more of a project with contributing elements/ contractors. Team - Do what needs doing but not contractors….

Much of the £2.5m budget was internal costing.

Int: Was this anticipated?

PartA: Was all accounted for as this was the way of operation but when acquisition was done there was no integration budget. Time spent battling with finance director and the costs do get absorbed and finance have to do it – cross-charging gets complicated

Budget then had to be split into internal costs/ external costs

Finance worked around it – lessons learned had already anticipated this - someone without that knowledge may have slowed the project considerably

Int: Consequences – from lessons learned not being addressed?

PartA: Practical things that had to be done were done – had to wear some problems

One part of project was as part of business case was that they would win more business.

Impossible to prove – because of this acquisition we would win more business. Loads of external factors impacted on this key objective. Economy, customer decisions –

Int: Any key external factors that impacted? Did it improve ability to win bids

XXX's reputation took a hit and the government stopped using them – capability didn't come into it.

If No constraints – the Acquisition and due diligence was very closed whilst happening and very sensitive so not common knowledge.

The integration team then comes at it cold and has no reference point and liaison with acquisition team.

Defined project without consulting those who have to deliver.

Experience of governance, knowing the importance of it from the outset and having decision makers on board. Also knowing the risks

EG Payroll - point of no return – critical – needed everyone on board also have a contingency in place that was fully supported. VITAL element.

Int: Could it have been improved?

PartA: – Internal market – had detrimental effect on IT. Could have had an IT TEAM member – work for the project team. Wanted/needed to have someone working for the team, dedicated to achieving the ultimate goal rather than doing a set of tasks as paid.

Int: On Scale of 1 – 10 – how successful –

PartA: SCORE : 6

Got all the practicalities done –

Good acquisition but the reasons in the business case were not proven

Couldn't prove increased revenues

Cost efficiencies were harder to achieve and were unrealistically stated

They forecasted leadership team will leave from day 1 – never going to happen

Int: Generally - are business cases overly optimistic?

PartA: Seems to be the case. It's whether the board challenge the assumptions. What you think you are going to get but this differs from what you actually get.

Even with all the information available – the view is narrowed by the people doing the project.

Following on from this project – new project. From a difference angle on - due diligence

Deliberately used the knowledge gained from the project. Different and more realistic approach - involving those who had worked on previous project - approach brought to bear made a difference and influenced new project significantly. BIG Lesson learned – wasn't logged or written down but the knowledge and experience was sought from the people involved. Be very strategic with the choice of team members. If he'd read about it not taken on board – experience ingrained the knowledge for future use. Doers rather than researchers.

Lessons learned – co-location of project team – to learn from each other.

If you are in the same space you can bounce ideas, group experience, tapping into the experience. Your own knowledge bank – ability to talk through and work through problems/issues/how to approach.

Timescale met

Int : Thank you A

8.2.2 Transcript of Interview with Participant B 11 July 2014 – 4pm-5pm Telephone Interview

Introductions and explanation of Dissertation topic

Consent form forwarded by email

Name:

Company:

Background Questions Summary

1. Identified Project: Business Link Project for Government
2. Reason for project: - development of new product/service 2006-2012
3. Monetary Value of complete project: £175M

Int: 4.Guidance/similar project?

PartB: Transfer of knowledge from DIRECTgov.com, involved government digital access

Int: 5. Concept of lessons learned considered?

PartB: When B joined the project halfway through in 2009 there were some elements that weren't going very well. Lessons were brought in with Mark as new project manager with a solid IT background.

There were many ongoing projects within different programmes. There was a lessons learned process run by the project management office. When every project was completed a lessons learned review was logged and put in a shared folder on a PC and then promptly forgotten about.

The key was getting people to think about what worked well. Get them in the initial stages and get them informed. The first point at which to do this was in assessing the risks. Initially the risks identified were very generic but not at all specific. They were not goods at identifying what elements/risks would actually derail the project.

One of the first things that was apparent to B was that there were two distinct IT workstreams that lead to the same platform but no-one had identified the interdependencies and not identifying that any delays on one would impact on the other.

There were problems with the previous releases and a lack of governance overall.

The key would seem to be to identify the lessons/issues and embed a method of working , governance procedures .

Within IT projects the processes need to be formalised. For example at "Code Complete" the testing is a key milestone and critical if delayed.

Need to identify key factors – dependencies at certain critical points - then an infrastructure "freeze" needed to be applied so that no changes made as this can delay testing and procedures. This doesn't stop issues but with more communication, everything ties up better, everyone is aware of what stage they are at and the system can be tested effectively. This enables good communication and this holds true right through to deployment and critical members are present.

This is where the Project Manager role can be on top of multiple project and have that overarching, overall view.

Looking at the project and from what he had learned B identified that a "Release" Manager needed to be appointed who was across the various work streams to look at all the timings and control the process. If the releases controlled the issues and dependencies were more recognisable, it became more of a team effort , more involvement by individuals and stopped the "free for all"!

Initially difficult to do, bit of persuading required as involved Government departments, commercial contractors and an element of change management to get it all working.

Resistance initially as seen as another layer of meetings/bureaucracy but the suppliers liked it as it brought more focus and clarity.

Lesson learned by B was that from human behaviour people are very good at identifying the generic product risks but not so good at identifying key specifics - i.e. what will derail the project,

Eg for business link - 2 big separate IT work- streams - no- one looking at the dependencies between the two - no-one was flagging the delays on one work stream and didn't see how one impacted the other . No overarching view - B knew that they had had problems with previous releases too so he strengthened up the governance between oversight of the work- streams , made changes to methods used. . Look at the lessons learned - what are the problems then embed a process to ensure that these are dealt with. Rather than having a blame or apportion blame. ITS WHAT PEOPLE DO that MAKES THE IMPACT .

Int: KEY FACTORS identified and addressed?

PartB: Procedural change - formalise "code complete" when you hand it over to testing it is a key milestone - if delayed it delays everything. This wasn't identified so B made sure that that was recognised and a procedure put in place. Need to apply through project management

Dependencies - at certain points - 2 weeks before going "live" an infrastructure freeze introduced on all IT platforms so that no changes made - as these cause problems and delayed whole project.

Risk management to link in too

Things still go wrong but issue management becomes much more effective, communications in place, everyone work together. If people know what's happening it can all be worked through. Communication key - even through to deployment - e.g. someone not available recognised that lesson learned.

Overall view - PM needs to be on top of. Difficult to do as one person but in this instance what he did was to appoint a "release" manager across the top and they looked at all the dependencies and timings so that they could funnel change on to the IT platforms. They ran a release Board and that looked at everything and got everyone involved in each release together. So making sure all aware and communication improved - structured it far better and therefore stopped the "free for all" happening in individual projects. Removed - Whoever shouted loudest - suppliers then confused.

What support did MP have? Took some persuasion -not automatic - problem diagnosis - how to improve - look at governance, communication, change management. Funded by a government department they then needed persuading that it would reduce risk and justify expenditure. Internally needed justifying as it looked like ANOTHER meeting. Couple of months of negotiating. When running saw the benefit and suppliers very much happier/

Suppliers in difficult position how to prioritise if everyone shouting.

Int: Putting these in place - DID it work ok?

PartB: Yes- what was needed - how would it be communicated, how would people work together - boundaries of accountability, clarification of responsibilities. Changed the way Risk was managed - very different risk register. Moved from bland to very specific as they could now identify interdependencies and risks associated. Clarity for all.

Int: Key things to help incorporate?

PartB: - Credibility

Int: Any Factors a hindrance?

No but underlying behaviours that needed changing. E.g. primary supplier. They were planning far too optimistically. Create an ideal plan - serious underestimation!

Releases and components put together by BT. They had under-estimated timings and this was leading to reputational damage as it happened on a few occasions with the client. More rigour was needed with their planning and testing, code delivered poorly, lots of defects, leading to re-working , therefore delays - familiar pattern in IT! Eventually got BT to put more thought into their planning , they put an individual in charge of it and they reported to the newly appointed release manager and that fed into the overall plan for testing and implementation to live. Their testing was also improved. So having identified the issues - learned from the situation put things and structure in place to deal. Improvements much better. Timetable hit, issues identified more quickly and solutions put in place.

This demonstrates that the lessons are learned along the way during the project. But if these are recognised by the PM then elements can be put in place to deal. Adapt and tweak as you go - as opposed to identifying prior to the start of a project.

Int: Are projects unique?

PartB : no, not unique , but different in their characteristics . Building, IT different but comparable as to what you have to do:

What are the requirements?

What are the specifications?

What's the design?

How long will it take?

What do you need to do to do it?

Process just differs dependent on the type of project it is

Quality control differs but making sure the right mechanisms are in place is what is important

Project management framework in place.

New project - in difficulties what he has identified from his own experience is: they haven't got the standard sets - design wasn't completed, wasn't reviewed or signed off. Customer therefore didn't have a clear picture of what they were getting, its built and tested but lots of problems and everything in the planning was seriously under-estimated so now delaying the project to get it organised.

Int: Taking experience and implementing in another project - is it individuals that make the difference and bring to fruition the notion of lessons learned?

PartB: in agreement it boils down to competent people who have the relevant experience. Lots in shared folders, handbooks, - can read it but don't own it or understand it – it's by getting your fingers burnt from time to time that the behaviour becomes learned.

Can't re-write what has gone on but from his own experience can start to put corrective actions in place and re-structure , re-process the system.

Change freeze - put that in - WHY? GOOD things happen - pointing out the obvious. Inbuilt -, innate experience and the ability to convince others that it is a good idea it suddenly becomes clear....

Int: 13. Consequences - or not using his lessons learned?

PartB: Not always a magic answer but if you don't apply the lessons learned you become exposed - if a delay or issue keeps happening your customers start to recognise the failure as a serious issue and then your credibility and reputation become compromised. Lose money - refuse payment - let us down more than once. Individual level- on member of team didn't adopt the new process, missed out a key step - change freeze - individual went through a disciplinary as the consequences on this particular project went as high as the Chancellor of the Exchequer!

Chain of events can follow that are critical.

Int: 14. No constraints? What different?

PartB: Time and money key but this is real world - took away some ways of working and moved into a more agile way of working - was successful and by doing things differently worked better.

Very rigid processes existed initially - client - own way of working - trying to get them to think differently - particularly with "agile" - if you can't detail your requirements up front better to work collaboratively and work alongside to . FIX time and cost and then work together to make it work.

Int: Of all things put in place what were the best improvement factors?

PartB: Putting governance structure in that managed the risks that were based on problems of the past. Took the lessons forward, subsumed them into the risk management approach and made sure that risk management was part of the governance in an effective way.

Int: On a Scale 1-10?

PartB: - give it an overall V successful everything to time and cost so 9/10

200 people on the project

Int: Anything that could have made it any better?

PartB:- Some constraints on technology - changes would have made life easier

Int: Subsequently used lessons form this projects?

PartB: Yes

Int : Use Documented lessons learned?

PartB: - NO only learned by doing. Takes some experience people around to challenge approaches and point out pitfalls

Int: How do you get your experience/learn lessons?

PartB: Don't go to other sectors to learn about an IT project . Generally benchmarking is good - done that approach for leadership management styles/how do other people operate/ implementing quality systems/ other organisations. Been part of PM groups in a sector(public sector) never really worked - conferences/ events/ local groups/ but never worked - reason being too diverse - difficult to draw common threads - too generic - if specific eg records management -go to someone and ask them - expertise available - through network personally or through organisation in gov/higher education can seek people out. In private industry very different - Working for XXX no info from ZZZ!

Int: Thank you

8.2.3 Transcript of Interview with Participant C 17 July 2014 – 8pm-9pm

Introductions and explanation of Dissertation topic
Consent form signed off
Name:
Company;

Background - rating assessment - every 5 years revaluation. The rates at time £250M/yr aim of the project to get them down. Over 5 years this equates to approximately £1 Billion. Rates on buildings /offices/underground duct/fibre /copper/manholes....UK charge per annum. Every 5 years project to re-assess this. Previously negotiation takes place. Project to manage this and sort out valuation, influencing as best as possible. Not strict timescale as that wasn't within their control as government rating office in charge.

1. Identified Project: Rateable Value Project
2. Reason for project: Get as low a rating as possible/Cost minimisation/transformation/efficiency
3. Monetary Value of complete project: £250M

Distinct project every time it is done - economic factors come into play, changing conditions, company changes

Int: 4.Guidance/similar project?

PartC: Background – 1995 big court case over it! Got agreement that settled next 5 years taking it to 2005. Then exceptional bad planning. Had worked on 2005 project which started in 2004 and teanm put together quickly - set of property consultants engaged who had done it before so some continuity but everyone from XXX had disappeared.

External advisors don before but everyone else new - 2004 a very late start - so lesson s then had not been learned! Just weren't on top of it - big chunk of costs.

Big model that had been used.

Starting again but nothing that they had in place.

Int: 5. Concept of lessons learned considered?

PartC: So having been involved in a similar project in 2005 C was put in charge of the 2010 project. Having been involved in the similar project in 2005 and been made aware of the pitfalls he did use some of the lessons learned:

Only person left in XXX who knew how to do the project.

Started planning for the project in 2007/8 - need to take account of factors from 2 years previously so at least they were starting at the optimum point. Starting early gives that advance knowledge and aware of all the contributing factors as they are taking place.

XXX managed to get it done early, others still having their rates re-assessed from 2007/8 in 2014!

By starting early and getting organised it gave the project credibility

Int: 6. Look for lessons externally?

PartC: Didn't look externally as they were the field leaders

Int: 7. KEY FACTORS identified and addressed?

PartC: 1. tactics of engagement - how to deal with key stakeholder (the gov valuation office). Wanted to be in control - influence how the project ran to their best advantage.

2.Two models in place and XXX had developed their own - wanted to make sure the XXX model was adopted. This worked both ways in fact as it took pressure off valuation office and allowed XXX to control the model. It cost XXX some money to do this but in the longer term was a key factor to improving the outcome as much more in control

3. Starting early - better planning and resourcing. External help was better in place - property consultants and telecoms help. Started early as credibility established. Budget sorted early. Identified Consultants and all in place to get ahead of the game.

Int:8. Learning from previous project?

PartC: from what had been done in the previous similar project and the scope of what had to be covered then putting things in place to address these and restricting analysis not to include spurious items that had occurred before.

By taking control of process they also determined the scope - having been involved before these items were able to be put in place.

e.g. working on subsequent projects where there has been a process for capturing feedback (yyy) - its good - lessons learned are all documented - put in a draw and forgotten about. Things are done but not always then utilised. However, personally - from what has gone before lessons have been noted and now he knows that the process must include talking to the RIGHT PEOPLE, getting PEOPLE in place to assist with getting the optimum from the project. Writing stuff down is great but people can't be arsed to look it up.

People doing assimilate the knowledge to take forward - learning by doing - simple message

YOU identify, YOU put steps in place to address in order to make the project work better.

Int: Q9.Possible to incorporate, how did you incorporate?

PartC: Knew he wanted to manage the process, scope - he knew what was wanted, Knew who he needed

Int: 10. - What helped?

PartC: - very supportive management -No problem getting the budget -

Was able to get the consultants he wanted. Having been involved in the previous project and it succeeded in reducing costs - he had some credibility so they could see that it was worthwhile. So 300/400k to get external was ok

Set up a steering group with a supportive senior manager who could "open doors" within BT. When needed other people to come to the party, the structure was in place had he had the influence and power to get people on board. Learned that previously an informal structure in place but formalising this and with a "champion" on board made a difference. Senior CFO - "what do you need me to do for you to make this work effectively?" V helpful within organisation. So the governance of the organisation was critical. He was identified early on - bit of a fluke - got the right man in place - had a supportive Director too and she assisted with getting the right man in place. He could see that he could be of assistance. Within the company - did the culture help? It was important - saving money a good thing at this particular time as culture of org was all about cost saving - if it did that it was worth doing - these were the business drivers.

Credibility of the team - had a track record for this type of project

Weakness of opposition also helped - tactics worked and no real opposition- timing was good - able to out gun

Very clear objective singular goal - get the rates as low as possible!

Political stuff going on and had to be credible and as low as possible and all knew what they needed to achieve. Currently - on project that no-one has clear idea

Int: 11.What hindered/stopped you

PartC: Not a lot got in the way - not perfect.

Small team - Two key people, two rating consultants and three additional external consultants dipping in and out. This was easy to control, all knew what was needed.

Not co-located - Ilford, Diss, Central London various places

Used phone a lot, team meetings every couple of weeks. Getting meeting rooms was difficult in XXX

Interestingly all the expertise has been lost - he's left, other XXX person who was to succeed him has gone - reorg. New people who have never done the process. Some of the externals still available but all internal knowledge has gone. Info documented as far as possible but whether it will be utilised?... corporate knowledge now outside the company.....

Next due to start 2015 for 2017 valuation

Int: 12. Best things achieved coz of lessons?

PartC: - control of project able to dictate/steer

Negotiation - always in XXX control

Int: 13. Consequences of not using lessons?

PartC: Difficult in that small team left a lot of work to be done. Someone to help - not able to do.

Int: 14. No constraints what would you do differently?

PartC: - Ideally someone else to help with admin and internal processes

Int: 15. Overriding elements Improved due to lessons learned?

PartC: Utilising lessons learned with people who been through a similar project. Able to take control, put in place appropriate processes, took more control over what the external consultants had to do - controlled it more fully to achieve goals required. Learned from previously. He knew what was important. Had the credibility, support of senior management who trusted his expertise. They didn't know - but were please that they had someone in place who could run with it. TRUST.

Gave all the support needed. Saved lots of money

Int: 16. Key factors that stopped you using lessons?

PartC: some things got in the way but these were outside the control of the project – e.g. couldn't control government valuation people who were very slow - they wouldn't/couldn't. Internal pressure to get on but unable to do

Self-contained - clear objective, sources known, model known

Int: Project Success Scale 1-10

PartC: - 8/10

XXX was 280M, by end of 5 year period down to 190M

1st year of new on £140M so halved costs and still reduced further - carrying forward savings about £1billion over 5 years - then ditched him! Did not realise they would also lose new guy who was to take over - stupid and short sighted. Knowledge management not managed! How is this done effectively? Succession planning was in place but sabotaged by the company.

People are the key - learned behaviour

Int: Incorporated learning subsequently?

PartC: Making sure you have management buy-in. Very aware that you need to get the right support - makes it smoother. Better flagging issues earlier rather than later/

Get people involved if they have a vested interest - key stakeholders need to be brought along

Look at the wider picture.

Accepting of flagging issues? XXX - don't give anyone bad news - happened once not a good experience. All about individuals

Subsequently - more team approach - more collegiate, structure of projects much more in place. Project based companies far more structured - corporate learning people still always start from scratch.

Int: Do you use specific Methodologies?

PartC: YYY very conservative - rigid - wants to do everything the same way - very difficult to change. Affected by position as can be affected by litigation. But not everything and still hard to change. Formal governance procedures

Int: Documented lessons utilised?

PartC: No. Good to document but how do you make people use and read. Many seem to be obvious - but it's all the obvious things that get forgotten.

PMO person YYY - Wash-up sessions - looking at these they keep re-occurring

Culture of the organisation makes a difference - some things become embedded but still lessons get lost.

Int: Thank you

8.2.4 Transcript of Interview with Participant D 23 July 2014 – 6pm-7pm

Introductions and explanation of Dissertation topic
Consent form signed off
Name:
Company:

Background:

1. Identified Project: Officer review at XXX

2. Reason for project: financial - groups expanded over time, Cover model hadn't been changed for a number of years and numbers of officers in place far exceeded numbers needed. Exposure to fires had lessened significantly
   Main objectives – reduce numbers to practical numbers, model >20years old, less fires/incidents so number of officers now excessive. Cost cutting culture now in place too so seemed an opportunity to reduce costs.
   Professionally and health & safety wise - officers needed to be more active – some not seen a fire incident for 3-4 years!!!!

3. Monetary Value of complete project: £3.5M per year
   Payback offered – ghost rota implemented giving officers 2.5hr attendance time availability, 7.5% augmentation – inducement provided to achieve the overall bigger saving

Timescale for project 18 months to get the changes done to realise all the benefits would take 3 years or more. Reduction in numbers via natural wastage

Int : 4.Guidance/similar project?.

PartD: No not really. Other FRS different models. Not seemed to be of any use. Not same size, same threats, same stuff.

Took note that shadow rotas had been introduced

Int: 5. Concept of lessons learned considered?

PartD: Internally /externally lessons learned. Few years previous the shift change project had been carried out. Much larger employee group – caused lots of difficulty, unrest and had taken years to implement.

For this project the group officers - was smaller, more malleable, more senior group.

Nonetheless lessons regarding communication, get buy-in, acceptance. Not being "done to them"

Diffrerent type of project but lessons taken and used.

Much less risk of union action and the people doing the project were on the same grades – peer to peer type approach. Very hierarchical organisation and so very aware of position so very much smoothed the waters.

Int: 6.Any External practice?

PartD: Didn't look externally as they were the field leaders

Int: 7. KEY FACTORS identified and addressed?

PartD: Communication

Careful of what was in scope – scope creep real danger.

Sponsor was keen on getting scope as clear as possible

Working with uniform colleagues (D only non- uniformed person and project manager) – proposals were very robust – they had worked in the environment and were totally aware of the conditions and what went on currently. Knew how the command structure worked. They had the internal knowledge needed in order to test out proposals and ideas could be tested within the team and the combined individual knowledge allowed them to have a good idea of what would and wouldn't work.

Having that type of team, locating them together to introduce this type of change was a good strategic move. Station managers, group managers and DAC - -good user representative group within the team carrying out the project. Knew what to test, what effect it would have. Credibility boosted as no "stupid" ideas allowed to be created.

Int: 8. How was this incorporated into the project?

PartD: Learning from what had been done in the previous similar project

Int: How did the project team evolve?

PartD: Mostly operational. Key to it was it was known what COULDN'T be done. Sponsor very aware – kept scope clear. Was it pre-determined from lessons previously learned? Yes – project to get to a pre-determined end.

Int: 9. Could lessons be incorporated?

PartD: Knew lesson but had to work around the Problem was that the sponsor had a clear idea himself on what was wanted and how that should be done – so when presented with some alternative options was not very receptive and sent team in a different direction. Ideally project should identify best was to implement and optimum options but sponsor decided and then often changed his mind.

Lesson learned by the team was that proposals had to be very solid. Analysis and ways of presented were tailored to meet the sponsor expectations or had to be presented in a way they believed he would accept. Lots of back-up info to support any new ideas. This was a hindering factor

Also sponsor did not want a non-uniformed person running the project – didn't have the support of the sponsor. In the sponsor's head a uniformed group manager should have been the project manager. Real cultural difficulty. Director identified D as project manager as it was seen as more independent due to the project that it was but obviously this didn't sit well with the nominated sponsor for the project. In hindsight, if a GM was nominated alongside to provide technical /operational help support it may have been a better way to make it work. Sponsor would then have had more confidence in technical knowledge of the PM

Int: 10 - What helped to incorporate lessons?

PartD: Team helped

Int: What hindered you?

Part D: lots got in the way (see 9 above)

Specifically, - credibility issue being a non- uniformed PM

Many of those who had to do stuff in the project worked for the sponsor directly and this caused difficulties

Weekly meetings with sponsor - D had to say that his staff weren't pulling their weight but he didn't provide resources. People were allocated but then didn't respect the authority of the PM (as not uniform) and then created excuses for not doing. His staff, so who is sponsor going to support/back.

So overall group dynamics were not the best – Sponsor/ stakeholders/project team/ allocated resources – balance was not quite right.

(for another project – sponsor gave total support to PM. If he allocated staff he expected them to perform on his behalf and would back the PM in all respects. In order to perform as PM it's crucial)

The organisation bought-in to the idea of a non-uniformed person leading this project and it made sense, but sponsor didn't – it was his area (which is why he was the sponsor) but it was too close to home – he wanted as his own and sorted by his team. Point of having non-uniformed PM was that they were independent and had no vested interest in the outcome. Sponsor should have appreciated this.

Int: 12. Benefits/Best things achieved coz of lessons?

PartD: With team in place, knew all the pitfalls around engaging certain staff, knew proposals had to be rock solid. It was worth the time doing the preparation and having solid back-up information. Any options had been fully road tested.

More aware of the political sensitivities. Naivety was reduced.

Easier to engage with HR and finance – expectation anticipated.

Communication – putting out information at the right time. Organisation culture is rife with rumour and because of recent cost cutting exercises the worst is often expected. Information is often

circulated based on speculation as so issuing clear, succinct and timely information allays fears and gets correct information circulating.

Timescale for project 18 months to get the changes done to realise all the benefits would take 3 years or more.

Int: Credibility of the team?

PartD: Once got going was good. Didn't finish with the same team that started. End up with people who do have accountability and interested in achieving the best outcomes. Right people get the job done

Int: 13. Consequences if they hadn't taken account of lessons learned?

PartD: Not the right project Board

Not the right Project team

Delays – take longer

Irritated stakeholders

Lots of proposals that would not have been of any use

More space for misinformation and rumour

Lessons learned were very beneficial

Int: 14 – With no constraints – what would you have done differently?

PartD: Different sponsor

More technical/operational dedicated from outside of team form area to be affected

How was team allocated? – Picked by the Board – favourites rather than strategic – the usual suspects rather than who has the skills who would be different, who would it benefit. It could have been More adventurous – many with the same mind-set and that became difficult to manage.

Change the power dynamics – different sponsor

Culture of the organisation hinders creativity. XXX very conservative and very difficult to offer up anything radical or even just "new"

Personally not sure how much buy-in there really was at the very top. The operating model had been introduced by the current commissioner and so saying that it was no good may not have gone down well.

Int: 15. Overriding elements that improved the project due to lessons learned –

PartD: Avoiding the "bear traps" that previous project shad fallen into.

Int: Was there a database/knowledge base available that someone starting this type of project could refer to?

PartD: YES – its formal – but very difficult trying to get the information to anyone.

There is a PMO manager– but not taken seriously within the organisation. Was introduced some years ago and has started to have an impact but it has been a slow process trying to change the culture and getting people used to the idea that there might be someone who has done something similar. Go to PMO office and they would have the knowledge of where to point you to and who may have done something. Hub is there and they have that knowledge across the organisation. Got info via people but Organisational memory is not logged. Seem that points of reference are always on two legs. If in a database "do people want to read it?"

Writing is not the same as speaking to people – don't think that is how people learn from each other

Lessons learned – what do you do? – own experience/instincts, other elements - talk to people , "fish" for knowledge, if particularly technical , out of comfort zone go find someone who has done something similar.

Int: S1. Project Success, Scale 1- 10?

PartD: Hard to do – As successful project 8/10

Int: S2. Are there lessons taken to other projects?

PartD: YES. As PM gain as much clarity as you can of who is on the project team and why

Who put them there? Who suggested them? Understanding the make-up of team and be as happy as you can without upsetting the project board.

Push responsibility in the right direction

PM is responsible for everything – but difficult to do and need the team to help delegation and trusting team to be able to do. PM needs oversight and broad view.

These lessons were taken forward to the next project.

Int: S3. Documented lessons learned? Or can you only learn by doing?

Assuming all lessons on intranet to access – will people do it?

PartD: Case studies would be the most useful

FAQs no good – they need to be a good resource library that people know about. Nevertheless PMs will probably still just go and find "someone"

Lessons are learned by individuals.

Depending on organisation this knowledge can get lost depending on how the organisation runs its projects and project teams. XXX not a good example as in a lot of cases people are utilised not on their skill or knowledge but on their availability and then because of the rotational nature of the organisation even if they do project swell they could then get moved on to something completely different and what they did learn is not captured.

Pool of project managers put in place but all uniformed people who just get rotated and moved on. In most cases these people would rather be fighting fires than documenting lessons learned.

This team was then not supported properly

Int: Any ideas on other ways to capture knowledge?

PartD: Depends on how organisation is set up. If you want to train project managers then they need to shadow other PMs and "do"

Cost prohibitive

Apprenticeships? XXX had some but PM was just one of many aspects covered. Might be an option.

Anything else on aspects of lessons learned? Any other type of help

How to harness the knowledge that exists – some organisations - lunchtimes talks – projects we have done?... pass on knowledge – use peoples expertise

Lessons learned from west coast tender exercise – PM was a mess – this should have been presented. Get interested parties together – pertinent topics. Start the discussion?... All about people communicating, an awareness of other experience –"I didn't know you'd done that"

Int: Thank you

8.2.5 Transcript of Interview with Participant E 2 August 2014 – 3pm-5pm

Introductions and explanation of Dissertation topic
Consent form completed
Name:
Company:

Background:

1. Identified Project: New East London Birthing Centre – Community PFI
2. Reason for project: - Improvement Programme – Improved choice, improve quality of experience – alternative to hospital
3. Monetary Value of complete project: whole building £15M, Birthing centre £3-5M
   Specific responsibility - £150K capital costs, staff costs £0.5M

Int: 4.Guidance/similar project?

PartE: YES – visited stand-alone birth centre in Edgware only one in London and then some team members visited a few others outside London. Couple of the steering group had set up the Edgware birth centre.

Int: 5. Concept of lessons learned considered?

PartE: Yes- very good evaluation project that had been completed as part of the Edgware birth centre. Able to draw on more outcome data rather than PM learning. As part of the project they secured money (national Grant) to interview women before and after with a controlled group.

5 min BREAK FOR RAIN!

Int: 6. Lessons from best practice from External projects outside NHS?

PartE: Yes, particularly building specifications, a lot around model of care – new initiative, what would work well, how staff would be working – looked at a lot what worked for women what would be cost effective.

Int: 7. Key factors identified to incorporate?

PartE: The clinical guidelines were particularly critical – women come to the centre, have their anti-natal care and then have baby. Critical to this was that transfers and emergencies needed to be organised and sorted. There was already one centre in London that was already operating but it appeared that here was no guidance about working with maternity services. In particular nothing had been set up with the London ambulance service (LAS). So even though lots of women have babies at home and there are emergency guidelines there was nothing formal in place. In London, Edgware was ok but it was decided that they needed a specific working agreement with LAS. Even though it is two health organisations , there are inconsistencies with the language used , what is an emergency doesn't mean the same thing to everyone….did lots of work therefore with LAS and went to their central control Waterloo, to get some things in place. Set up one live drill which highlighted lots. Lots of planning, emergency ambulance, paramedics, lots of timing issues, lots of debriefing.

Int: So used lessons known and put it in a real situations?

PartE: Did some drills without them but it was a key learning exercise as they did have to modify a number of things afterwards. Learned lots from the drill .Things around what is said to ambulance control on phone, who should say it… Getting into a drill rather than conversations and this has been shared with another birth centre now in Barking and they have taken and used the knowledge gained – lots of organisations have visited and used the learning from this project.

Proper lessons learned - nicked our stuff!

Int: 8/9. Having identified - were able to incorporate into the project?

PartE: It was understood what was needed but what got the LAS to engage fully was the prospect that there would be a high call rate on their service than had existed previously - they needed to be able to cope. Once on board and sorted out finances (there is a contract needed for hospitals with the ambulance service) SLAs existed but it had to be assessed and they deemed that there was enough flexibility in the existing SLA to factor into their agreement. This was something that hadn't been taken into account when planning the project - it was an unknown factor. Once known it can be factored in subsequently - risk log then included that this was a high risk factor so protocol was agreed with them to by-pass 999 (secret) to use in emergency service. Normal practice was to use 999 just as a normal member of the public. Once over 20mins the could implement new system.

Int: 10. What support did you have?

PartE: Executive sponsor was Director of nursing - she had a very good relationship with her counterpart in the commissioning side - PM also had a good relationship with Chief exec on commissioning side and Director of estates. All of these were of a significantly high status to use as levers, to name drop to ensure. Tended to be that they would identify person at their level to instigate and sort issues and so then it would come "from the top" to get people to act and sort. Getting the Buy-in was ensured. All very helpful

Int: 12. Benefits gained from using lessons learned?

PartE: Biggest one was information to women. The whole choice agenda about having a baby- they all have a notion but for some people having it in a birthing centre rather than hospital the perception was too risky. They were able to provide information to them with specific safety information that had been road tested. eg average times to get to hospital. Processes in place made sure there was continuous audit once open so continuous monitoring particularly of transfers and outcomes because that is the nitty gritty that people are interested in - when goes well its good and tight control if starting to not work well. In first year after opened 30% of women transferred (high) but that had been anticipated - everyone more cautious more nervous - probably steered by staff rather than women but then as people settle and become more confident with process and ways of working it settles. In year 2 it was then 19% which was then comparable with others. Could then use this information for audit - it then gets planned for and incorporated. Able to Allay fears - had back-up info

Int: 13. Were there things that were consequences of Not doing?

PartE: Staff team building. It cost a lot of money, they wanted them operational as quickly as possible. Lots of time and resource on recruitment - not a popular job but only suits certain people so recruitment took longer than anticipated. Full complement was only in place a month before opening (in fact 2 missing) when last ones came on board. Had to delay opening. PM was not line managing in the centre and there was disagreement over team building - PM felt time should be spend working through stuff together but because of opening time midwives were worried. As a team they wanted to be available for the women they were already caring for and then they got called in to the hospital and home births that had to take place during one month delay. This led to the fact that in the first three months of being open it was very tricky. Team working hadn't been established. Shift patterns impacted and teams didn't gel. This led to a number of issues. It was known it would happen and perhaps PM should have stuck to original plan. Doing again would definitely insist. There were consequences in that a couple of staff left after 3 months (almost 20%) which left a negative feel, it put the spotlight on the service for wrong reasons . with a bit more time to establish working patterns and team work it could have been resolved.

Int: 14With no constraints - what would have been different?

PartE: Definitely timeline constraint was a definite. Only reason they delayed was because beds hadn't arrived! Needed a whole raft of support to allow the delay. It was a board level decision but needed to be made. All got a bit fraught and ideally the deadline could have been later - allowing time for team building and smoother opening with everything fully in place.

Int: 15. Overriding elements that improved the project as a result of using lessons?

PartE: Learned a lot about team building. Initially Senior manager for that service was based in main hospital. They already had a significant role and this was tagged on. This lasted about 9 months but then it was decided that a senior manager was needed for the centre and this really improved the whole situation of having senior support, someone on hand at a higher level who could troubleshoot and get results.

Int: Within team was it co-located during the project?

PartE: PM was only person who didn't have another job. PM was in charge of a number of projects but was the only one dedicated to this project. People kept saying "you're just doing this?..."

Trust has an improvement team internally and PM could tap in to support from them re documentation and some consistency about the process. It was a type of PMO. Talking to them it appeared that there should have been one of the PMO team allocated to the project but it hadn't happened. Because of the size of the project - was overseeing pathway between primary and secondary care and big workforce project, big engagement project and should have had someone allocated.

Some tensions about reporting. Role of steering group was questioned, governance.

Whole project came about from a sideways route - it was good - a very interested GP and a mum (mid-wife). They wanted this type of facility on isle of dogs and there were about 1000 births a year taking place. It's isolated - one way in and out. Traditionally local pop hadn't changed much. Site of

GP office was being re-developed and then GP mooted the idea of including a birth centre in the new development. So it wasn't a business case which then generated feasibility it was a request from commissioners. Passed to hospital trust but local community had a real ownership of project, so then role of steering group was not clear on who made the decisions. Had to be handled very carefully and it took a little while to get the governance arrangements sorted so that everyone was comfortable. Became a sub-group of the whole centre development board and also a sub-group of the trust improvement programme board. The PM role needed to be instigated. They knew they needed to structure that. The job was advertised. PM had no experience of doing anything on this scale before so massive learning curve - enthusiasm isn't enough. Had done PRINCE2 this was the methodology purported to be used but it wasn't really in place. So structure and time wasn't honoured. Project started without PM but she had been involved in the steering group. Was aware of short comings and Director of Nursing supported that it needed someone dedicated to getting it structured and organised and this was an important lesson that was acknowledged. This was a key factor that they hadn't used and then they suddenly realised they needed a PM.

Int: Anything else that may have helped?

PartE: Probably not. Once established it settled down. sometimes the acknowledgement of what the PM needed to cover wasn't there but she was relying on Health planners on building stuff - help was there for majority but one example of birth pool in every room then builder suddenly said it takes 5 hours to fill the pool - not feasible. Building regulations dictate thermostatic mixers for safety but this was not viable in this situation so risk assessments and procedures in place to get it all in place removing this safety feature. A number of this type of thing just adds to time.

Int: S2 - what have you used from this project in subsequent projects?

PartE: Another birth centre in Barking - three years later - they asked for someone to be PM. Had been approached but didn't want to do - fantastic service but it costs a fortune. There is not the economy of scale to justify financially. 11 midwives in the acute unit than in a birthing centre. So on that basis it was too risky. So surprised when Newham took it on and then more surprise when PM was announced. Tight timeframe. For this project it was 18 months which was about right but still tight. PM role then changed and then not able to take part in new project. However because of that relationship PM was able to share guidance and training materials, talk about specifications - what works and doesn't. PM had all the data logged and still has in order to share. So PM became the knowledge database for this type of project and is the person to go to. You only realise how out of comfort zone - big things happening , centre was going to open and panic started, nerves kick in and questioning starts. My role to share the story very practically. At London now there is a massive new build. Lots of work with architects and confidence has been taken forward. Looking at a refurbishment in new role and know the language. Able to challenge - get the confidence in different areas.

Int: scale of 1-10?

PartE: - 15/10 no 8/10 as financially not successful

clinical outcomes, staff engagement, user outcomes all good. Did financial modelling during project and it all costed in. Knew where they had to be but Dept. of health then changed significantly and changed how services are funded- all changes impacted the model completely. This was an external factor that couldn't be controlled so it became a loss maker for the service and so then it was a decision whether to accept this. However it now makes the service very vulnerable and every year it always comes up for discussion. It has the loyalty of the local community. Because of the way the model was developed as a birth centre within a multi-functional building the community own it and this is what will save it.

Int: S3 Lessons learned - do you think that lessons learned are utilised or by doing?

PartE: There is both – e.g. financial modelling - that has been learned and documented. As an organisation there is less naivety going in with promises as climate has changed and services commissioned. Unless there are written guarantees with risk sharing they won't enter into agreements that aren't financially solid. This has been embedded completely. This has become business as Usual.

Sometimes when commissioning, a dept. tries to suggest and idea but it is now assessed and costs allocated to make sure awareness of full cost is understood. There is no room any more to overspend. The culture of the organisation now has driven the change- there are no longer big dept. of health write offs which was prevalent before. Only accepted cost pressures are those that were totally unpredictable - not able to plan for

Int: In a way the organisation itself has instilled?

PartE: In own service it has happened. Organisation has changed twice since this project but service has taken lessons on board. But that is still a £45m budget.

Int: There are elements about learning lessons along the way - individuals have experience and innate knowledge - if you lose the individuals would you lose the knowledge?

PartE: In a new service it takes 2/3 years to determine its own cultural identity that can then be sustained as people come and go. If there is early disruption then it’s lost. At the start of new services individual relationships are key but that becomes less so as time moves on.

Int: Anything else that would be useful re lessons learned?

PartE: Did learn that I was Not firm re seeking assurances - make assumptions but then people duck and dive - much tighter on action logs and risk logs.

Governance in place but getting access was hard work. Really clear that only if critical - otherwise get on with it - do or die. Not not supportive but underlying message was the expectation to get on and sort it - that's what the role needed to do.

Flagging issues was acceptable. Doing again would have shared much more widely and much more regularly the progress and issues rather than waiting. It was v clear that PM was expected to make decisions so not a pure PM role, which does have a lot of risk. Personally tied, emotionally tied, usually can flag. Needs to be shared as too isolating otherwise. Nervous wreck at the end....

Because of type of organisation need to take more account of lessons learned - Someone could die!

You have to be strategic on the project team - knowing that is very useful - if expertise available from start - Structure on this project was a bit different. Commissioners had own project manager, who linked with DM PM role. DM project team was steering group - there were lots of mums on this group and PM had to manage their expectations and what they wanted which wasn't strategic at all and then PM had to report to overall improvement board which had to include all the strategic stuff. That then fed back to steering group. Structure was complicated because of all the stakeholders. Strategic level was done on individual level. Was a very specific stakeholder management project. Stakeholders and communication projects - lots of strands - big project to manage individually - but upside very autonomous. Then again isolating.

Int: If Doing project again?

PartE: Would have a much better idea on what was needed. In at deep end. Lot of health initiatives never have user consultation and then it happens. This project was a hearts and minds project so. Having a very large user group was very important and needed to happen. Stakeholder/User satisfaction was everything.

Int: Thank You

Transcript of Interview with Richard Reilly 5 August 2014 – 1pm-2pm Telephone Interview

Introductions and explanation of Dissertation topic

Consent form completed and sent via email

Name:

Company:

Background:

1. Identified Project: Free up a floor of a building to lease out to another public service
2. Reason for project: - Cost saving, organisation transformation programme, best use of asset space, share costs , generate an income on lease
3. Monetary Value of complete project: Cost to do it £800k, benefits ongoing £200k/yr (initial 7 year lease)

Int: Guideline from Previous/similar projects?
PartF: Background to project – it wasn't successful. Project had been in discussion at senior management level for about 3 years. Lots of discussion had taken place but it was getting nowhere. Decided to make it into a formal project. They had tried to do previously but not been able to take it forward. RR part of an in-house management function and was brought in to try and formalise it into a proper project. He started to put some governance structure around all the minutes and notes and meetings. This was the first task and then the project timescale was set as 6 months to complete. Having collated all the existing information and looking at what needed to be done RR identified a list of things that therefore needed to do done in 6 weeks to get it up and running to meet the 6 month deadline. This was a reality check and they realised that it was not feasible. So never happened

Getting a district into a county. Wanted to install the adult social care department in the new building but the timeframe was not feasible. It would mean them closing some buildings and there was some politics around that as well. The project was a success on one level but in terms of goals they couldn't be achieved. Didn't spend all that money and didn't waste time doing but also didn't get the income which was the overall goal. Having identified that this would not be feasible all the work that had been completed was put into a lessons learned log and all the relevant building information catalogued for future use. This information has subsequently been used with a third party and looking to bring in another company. Not starting at ground zero - re-using information logged.

Int: 6 Lessons from best practice from External projects?

PartF: Not really taken into account

Int:7. Key factors identified to incorporate?

PartF: Technical meetings – what was needed – wanted a whole floor for the county council

Security/Key cards

Number of people - that area to put number of people was going to be difficult and expensive

Air conditioning was needed but needed to sort

It was never finalised, of how many people would they move in a movable feast– needed a desk ratio, air quality, space, points on the floor. Couldn't hit decision points

Int: 11. What were the Hindrances?

PartF: Going back to the county council they were never sure because of all the dependencies

Basildon knew what they were doing and where people were going. The other council had a number of dependencies

They had to free up a number of buildings which would have knock on effect elsewhere.

One building was about to be condemned, people out or repair

Other buildings to feed in but they could never agree a number.

The decision chain was the impacting factor – definite decisions weren't made. No firm details

Whilst negotiating – how did you sell the project? They had been meeting

Meeting as a project board (without the formal title) - right people:

Director, Officers, Contractors, Council due to pay for works

Int: 8.How were lessons incorporated into project?

PartF: Turned the meetings into a project Board, Identified the sponsors. Effectively two organisations so had two sponsors who worked together.

Int: 9/10. Key factors that helped?

PartF: Sponsors fully understood the issues but when they tried to go back to the Members to get an answer, because it was a political decision, they failed to get the go ahead. Officers on the Board were fine – there was a reluctance to bring members into the decision But,they would have to sign it off.

Int: 11. What were the hindrances?

PartF: County council was the biggest hindrance as decisions couldn't be made – They talked about it for around 3 years. Council didn't change but County cabinet did, No answers when it got to detail. One of the buildings to close was a school and no one was brave enough to make that decision.

If set up as a project from the start and managed it would have worked, but by the time they got serious the deadline was 6 months and this was driven by the fact that they were going to condemn

the other building, - so something had to be available in 6 months time. It was a case of putting a plan together and working backwards but in effect they had left it too late.

Int: 12. Benefits from lessons?

PartF: It has been resurrected. Recommendation was that we need to get a firm idea. Got CEO to write to their CEO and point out - are you serious? - If so you need to get this set of decisions made. They needed to know so they can go forward. They learned from that some key information:

There was a covenant on the building they had been unaware of and got that removed.

They were able to work out the desk ratio that would work on that floor, looked at A/C.

At end of it legal guys and project team had a template lease that they could use. Knew all the things they need to do if they were to offer it another party.

Covenant was interesting as it meant that you could only have other government agencies in the building you couldn't lease to another company so it was vital info.

All the planning had put together a feasibility study on how the space could be used and therefore how they would sell it in the future. So very useful.

Int: Timescale?

PartF: PM worked on for 3 months. In that 3 months got an understanding, was able to identify risks and dependencies and able to put a project file together. Didn't add up!

Int: 13. Consequences of not using lessons? Anything learned that might have done differently?

PartF: If started earlier - if they had originally Jan wanted to be in and they could have done it in the 6 months. There was no culture of project management there. Projects that had been done well were done by third parties. Internal projects they had very little understanding of what Project management was. This was demonstrated by the fact they had been meeting and talking for about 3 years but with nothing to show. Director was supportive - he had his eyes opened and realised that his team should be driving these types of projects through and has subsequently taken a lead - was a wake-up call.

Int: 14. No constraints?

PartF: wasn't viewed as a proper project until too late - start earlier

Int: S2. Have you utilised lessons learned?

PartF: Yes - Going into new project - similar so knew what to look for –

Int: was there a database?

PartF: No. He had never worked on a buildings/ facilities project at all. He was lucky that some of the stakeholders had lots of experience.

Had building manager there and he had been involved in a previous aborted attempt at doing something with the building. He went to him informally and they sat and discussed and went through what happened last time and in that way they identified the dependencies - made this into a formal lesson log.

Not always Lessons log/formal paperwork to access - individuals often have the knowledge

What they did was a lessons learned and project closure report and that is what has been used for the project to be resurrected.

Some organisations this doesn't happen and then that learning gets lost. In PM's experience of lessons learned that is the ONLY time lessons learned has been used and that's why he picked that project. Often get thrown in. By the time you get involved the project has already progressed and mistakes have already been mad that should have been addressed when scoping the project. It's the onus on PM to get things moving and time is not spent fully scoping which is the point at which the lessons learned would be reviewed. Often you get pulled off to go into sort it out and it's all late

Lessons learned on what's happened but mistakes have already been made.

Int: 16. Anything to make it more successful?

PartF: Apart from starting earlier - Scoping should have been fully explored. Lots of the dependencies were around knowing exactly how much it would cost - they had an idea - we have the money - but if done properly the numbers could have been firmed up, they could have agreed the budget and the numbers would have stacked up. Never really finalised -often the planning is an afterthought. Often you come in to try and retro fit stuff to where you are and it doesn't work. They had some budget - but they hadn't even thought about A/C.

They did listen and then when it is formalised in a project plan it is very clear as to what you are in for. When delivering the plan did you have support? Sponsor was excellent. He had briefed him outside of the project board. He knew what was coming. As PM he had been speaking to all the stakeholders on both sides and including the actual contractors who were to put it in. It was ambitious in everyone's opinion. He didn't say you can't do it but did say if you want to do this (and get it done in 6 months) you need these items in place - these are the options

Int: Scale 1-10 - how successful?

PartF: its objective was to bring in income to the council and that didn't happen so 1/10. What it did do was a dry run for next time - virtually had all the scoping for the next project so very useful. As a project governance review it was a success but the project itself was a failure.

A lot of projects the same - you can manage them really well but the outcome is not what the original objective was.

Int: S2 - Lessons learned for future personally?

First one to do with building works and from that he had an understanding of what was need and made him say - start now let's spend some time doing the scoping - big lesson put the planning in first. Sometimes can't be done. Sponsor just says want this done just get on and do it. When you can influence it - map out as many of the dependencies as possible and get an idea and project plan in place to look at. Tempting sometimes not to do the work breakdown structure but very worthwhile - if you have the time and can do - do it. Flag up issues asap. Having done that though for him on that project he was worried about going to the sponsor, (director), and saying this has been poorly managed. It was good to flag it. If they had started on the road and spent £50/60k and then it had failed it would be worse. First time he'd ever done that - to say NO - but it's given him the confidence to do it again if necessary.

It is delivering bad news- culture of org or dept. can influence how you take it forward. Having a supportive sponsor is critical as in some orgs and cultures they don't want to hear bad news. Now in current organisation more reluctant to deliver message. They would just say get on and do it. It was a mature manager who was brave enough to support him - he had to go to CEO and explain.

Couple of projects now - in trouble, flagging that it's in trouble, warning people it's in trouble but it is not being taken in. Until it falls over they won't stop it. Brave decision to stop. Perception is that it reflects badly if it stops but courage to take the decision to stop generates respect.

Trust - big thing - the project got him a programme manager role with that director, He was impressed how he'd managed that project and told it like it was and then when he wanted someone to trust he approached him. He was a very strong sponsor and had enough clout to make a decision and he would stand by it - often big issues in public sector - all done by committee and democratically - lot more people can pass the decisions - the culture avoids decisions. If no culture of project management then it just trundles on.

Was there a knowledge database? NO nothing like it. Successful projects in local government were run by consultants - they use their own lesson log and bring their learning.

In a way they are buying in their lessons learned and transferring risk.

Where F is now - they have a PMO - not enforced to do lessons learned

Int: Ideally- in an ideal situation - how do get people to learn lessons?

PartF: Knowledge with people even when there is a database /log

Int: Good way to impart lessons?

PartF: This week - go speak informally to three people who have either done something similar, worked on it previously or done something similar,

Rather than a database of info can have list of PMs in org and projects they have worked on - go speak with them

They tell you honestly - can advise on stakeholder management - informally get the insights needed

Int: Was there a Team to work with on project?

PartF: He was PM there was no PMO - happy to do that, do the governance. He had the technical expertise - they were part of team- . Could do the plan and then had expertise around to fill the detail needed. It was the technical stuff that was needed but was all available. Co-located in same building. Could easily get hold of contractors.

No experienced of very disparate teams

Int: Anything from lessons learned - key to take forward to any project?

PartF: Setting out get agreement as early as possible of exactly what the deliverables are. Everyone knows what you are doing then you are ok.

Is there a budget for this?????? In local gov this is a particular issue - no budget, no point

No money value of using PM - now ready to go and get people in - very satisfying to get it used

When taking over a project - getting the clarity as quickly as possible - often the project has evolved and crept into something else - need to identify clear objectives.

That would support a proper PM set up? - 90% of people still have a perception that the PM draws a plan and nags people to get it done. But the PM ends up doing it and getting sucked in. Just Directing traffic is not how it works!

Int: Thank You

8.2.7 Transcript of Interview with Participant G 8 August 2014 – 1pm-2pm

Introductions and explanation of Dissertation topic

Consent form completed

Name:

Company:

Background:

1. Identified Project: 4 related projects – 2-4 years ago. Investigative project – role of organisation is to uphold the law in various areas and there was cause for concern that there were various companies that weren't complying and so the project was to find out if that was the case and if so, establishing a body of evidence in order to prosecute and put in place remedies to fix the problem or put in place penalties for the companies.
2. Reason for project: - to identify compliance – to establish what had happened and test against newly introduced criteria.
3. Monetary Value of complete project: Different measures – spend in organisation £15man years of people time/year. Large scale and brought in external counsel to advise - >£100,000 Re businesses the up to 10% of turnover
   Finally penalties + compensation penalties - ~ £25M one still ongoing.
   Timescale for project - interesting- guidelines for how long was 6-9 months in the end the shortest one was a little under 2 years. They were difficult and complex and wide ranging. Became clear that they were not going to manage in the target time. Could only determine once project started. Especially – in this type of project as the idea of investigation is set at beginning but its only as it unfolds that different directions identified.

Int: 4. Guidance from a similar project?
PartG: There was in that the PM had done this type of project before and therefore had brought experience with her. So experience in terms of senior managers within team had a lot of experience. In terms of accessing standard lessons learned – there wasn't a huge amount in that organisation. If you were to go back and say we haven't done precisely that thing before because the conditions were new but investigations had been done before and there was an associate process. We had all the process guidance. We had the published guidance on what the stages would be. We had the legal guidance. Where the boundaries of conduct are – what we need to do to make things fair – all in place.

Int: 5. Lessons learned – previous internal project?

PartG: Concept of lessons learned – something you consider? Yes absolutely. Because of PM background – really believe in "not re-inventing the wheel" if not necessary. She looked around, asked people. She knew there had been similar investigations before so looked at what had happened in the past. Drew on experience. We were required to follow the process, the question then became what level of resources were required to deliver things on time and also what things

had gone wrong in the past and could we get around these issues. Do it differently to make it better. Very much looking around, talking to people, picking up documented info, so interviewing people who had been through the process before at that organisation to check methodology as everyone does things slightly differently.

Int: 6 Lessons from best practice from External projects?

PartG: Yes – did look outside. There are 2 groups that help to co-ordinate best practice between different organisations. In consumer law enforcement and separately competition law enforcement. Regular meetings, network of contacts. Did also speak to other regulators: 1 to see if also looking at similar sorts of things but also to see have you done this particular sort of thing before and do you have any suggestions for approaching. Areas where there was useful information available were the way we sought information for the evidence gathering. Also people who had used a much more litigious approach because as an organisation needed to make sure they had as robust a process as they could.

Int: 7. Key factors identified to incorporate?

PartG: In terms of improvements from past or things to watch out for?

Yes - quite a lot of making sure that we asked for information in a way that was going to be successful. Allowing enough time for that. In particular they took the step of sending draft requests for information (unusual in that org) so that the overall process was shortened. No point in asking for something that doesn't exist - maybe it is not in that particular format, given the incentives on the companies to want to only produce WHAT IS REQUIRED, onus is on the companies to produce information but they may only produce exactly what is asked for. Requests needed to be couched in the right language and manner to elicit the right information. There was also very much a steer about getting understanding and getting a consensus very early about what was the adequate standard that we were measuring against. Given the newness of their obligations, not having been tested in that precise format before, although perceived as clear by regulators as clear it is surprising that when you get right into it where the line can be quite potentially nuanced. Have to make sure that you are clear on what you want. Previously this was something that had taken a long time and r it was part of difficulties at the end. It may not be something that the companies agree with but they do have their own appeal process and so they have to comply. It's getting the clarity from the off – YES.

Int: 8. How were these incorporated into the project? Support?/senior management?

PartG: There was a lot of goodwill internally in the orgs. The "target" companies were very keen to resolve the matter because being under investigation was not a happy place to be. That sometimes translated itself into potentially difficult relationships – because they felt strongly that they weren't in the wrong in some cases so whilst you could see the lesson, you could see the thing you needed to do but it was varying degrees of success in terms of how quickly you could deliver it. In terms of the organisation doing something on a bigger scale than before there was a lot of briefing

communication needed, line to take. It was also quite high profile too. So having a steering group established early on with the right people from across the organisation and also plugging into the different fora of best practice was really helpful

Int : 9. Was it possible to incorporate everything?/10. What key factors helped you incorporate the lessons learned?

PartG: It was really helpful finding a couple of people who had been in at the drafting of the obligations themselves as part of the team because this gave the credibility to defining the requirements. Those people could say – that IS what we meant when we wrote it. Here is the advice that I gave that this was ok. It wasn't always easy to persuade people as there were a lot of feelings and high emotions around the investigation. It had quite high personal impact on some of the people involved potentially. Not only in the companies involved but also for the members of the public it affected by it. Trying to manage that it sometimes meant that it took longer to reach a conclusion.

Int: Help to do?

PartG: Something found very helpful was the project support office – general Project support. They prioritised who got assistance but because this project was very high profile it got lots of help.

Int: 11. What key factors hindered or stopped you using what should be valuable knowledge/experience?

Int: Barriers?

PartG: I think - don't know, that there would be a degree of people finding it difficult.

Thinking about barriers the nature of this was that it evolved and pursued different lines of enquiry. The project team grew from 6 people to roughly 25-30 over the space of 8 months. With that scale of team turnover like a lot of large scale projects you not only once had to bring people up to speed with the project but had to do a number of times. Having a standard way of doing that could have been useful. I didn't, - I just kept doing it as I went along. In the project and as it wasn't anticipated from the outset. One of the challenges of planning something like this you don't know what you are going to find. You might know very clearly what the obligations are. You might know why the company thinks it's doing ok. When you find something amiss you end up having to address the issue so being conscious of the scale (£25M) you then assume that there is a higher risk of appeals,

as the stakes are so high. So that meant greater resources making sure of a completely robust approach. Preparing for that challenge.

Int: 12. What, if any, were the benefits gained by using lessons learned?

PartG: It enabled us to progress things more quickly – also more effectively. There was a lot of pressure to complete it very quickly albeit it took longer than we'd hoped, everyday mattered. It was very much about trying to consider information, agreeing stuff, how best to do that, prioritising etc… If we hadn't known the things we did, we could have risked missing a lot of things and potentially not being able to establish the facts as well as we did. The knowledge available using the external support as well was a great help. The PM personally didn't have as much experience of a litigious approach or preparing files for that. The precision required and being able to prepare effectively In that way and being able to come up with a very robust case led to a swifter conclusion of the end result because The companies involved could see the scale of effort put in.

Int: 13. What, if any, were the consequences of not using lessons learned?

PartG: Looking for things that could have been done to improve it – it went pretty well. Another example asking for a set of information that was the same across all the companies concerned we adapted it from there depending on what was found. I felt we could have spent more time at the outset thinking about – if it became a big case, if we found something significantly wrong. I don't think we'd anticipated how big it would get. Even though the company had given it a high profile and given appropriate resources, but that iterative process needed to be planned for. Key lesson - In the future if you Are going to do something that could end up that big you quickly need to be able to identify that you need the extra support you also need to accept that things are just going to take longer because it is a bigger team, issues bigger….Risk analysis/contingency? Because it is a reactive piece of work for that team and the organisation there was a huge contingency because if something happens you don't know how much it is going to cost, but the max is XXX. But we all learned a lot of how to manage something of this scale in the future.

Int: 14. With no Constraints what could/would you have done differently?

PartG: The nature of trying to come at it in an efficient cost way. It was in the public domain (public sector) there are limits. It would have been more straightforward from a project perspective to have fewer people allocating more of their time to the project. That way you spend less time educating and re-remembering and getting onto the zone to then produce good work.

Int: Was the team co-located?

PartG: Yes, in the main, a few people in different offices and different offices across UK. Was this beneficial? Not much experience of working across distributed site but from my perspective as a PM it is a lot easier – you can see the people, everyone knows what's what. That helps

Ideally more researchers listening and checking through evidence at the same time – all running concurrently. It was not possible to do that because of cost, had to balance, but if you wanted it quicker you would need that. – it would have been valuable.

Int: 15. Do you think what improved the project was a result of utilising lessons learned?

PartG: YES they were a big part of it

Stakeholder handling and the understanding of the relationships to get the right balance of firm but fair with the companies involved, together with how you write an information request plus the understanding internally – that made a huge difference. The relationships that we developed with the people in the companies made a huge difference. You are able to do that by knowing what does and doesn't work from previous projects. Whilst this was not codified down in paper that was certainly something that the organisation had as a lesson and was very alive to. There were clear escalation processes and the senior steering group and CEO all in support. Because of the dependence on and desire to change behaviour, that made biggest difference. Is that type of governance always put in place? In other projects is it something to try to ensure from the start? That of itself was a lesson learned from previously - fact that there was an agreed and constituted steering group of key and senior people key advisors, eg economics, engineering if required. This was something that had been necessary to progress earlier projects so that had become a standard approach (embedded) and was invaluable. An additional thing that had also evolved was the idea of having sub-groups of the main board to assist with the governance process as well. So the approach to governance of the project and how that sat within the organisation governance was established.

Int: 16. What were the three key factors that stopped you using some form of previous knowledge that you think would have increased the success or improved the project?

PartG: The turnover of people on the project meant that some aspects of the project had more experience put on it than others. That would have made it smoother. Bringing people up to speed and making sure they were aware of exactly what the consensus of previous people had been. It was a complicated and you needed to bed people in.

Int: Was it a very strategic method of putting team together initially? Who was available or who had expertise?

PartG: It was a mixture of both. There were a number of high profile things going on at the same time and we struggled to get time that they would have liked from several key people who would have been there from the outset. Particular advisors are used to get the application in the first place. Tried to keep some on steering group to access at key points. Speed and insights of these people kept all the way through would have been useful.

Also think – we tried, and I'm not sure if always successful, to get co-ordination between strands of the project because it was a programme (4/5 investigations at once and therefore different things going on at different times). We got people together and all knew each other but its making sure you get the best value from that. You don't want the only time people talk to be in a formal meeting. Tried to encourage sharing but then keeping oversight of everything is difficult. Don't want people going off on a tangent. Very important not to treat the companies differently unless their conduct warranted it. In terms of the process of the investigation we had to be very scrupulous about that. So it's that kind of whether we could have done better at spreading the knowledge and benefitting from different peoples perspectives. Gathering lessons along the way. This was encouraged and to some extent it did happen but hard to know.

Int: S1 – Scale of 1-10?

PartG: Felt good about it 7/10

Major things that were not as we would have liked was the time it took to finish. However during that time all the companies did change their conduct which meant that the issues being investigating had all finished. So found them to have not been doing things well enough but by the end of the investigation remedies had been put in place. It delivered the behaviour improvement, the compliance and then the redress. Pretty successful

Int: S2. Lessons learned from that project incorporated in subsequent projects?

PartG: YES- quite a few! Both personally in terms of managing that scale of project which I hadn't done previously and also carrying forward the recognition of the importance of the relationships. I know that all those people will be carrying that with them. What I think the co-ordination side is something I have done more of and tried to get people to contribute more overtly to and encourage the peer to peer sharing. Also in terms of governance processes. This process was developed and

that has been followed through since and there is some new guidance being consulted on as to how investigations are conducted and practices – reflects and then becomes part of the standards. It did set a standard of how files are prepared, how you draft your documents and a number of those sorts of things were all followed through. And most important thing the ability to require redress was then included in statute later on. Having seen how that approach could work through different means that has now been recognised. It would seem to be something where it wasn't enough – it didn't feel right that the misconduct/failures would be punished purely by financial penalties – they never ended up redressing those affected and the way it was resolved addressed this and it felt more just.

Int: Looking at lessons learned – what do you think of?

PartG: As we have gone through this I have realised that it is more about people – I have been an exponent of writing things done because then your organisations knowledge is hard to pass on. I was lucky in that I have been in this area for a long time so I knew the right people, but that's not always the case.

In a previous role in another organisation I was in a project manager mentor role – at the end of every project they would do project then write a review and then they would be put on the intranet – varying versions for various audiences. There was always a version on the intranet and that was such a rich resource of what's happened before – that gives you an idea of the people, whether a similar project has been done and you have a reference point. Also it was written down to say e.g. "…when you do that - make sure you do this…" and that would always be the first place to go to for lessons learned and advice. It was definitely used. I was an exponent of that – there was lower awareness of it across the organisation that I would have liked but peoples natural inclination is always to want to go and talk to somebody rather than to read stuff. May be some who want to read but not many of them. Talking to people is critical. Getting the balance – type of people PMs are is to get on and do – very true.

Other approaches I've done and useful is that once you have done your "wash-up" that should not just be for your team but you then take the key points. Last question on all of the review sessions is – "and what shall we communicate to other people?.." so that you can then take key findings to a governance group, a presentation to the whole group, there may have been people who fell asleep but the vast majority came up and said – given the topic- they all thought it was really good and worth doing. Just do it!

Perception of Lessons learned is “boring” but when presented to a receptive audience - key points communicated they really take the information on board, know that that project has been done, team members who’ve done it and lessons to be taken away – covers off the learning and talking to people.

Int: Lessons learned – taken only to next project or can you do going along?

PartG: One thing that I did do in my latest project. Stages in it where you get to a point where you are issuing your ideas/proposals or your case to the company and then the company gets a chance to rebut or accept. In that period you send something out and are waiting on a response. So it is in fact a period to review what you want to do next. In those sessions we have identified some ways of working and potentially small things identified and some relationship ideas which could be used going forward. Practical things like seeing actual time /resources expended vs what we thought initially. Then revise for the future. Those tweaks allow you to predict more closely for next time. Forecasting and planning. This is particularly useful for longer term projects - you want to review as you go along.

In part of what we are doing here. Project man role is a specialist thing for this org. all the different tools and techniques and tips on what works and doesn’t have been packaged up into tool kits – template to manage project, ways of gathering information, your project governance - created a whole raft of spins off so there are lunchtime training seminars – presentations made then also “helpnote” – longer signposting document on “how to” do stuff. I’ve found already one for the people being appointed to a big project it is immediately useful to point someone in the direction of it to say access this and this will get you started. Those have been built up from the lessons learned that have been logged so far. It’s a combination of how do we process it and things that we have got to make sure that people have the right knowledge and also that we build on it.

Organisational culture that has been developed to utilise this type of knowledge. Commitment by the organisation to try and support - it can be difficult for people to appreciate. Project managers operate differently in different organisations. Raft of different things that impact on how the PMs operate. Sometimes just trying to learn the organisational landscape – how do you do it here? This org very good. Before have had to rely on good networks and I have been writing it!

People who support it and then it develops throughout the organisation. Trying to harness the knowledge. Way I’ve found most persuasive is by explaining the people how knowing what happened before will make their life easier.

Or - Colourful examples of things that have gone spectacularly wrong - help!

Or- We did this and that meant we didn't do this which saved us time / resources / embarrassment / reputation….

It seems obvious but then it's not easy to get people who have just finished a successful or unsuccessful project to care and list the key elements that helped/hindered. But it is that point just before it all comes to an end that is the most useful, most fruitful – you have all the gripes, all the plaudits, can focus on the positives and turn it into useful information.

Int: Thank you

Appendix 8.3 Olympic Case Study Analysis

London 2012 Olympic Case Study Assessment				
Timescale	**Key Programmes**	**Key Milestones**	**Lessons Learned and applied**	**Lessons Learned Journey**
July 2003 - 2004	Bid Document	Set up London2012 Ltd	The management team recognised that London would have to improve the technical elements of the bid. They recruited specialists for the theme areas as well as procuring the services of Peter Morris and Jim Sloman, who brought their experience of the Sydney Games in 2000. As a result, a number of the venues were changed: Fencing moved to the Olympic Park, Shooting was moved from Bisley to The Royal Artillery Barracks in Woolwich and Mountain Bike was shifted to the Weald Country Park, near Brentwood in Essex.	Lessons before
July 2004 - 2005	Candidates announced	Candidate Shortlist	A team consisting of project managers, a design production company, French translators and a specialist writer were recruited to help with the preparation of the Bid Book, which took eight months to complete. Also had a change of Chairman to increase expertise for next phase of bid. observer programme in Athens was also beneficial to the bid team and provided good input into the technical themes of the Candidate File as well as giving a sound understanding of how the Games worked at an operational level.	Lessons Before
July 2005	Host City Announced	Secured the Games	Based on the challenges met during the early years of preparations for Athens 2004, the IOC recommended that a bid should consider the transition arrangements for moving from a bid company to an OCOG. Between March and July 2005, a large amount of time was devoted to putting in place the transitional arrangements for London 2012. The transition plan had to take into account both a 'win' and a 'lose' scenario	Lessons Before

London 2012 Olympic Case Study Assessment				
Timescale	**Key Programmes**	**Key Milestones**	**Lessons Learned and applied**	**Lessons Learned Journey**
July 2008-2009	The Big Build Foundations	Review, Adapt, Further 10 Key Milestones	Lessons were learned from previous Games, and both the ODA and LOCOG drew on experts from these Games. Rod Sheard, senior principal at Populous, designed the Olympic Stadium for the Sydney 2000 Games and did likewise in London.	Lessons During
July 2009-2010	The Big Build: Structures	Review, Adapt, Further 10 Key Milestones	Beijing 2008 probably represented the last truly grandiose Games. Instead, L2012 recognised lessons inherent in the approaches of Barcelona 1992 and Sydney 2000 to sustainability and legacy,	Lessons During
July 2010 - 2011	The Big Build Completion	Review, Adapt, Further 10 Key Milestones	The plan that dominated the bid book in 2005 has changed and while the Stadium will still host the 2017 World Athletics Championships, it can be modified and reconfigured for a range of possible future uses. At the Velodrome, the architects called in Olympian Sir Chris Hoy to help them create the perfect venue for Olympic and Paralympic Track Cycling. The big build was completed on schedule in July 2011, with 42 successful test events hosted in 28 venues through the spring of 2012, learning lessons for smooth operation at all the venues.	Lessons During
July 2011 - 2012	After the Big Build	Park Fringe+ Temporary facilities	One of the most spectacular buildings, the Aquatics Centre, had to compromise the original design with two demountable, temporary stands at Games-time (to create a capacity of 17,500) demonstrating learning during the project	Lessons During

London 2012 Olympic Case Study Assessment				
Timescale	**Key Programmes**	**Key Milestones**	**Lessons Learned and applied**	**Lessons Learned Journey**
2004 - 2012	Project Learning	Ongoing	The IOC Knowledge management data was available throughout the whole programme. The IOC were on hand to supervise and help with all aspects of the preparations. They visited London 10 times between 2005 and 2012. They assessed all the preparations, including the building of the venues, transport links, staging of the Games and mand for many other aspects.	Lessons During
2004 - 2012	Project Learning	Ongoing	In the early stages of the project, with venue developers focused on legacy, the Village team faced a challenge in ensuring venue operations were accommodated. A 'one team' approach was generally adopted towards the project and, in many cases, Games operations requirements contributed to enhancing the post-Games product	Lessons During & After
2004 - 2012	Learning Legacy	Ongoing	Considerations of sustainability underpinned every planning and procurement decision at London 2012. A radical ecological vision went way beyond the headline-grabbing concepts of carbon offsetting or recycling. This was a strategy with global impact. It was designed to provide an environmental legacy and a new sustainability knowledge bank to inform decision-makers in sports event planning for decades to come.	Lessons After
2012 Onwards	Learning Legacy	Ongoing	At Olympic and Paralympic Games in the past, large elements of the infrastructure, such as barriers, temporary offices, food outlets, signage and seating, were bespoke items manufactured for a particular venue. After the Games they were often scrapped. In London, by contrast, many of the key pieces of infrastructure were hired, leased, bought back or recycled into a new, post-London 2012 role	Lessons After

Olympic References

APM (2012)' Delivering the greatest show on earth' *APM Legacy Learning* [Video and podcast]. 30 March 2012 Available at: http://www.apm.org.uk/news/delivering-greatest-show-earth-video-and-podcast#.U_x0SvldWuI (Accessed August 2014)

APM Group and the Stationary Office (Axelos) (2011) "*Organizing the "greatest show on earth*". Best Management Practice Case Study" [Online] Available at: http://www.axelos.com/gempdf/Greatest_Show_on_Earth_Case_Study_Nov11.pdf (Accessed August 2014)

Department of Culture, Media and Sport (2008) *Before, during and after: making the most of the London 2012 Games*. [Online] Available at: www.culture.gov.uk/images/publications/2012LegacyActionPlan.pdf (Accessed 24-11-12)

Department for Culture Media and Sport (2013) "Report 5: Post-Games Evaluation Meta-Evaluation of the Impacts and Legacy of the London 2012 Olympic Games and Paralympic Games SUMMARY REPORT" [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224181/1188-B_Meta_Evaluation.pdf (Accessed May 2014)

International Olympic Committee (2012) Factsheet Legacies of the Games Update 2012. [Online] Available at: http://www.olympic.org/Documents/Reference_documents_Factsheets/Legacy.pdf (Accessed 5 May 2014)

International Olympic Committee (2014) Factsheet OGKM Update 2014. [Online]. Available at: http://www.olympic.org/Documents/Reference_documents_Factsheets/OGKM_UK.pdf (Accessed 5 May 2014).

Kintrea, K. Law, D. Argent, N. Organ, L. (2011) *Lessons learned from the London 2012 Games construction project: Learning Programme assurance on the Olympic Delivery Authority construction programme*. UK: Olympic Delivery Authority. [Online] Available at: www.learninglegacy.independent.gov.uk (Accessed 27-9-12).

London East Research Institute of the University of East London (2007) *A Lasting Legacy for London? Assessing the legacy of the Olympic Games and Paralympic Games*. London: Greater London Authority. [Online] Available at: www.uel.ac.uk/londoneast/research/documents/lasting-legacy.pdf (Accessed May 2014).

London Organising Committee of the Olympic Games (LOCOG) (2012) London 2012 Olympic Games Official Reports Volumes 1,2&3 [Online] Available at: http://www.olympic.org/london-2012-summer-olympics (Accessed August 2014)

London 2012 (2012) Lessons learned from the London 2012 Games construction project [Online] Available at: http://learninglegacy.independent.gov.uk/documents/pdfs/programme-organisation-and-project-management/426289-2012-ll-construction-tagged.pdf (accessed August 2014)

Olympic Delivery Authority (ODA) (2010) *The Big Build:Completion* London:The Stationery Office Limited [Online] Available at: www.london2012.com (Accessed May2014)

ODA - Olympic Delivery Authority (2011b) Annual Report and Accounts 2010-2011. London: The Stationery Office Limited [Online] Available at www.london2012.com (Accessed 10-10-12).

Sanderson, J et al (2011) *Risk, uncertainty and governance in megaprojects: A critical discussion of alternative explanations*. International Journal of Project Management, 30(2012), pp.432-443, Elsevier [Online] Available at: http://search.proquest.com/docview/992994308?accountid=17234 (Accessed 2-10-12).

Taylor, L. (2012) 'Delivering the Olympics' *Project* (May 2012). [Online] Available at: http://www.apm.org.uk/news/delivering-olympics#.U_yKR_ldWuI (Accessed August 2014)

Townley, M. (2012) *Project and Programme Management* [UEL SMM213 Lecture 10, CLM guest Speaker]. 23 October 2012

Appendix 8.4 LOCOG Knowledge Management Process

"LOCOG's Information and Knowledge Management (IKM) team had three strategic aims: first, to improve business productivity through the deployment of a document management system and other collaboration tools; second, to embed knowledge from previous Host Cities across LOCOG through structured learning programmes; and third, to ensure LOCOG's knowledge, records and archives are captured and transferred as a legacy to future Host Cities. The IKM team delivered these objectives through the implementation of a number of innovative projects that always focused in forensic detail on the specific needs of the end user. For example, LOCOG created a flexible extranet platform called 'The Exchange' that allowed sharing of information with a wide variety of external partners and stakeholders in a very simple and intuitive way – in all, 60 secure mini-websites were built which helped enable the 'one-team' planning approach with all organisations playing a part in delivering the Games.

The IKM team also took a new approach to sharing knowledge, initiating a pre-Games learning programme. This was aimed primarily at Sochi 2014 and Rio 2016, who were invited to visit London during LOCOG's test events to maximise the lessons they could learn from our readiness programme.

LOCOG benefited from very close links with the IOC's Olympic Games knowledge Management team throughout the planning and delivery of the Games. The teams worked in partnership on many other projects, including the Games-time Observer Programme and the London Debrief.

The IKM team spent many months planning and preparing for the knowledge capture process immediately after the Games were completed, where the team worked with all functional areas to ensure the London 2012 Games Blueprint was collected from LOCOG's staff – this included thousands of plans, documents and publications, and well over 100 'knowledge reports' written specifically to provide recommendations to future organisers on staging an Olympic Games.

LOCOG also became the first Organising Committee to sign a formal Archives Agreement prior to the Games. This agreement was reached between LOCOG, the British Olympic Association and The UK National Archives in close collaboration with the IOC, which allows for all LOCOG's records and archives to be accessible digitally by future generations around the world.

Integrated delivery

– Leadership: spend time on this. Understand what leadership means in the context of the different phases an OCOG goes through on the journey to the Games. Inspire, empower and acknowledge. This is a long journey and, given you essentially double in size every year, you need your senior and middle management teams to be great leaders so they can train the rest of the organisation as it develops.

– Building a delivery organisation to deliver the Games: your organisation changes dramatically over the seven-year period of preparations for the Games as you move through your planning and delivery phases. Blend bid people and new people, and bring in the experts. This provides important confidence for partners and stakeholders. Trust and credibility in your planning are also paramount in the pre-Games preparations.

– Highly skilled facilitators: the OCOG is central to all delivery and a facilitator throughout the process, looking at gaps, identifying best partnerships, brokering relationships. Other than the IOC, no one cares as much about delivering a great Games. The OCOG has one single focus; almost everyone else has other things to care about and deliver so be the ringmaster.

– Public and private partnerships: critical to staging a Games. The OCOG has to champion this and create the structures and environment for these two groups to coexist happily.

– Relationships and partnerships, both internal and external, must become operational. You need to have the right organisational structures that must reflect the operational requirements for the Games, especially to mobilise, train and deploy staff from functional teams into venue-based teams to deliver sports events at Games time. The 'one team' approach is the only way to deliver seamlessly. Create the one team physically and figuratively as early as possible and take it through planning, testing and readiness phases."

[Source: London2012 Olympic Games Official Report 2013]

Appendix 8.5 Government National Programme for I.T in the NHS

National Programme for IT in the NHS				
Timescale	**Project stages**	**Action**	**Outcomes**	**Lessons ?**
2001- 2002	IT Needed to reform UK government services and identified NHS to benefit from improved IT	Meeting with Bill Gates and follow up meetings with IT Firms such as Microsoft and Cisco. Government Blueprint "Delivering 21st Century IT Support for the NHS: National Strategic Programme"	Potentially IT could transform people's experience of healthcare. Information captued could be used repeatedly, transforming working processes and speeding up communications. Medical records could be computerised. Delivery of services designed around patients. Supporting staff through effective electronic communications	Experts in the field of IT consulted. Not actual Healthcare IT experts.
2002	Clinical Care Advisory Group established to link in with government taskforce	Translate healthcare requirements into IT requirements	to identify and agree what was the most valuable information to store and what was achievable in practice. Proposals accepted in March 2003 with agreed continuing involvement	End-User Involvement - but limited
2003	Department of Health Information Director Appointed	Tasked to deliver the transformation	Proposed timetable of 5 years not accepted and told to implement in under 3 years	Plan amended, ignoring expertise-working to political agenda
2003	Developing the Plan	Put the plan in place	Plan approved but key aspects not adhered to . £5billion budget and very high risk score of 53/72 removed from published report.	Objectives unclear
2003	"Connecting for Health" established by Department of Health	An agency to procure and deliver the IT systems	New Director General of NHS information Technology appointed to deliver the National Programme for IT in the NHS. New budget announced as £2.3 billion	IT experience of introducing Congestion charge - No health experience. No basis for budget reduction
2003	McKinsey Consultants engaged	Study into healthcare IT market in UK	Study never published - is known that it concluded that no existing company in the market had the capacity to deal with a multi-billion pound programme	Asked the experts - ignored their findings?
2003	Divided NHS England into five regional monopolies	to ensure successful delivery	So instead of one system to cover whole of UK , now potentially 5 integrated systems?	Intergration problems - initial idea was to centralise?

National Programme for IT in the NHS				
Timescale	**Project stages**	**Action**	**Outcomes**	**Lessons ?**
2003	Procurement process started	to identify and appoint the best companies to implement a seamless functioning system	5 week turnaround requested from bidders thus no time to establish complete requirements or talk to doctors in NHS to see what was needed. All contracts awarded in 6 months. No consultation with end users of the systems including crucially major hospital systems. A conscious decision was made to deal with complexities AFTER contracts had been awarded??	classic IT failure of not engaging with end-users. User group established in 2002 to assist - mostly ignored. Experienced NHS Information director knew end user engagement essential -acknowledged that timscale imposed was never going to allow for this. Efforts to include end-users were obstructed. Director refused to "make up" consultation information and was made redundant
Dec 2003	Prime Contracts awarded	Four bidders awarded five contracts(one for each region) worth £5bilion plus some miscellaneous contracts for broadband and an electronic booking system	Contracts were signed before the governement knew what it wanted to buy and before the suppliers knew what they were expected to supply. Value of contracts soared from £2.3 billion budgeted to £6.2Billion. Timscale had escalated to 10 years	Clear objectives and specifications not agreed from outset
2004	Sub-contracts for specialist software identified	Primes Contactors allowed to choose - two different providers used	potential difficulties with combining systems. Turned out one of the companies flagship products wasn't completed and not tested but two regions dependent on it	No rigour applied to ensuring software suppliers could deliver expected products
2004	Chief Medical Officer brought on Board	to try and include end-user involvement	End-user buy-in now recognised as critical to the success of the project. All a bit too late as Contracts already signed and what had been signed for did not deliver what the clinicians wanted. Position only lasted 6 months	Required but not really wanted?Appointment was a gesture to improving the situation

National Programme for IT in the NHS				
Timescale	**Project stages**	**Action**	**Outcomes**	**Lessons ?**
2004	Issues Arising	Specifications	5 months in and contractual issues starting to appearEffective agreed end-dates not going to be met arising from detailed definition of requirements too difficult	Shouldn't do complete specifications AFTER awarding contracts!
2006	Prime Contractor Difficulties	Software/Finances in trouble	Due to lack of usable software losses of £270 million announced by one prime contractor	Clear specification, experience of relevant sector,tested products
2006	Prime Contractor withdrawal	Cutting their losses	One contractor with two contracts agreed to pay penalties rather than continue with project	How bad must it be, as significant penalties
2006	Prime contractor Issues	Existing Contractor took over additional contracts, remaining contractors having software difficulties too	Had engaged same software provider as withdrawal contractor so no working software to install?!!! Other contractors had employed US software company but hospital systems vastly different - not been accounted for . This software company was then changed for another US one - with the same issues?!	Poor background checks on suppliers - no learning applied anywhere it seems
2006	Confidence in the system disappearing	Clinicians and department of Health experts starting to speak up	IT health experts provided evidence that neither the clinical functinality nor any of the business case benefits would be delivered by the	Local care record systems recommended from those who know - why not
2007	Contractor confidence Gone	Contractor confirms failure	Contractor states"the National programme isn't working and it's not going to" . Complete loss of confidence in programme	Time to re-assess - STOP?!
2007	Director General of NHS information Technology resigns	No Leadership	Executive teamand project in disarray. Tried to justify programme so far and blamed IT specialists	Restructure left too late

National Programme for IT in the NHS				
Timescale	**Project stages**	**Action**	**Outcomes**	**Lessons ?**
2008	Two new Chiefs appointed	To get project on track	Difficult task at this late stage - didn't know where to start	Change of leadership not going to improve situation at this late stage
2008	National Audit Office report Issued	To address Failing programme	Failed to deliver on its central objective	Time to completely re-assess - Exit strategy required
2008	Contractor removed	To address Failing programme	Failed to deliver - may sue the government	Contracts need to be well designed - get out clauses for both sides
2009	Feasibility of Project Questioned	Public Account Committee questions continuation of project	No decision made and project continues	STOP!
2010	Criminal Charges for Software company directors	FSA taken to Court	FSA took them to court for conspiracy to make misleading statements- verdict not yet available	Check the background and veracity of suppliers - can they really deliver?
2011	Project no longer required	Public accounts committee Report	Depatment og health responed to PAC saying a centralised national approach no longer required but all existing contracts to be honoured????	Contracts - exit strategies - what can be salvaged? Lessons learned????????

References for NHS IT Case Analysis

APM (2014) *'Peeling back the covers on government programmes event"[Video]:*18 June 2014 [Online] Available at: http://www.apm.org.uk/news/peeling-back-covers-government-programmes#.VA5TqPldWuI (Accessed 21 August 2014)

Bacon, R. and Hope, C. (2013) *Conundrum: Why every government gets things wrong and what we can do about it* **.** London: Biteback publishing.

Crompton, P 2007, The National Programme for Information Technology - An Overview, *Journal Of Visual Communication In Medicine*, 30, 2, pp. 72-77, Academic Search Complete, EBSCO*host*, (Accessed 2 September 2014)

Great Britain. Cabinet Office (2014) *Major Projects Authority Annual report 2013-14.*[Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/315777/MPA_Annual_Report_2013-14_publication.pdf (Accessed July 2014)

Great Britain. Department of Health (2002) Delivering 21st Century ITSupport for the NHS National Strategic Programme [Online] Available at: http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4067112.pdf (accessed August 2014)

Great Britain. Department of Health (2012) The power of information**:** Putting all of us in control of the health and care information we need [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213689/dh_134205.pdf (accessed August 2014)

Hendy J, Reeves, B.C., Fulop, N., Hutchings, A. and Masseria ,C. (2005) Challenges to implementing the national programme for information technology (NPfIT): a qualitative study *British Medical Journal(International edition)* 2005, Vol 331 (7512) P331-336 Academic Search Complete, EBSCO*host*, (Accessed 2 September 2014)

Humber, M (2007) BMJ National programme for information technology Is sorely needed and must succeed—but is off to a shaky start, *British Medical Journal*. May 15, 2004; 328(7449): 1145–1146.doi:10.1136/bmj.328.7449.1145 (Accessed 1 September 2014)

Pagliari, C (2005) Implementing the National Programme for IT: what can we learn from the Scottish experience?, *Informatics In Primary Care*, 13, 2, pp. 105-111, CINAHL Plus, EBSCO*host*, (Accessed 2 September 2014).

Appendix 8.6 Question Analysis Matrix Imported into NVivo

Name: Question Analysis

<Internals\\Question Analysis> - § 119 references coded [100.00% Coverage]

Reference 1 - 0.84% Coverage

No not really. V large organisation and it must have been done before but no database or formal knowledge bank to refer to. Due diligence had been done on the acquisition and all legal documents were available. This was basis of going forward

Reference 2 - 0.84% Coverage

No - timeframe didn't allow. Stock market announcement made and team had to hit the ground running

Reference 3 - 0.84% Coverage

List of key people available to talk to new staff. Key elements to complete, two workstreams:
HR/Payroll assimilation. IT/Technical integration

Reference 4 - 0.84% Coverage

Yes - HR/Payroll and IT became the two main workstreams. What was missed in due diligence was that one IT contract could not be novated to SERCO at NO COST. Was essential software and had to be negotiated and paid for again

Reference 5 - 0.84% Coverage

Wasn't done. Relied on individual/team knowledge

Reference 6 - 0.84% Coverage

Good Team, Formation of Project Management Office. Due diligence information, good governance chaired by MD of integrated business so vested interest productive monthly board meetings. Positive internal culture for problem solving rather than blaming

Reference 7 - 0.84% Coverage

New upgrade to corporate system had happened internally.6 months later could have been smoother transition. Disjointed internal teamwork due to internal market system. Location - core team co-located but individual expertise various places nationally. Having the right people assigned to the team.

Reference 8 - 0.84% Coverage

Lessons learned identified that internal costing had to be accounted for - knowing this and how to deal with it saved a lot of time and effort

Reference 9 - 0.84% Coverage

SERCO culture didn't allow time for identifying previous lessons learned. Assumption that all contracts had been checked in due diligence was a costly mistake. Business case was optimistic and key objective "to win more business" - there was no way to prove and was impacted by external factors outside of the project teams control

Reference 10 - 0.84% Coverage

Ideal world - work with the mergers and acquisition team more fully - this would improve business case and get project team up to speed from the start

Reference 11 - 0.84% Coverage

Experience of importance of governance. Decision makers on board. Knowing the risks, clearly identifying and having contingencies in place.

Reference 12 - 0.84% Coverage

Not having a dedicated IT team member. Internal organisation prevented good teamwork with IT and corporate systems - made it disjointed and difficult to hit timelines

Reference 13 - 0.84% Coverage

SCORE - 6. All practicalities got done. It was a good acquisition but not for the reasons in the business case: couldn't prove increased business, cost efficiencies were harder to achieve as had been unrealistically stated

Reference 14 - 0.84% Coverage

YES - Be very strategic with selection of team members, co-locate as many of the team as possible - this allows you to utilise your team knowledge bank. Each project expands individual knowledge/experience and this is what you can draw on. Specifically next project was very clear on business case, more realistic with forecast and led to turning down acquisition

Reference 15 - 0.84% Coverage

Previous knowledge and experience existed within specific PEOPLE. Lessons learned came from individuals so the success of the project is reliant on getting the RIGHT people assigned to your project

Reference 16 - 0.84% Coverage

No not really. As this programme linked many projects there was a lessons learned process run by the PMO. When every project completed a lessons learned review was logged, put in a shared folder and promptly forgotten about

Reference 17 - 0.84% Coverage

No - Not really - don't go to other sectors to learn about IT projects. Benchmarking is good practice but that more for leadership styles/how do others operate/implementing quality systems. Previously part of PM groups in public sector but never really came together for good sharing as experiences very diverse - so either too generic. Public sector also different - happy to share unlike private sector! Personal networks most useful

Reference 18 - 0.84% Coverage

Having come in in 2009 (project started in 2006) it was clear that there were problems with previous releases, a lack of governance overall and Risk identification was also poor

Reference 19 - 0.84% Coverage

YES -The key was to identify all the lessons/issues and embed a method of working, incorporating strong governance procedures and risk management

Reference 20 - 0.84% Coverage

Within IT projects experience states that processes need to be formalised. This clarifies critical milestones and dependencies. This facilitates better communication and better awareness.

Reference 21 - 0.84% Coverage

A "release manager" was appointed who was across the various workstreams. Procedural changes were put in place, change freezes implemented to ensure dependencies highlighted. Suppliers on board with making improvements. As things improved credibility soared and more improvements made

Reference 22 - 0.84% Coverage

Persuading Client that improvements reduced risks & justified extra funding. Persuading teams internally that it wasn't just another layer of bureaucracy Underlying behaviours needed addressing and that took time

Reference 23 - 0.84% Coverage

Less issues, less delays, happier suppliers. Introducing good processes makes things happen BETTER

Reference 24 - 0.84% Coverage

Delays, multiple issues, defects, multiple re-working, loss of reputation. If you don't apply lessons you become exposed and credibility and reputation compromised. Consequences at different levels - customer can refuse to pay, individuals brought to task for not adapting and performing

Reference 25 - 0.84% Coverage

Make the client adapt to work in a more Agile way - processes very rigid but that caused difficulties when requirements very fluid

Reference 26 - 0.84% Coverage

Putting a governance structure in that managed the risks already known from problems in the past. Took lessons forward and incorporated into improved risk management approach that was then able to deal with more effectively

Reference 27 - 0.84% Coverage

There were some technology constraints that that if not there would have made life easier

Reference 28 - 0.84% Coverage

SCORE: 9 - It was very successful and everything at the end was on track and completed to time and cost

Reference 29 - 0.84% Coverage

YES - Current new project - lessons - standards not in place, governance lacking - all these needed to be put in place again - corrective action to re-structure and re-process

Reference 30 - 0.84% Coverage

Boils down to Competent people with relevant experience. Shared folders all well and good but only by getting fingers burnt from time to time does behaviour become LEARNED. Need experienced people around to challenge approaches and point out pitfalls

Reference 31 - 0.84% Coverage

Yes - Started planning early. Having been the only one involved in previous similar project he was the existing knowledge database

Reference 32 - 0.84% Coverage

No - they were the field leaders

Reference 33 - 0.84% Coverage

Tactics of engagement, how to deal with key stakeholder. Needed to own and control the model. Identified key help (consultants). Must start early as preparation key

Reference 34 - 0.84% Coverage

Yes- plan to adopt model put in place and negotiated. Restricted and determined the scope as required. Took control. Knew Process must include talking to right people and having right people in place to support and execute

Reference 35 - 0.84% Coverage

Knew he wanted to manage the process. Knew what scope was wanted. Knew who he needed

Reference 36 - 0.84% Coverage

Having been involved in a similar project with relative success, credibility was already established. Steering Group with supportive manager and project champion. Strong governance critical. Weakness of opposition. Very clear objective

Reference 37 - 0.84% Coverage

Not very much. Sometimes project getting team together was difficult as not co-located

Reference 38 - 0.84% Coverage

Control of the project. Ability to steer. Experience allowed to get ahead in the negotiations and keep control

Reference 39 - 0.84% Coverage

Knowing the amount of work, the small team was a constraint and left a great deal of work for individuals

Reference 40 - 0.84% Coverage

Ensured additional help for all of the essential administration and internal processes

Reference 41 - 0.84% Coverage

Able to take control. Put in place appropriate processes. Clear direction for external consultants. Had the credibility. Had the support of senior management who trusted his experience. Saved a lot more money so improved the overall goal and benefit

Reference 42 - 0.84% Coverage

Anything that got in the way was outside the control of the project. This sometimes created internal pressure

Reference 43 - 0.84% Coverage

SCORE: 8 It worked well, they achieved significant cost minimisation and they put in place some succession planning by training someone else on the project

Reference 44 - 0.84% Coverage

Making sure you have management buy-in. Get the right support at the right level. Better to flag issues sooner rather than later. Some cultures more accepting of this depends on the culture of the organisation. Get people involved if they have a vested interest

Reference 45 - 0.84% Coverage

Project based companies more structured- encourage corporate learning but people still often start from scratch. Documented lessons not really used. They state the obvious but it is the obvious that often gets forgotten. Culture of the organisation can make a difference - learning becomes embedded but lessons still get lost

Reference 46 - 0.84% Coverage

YES - previous shift change project - there was lots of difficulties, lots of delays and very difficult to implement. Union opposition was fierce. Although different project had some similarities so used the learning. There is a PMO and projects are documented but not yet accepted in organisation. Individuals can pass on knowledge but organisational memory not logged

Reference 47 - 0.84% Coverage

No - Leaders in the field anyway

Reference 48 - 0.84% Coverage

Smaller group, more senior group and much less risk of union action or union opposition. From previously Communication was key. Keep to the original scope and be very clear.

Reference 49 - 0.84% Coverage

As project team were all uniform staff proposals were very robust. They had first hand experience of the working environment that they were trying to change. Aware of conditions. Knew how the command structure worked. Knew what would and wouldn't work. represented a sample user group. incorporated internal knowledge needed.

Reference 50 - 0.84% Coverage

Knew the lessons to use and avoid but had to work around the project sponsor who was not always receptive to what was felt to be the best proposals. Lots of back-up work needed in order to convince sponsor expectations

Reference 51 - 0.84% Coverage

Make up of the team was critical. Innate knowledge already gained meant proposals were sensible and knew they would be acceptable. Also this gave the team credibility amongst the major stakeholders and those affected by project

Reference 52 - 0.84% Coverage

Pre-conceived ideas of the project sponsor. He did not support the idea of a non-uniformed PM. Director appointed CB as a more independent PM due to nature of project an therefore no vested interest in outcome. Sponsor found it difficult. Because of lack of support credibility was compromised. Much of resources worked directly for sponsor and this therefore had a knock-on effect. This led to a difficult group dynamic overall.

Reference 53 - 0.84% Coverage

Team knowledge - awareness of pitfalls and best way to engage staff / stakeholders. Knew preparation had to be good and were able to "road-test" options with team. Very aware of political sensitivities due to previous issues. Easier to engage with finance /HR. Communication - Type/Culture of organisation misinformation is rife so distribution of clear, succinct and timely key messages needed. Also having the right people gets the job done.

Reference 54 - 0.84% Coverage

If lessons learned not used project board not right, project team not right, Delays, irritated stakeholders. Lots of proposals would not have been of any use. Misinformation and rumour would have been rife.

Reference 55 - 0.84% Coverage

Different sponsor - this may have changed the power dynamics. Project team selection could have been more strategic. Many with the same mindset which limited creativity and was sometimes difficult to manage. Organisation as a whole not open to new ideas. More convincing support a senior level

Reference 56 - 0.84% Coverage

Was able to avoid the "bear traps" highlighted by previous bad project

Reference 57 - 0.84% Coverage

There was a PMO manager but not taken seriously in organisation. There was a database but it is difficult getting information to individuals. knowledge is held about a vast range of projects. PMO office can point in the direction of similar projects but if the individuals go then that knowledge will be lost. People don't read large volumes of information.

Reference 58 - 0.84% Coverage

SCORE: 8 - project was successful, 18 months to get changes done but will be 3years or more to realise all potential benefits

Reference 59 - 0.84% Coverage

YES - As PM gain as much clarity as you can of who is on the project team and why - who put them there, what was the motivation. Make sure that responsibility is given to the right people. PM is responsible but needs good support from the team and needs to be able to trust them to do

Reference 60 - 0.84% Coverage

Assuming all lessons on intranet access - not sure people would access. FAQs not very useful. Ideally perhaps case studies would be the best thing to have but would have to be good. Even with this type of resource PMs will probably just go and "find someone" to tap for their knowledge. Organisation culture plays a big part. LFB not a good example of good PM as people are allocated projects on their availability rather than skill and expertise. In this way knowledge is lost

Reference 61 - 0.84% Coverage

own experience/instincts - talk to people, "fish" for knowledge. If completely unknown go find an expert who has done something similar

Reference 62 - 0.84% Coverage

Depends on how organisation is set up. To train PMs it is a god idea to shadow other experienced PMs and "do". However this might be costly . Apprenticeships might be an option. Lunchtime talks - projects we have done-others have done. Get interested parties together - pertinent topics - all about communication and awareness of others experience.

Reference 63 - 0.84% Coverage

YES - a very good evaluation document had been produced as part of the Edgware project. Was mainly outcome data rather than PM guidance. They had done a "customer" survey before and after

Reference 64 - 0.84% Coverage

Yes- for specific things such as building specifications and models of care. It was a new initiative wanted to see what would work well, staff working, effective for pregnant women, cost effectiveness

Reference 65 - 0.84% Coverage

The clinical guidelines were critical. To ensure safe practice transfers and emergencies were key. Identified no formal agreement in place with the London Ambulance Service (LAS) and this was needed to ensure critical guidelines met

Reference 66 - 0.84% Coverage

Yes - was a key element

Reference 67 - 0.84% Coverage

Yes, Mostly - Worked closely with them to set up procedures and include in SLA. Did live drills and learning exercises which provided loads of learning. Risks identified protocols set up

Reference 68 - 0.84% Coverage

1. Buy-in from LAS 2. Good executive sponsor. 3. PM had good relationship with CEO on commissioning side and Director of estates. All high status and able to use their leverage and ensure buy-in. All about relationships

Reference 69 - 0.84% Coverage

Information to women - critical safety information available that had been road tested. Processes in place for continuous monitoring of transfers and outcomes. Increased credibility and trust. Lots of back-up information and controls in place

Reference 70 - 0.84% Coverage

Staff team building. A lot of financial input. Much time and resource on recruitment - only suits certain people so this took longer. Thus reduced timescale to open and commitments already in place. 1 month delay in opening but still very tight timescale and team working not established in first 3 months. issues arose 2 staff left (20%) - led to demoralised team.

Reference 71 - 0.84% Coverage

Timeline for completion would have been extended. Smoother opening and allow time for team building

Reference 72 - 0.84% Coverage

SLA improvement. Good processes from start. Team building elements that worked. Senior manager identified as being needed in centre - real improvement on support, troubleshooting and ensuring better outcomes. Identified PM needed eventually (not at start!)

Reference 73 - 0.84% Coverage

Remote PMO , initially unaware of PM role. Once identified it provided documentation and process advice bit it was acknowledged that there should have been more support and someone allocated from PMO to assist but that hadn't happened. Trust in the steering group, tensions about reporting because two routes from commissioners and Hospital trust, not clear on who made the decisions. Governance issue. Structure and time not honoured.

Reference 74 - 0.84% Coverage

SCORE: 8 as financially not successful. Clinical outcomes, staff engagement, user outcomes all really good. Initial financial modelling worked but then Department of health changed significantly and altered funding requirements. Uncontrollable external factor but now makes the project vulnerable

Reference 75 - 0.84% Coverage

YES-Another birthing centre developed in Barking three years later. Not able to run project but project model and lessons learned log used and PM available for consultancy. Shared guidance, training materials, discussed specifications - what did and didn't work. PM is the knowledge database for this type of project. Sees her role as to share the story very practically. Has used the knowledge from this project to go forward with confidence , knows the language, able to challenge in many different areas.

Reference 76 - 0.84% Coverage

NO - Can do both. For example the idea of financial modelling has been learned and now documented for many project to use. Much more awareness and Less naivety as a department and lessons embedded. Driven by change in the culture of the organisation too. At the start of new project Individual relationships are key. Takes 2/3 years for service to establish its own identity and then can be sustained as people come and go. If early disruption the it can be lost

Reference 77 - 0.84% Coverage

Share the story very practically. Need to be firm seeking assurances from contributors. Governance can be tailored for particular types of projects. Identified the organisation expectations - knowing that affects way of working.

Reference 78 - 0.84% Coverage

Flag issues. Share more widely and more often to create awareness. Because of the type of organisation it is lessons have to be learned or people die! . Be strategic on project team - try and identify expertise early. Maintain a log of information. Share the story very practically.

Reference 79 - 0.84% Coverage

First task was to put some governance structure around all the existing minutes, notes and meetings. Having collated all the existing material and knowing what needed to be done given a set timescale. A series of actions was drawn up to present to the steering group.

Reference 80 - 0.84% Coverage

No not taken into account

Reference 81 - 0.84% Coverage

Needed to identify staff numbers, technical details needed to be confirmed. Air conditioning a key factor but had dependencies and security.

Reference 82 - 0.84% Coverage

These were critical factors for the project to work and decisions on them needed to be made quickly. This was not achieved

Reference 83 - 0.84% Coverage

Turned the meetings into a project board and identified the sponsors. Needed two sponsors as effectively two organisations. Experience and technical expertise was incorporated and this led to big reality check for project board who realised that they could not incorporate what they wanted in the timescale available

Reference 84 - 0.84% Coverage

The sponsors fully understood the issues. They were aware of what was needed.

Reference 85 - 0.84% Coverage

The county council operating method was the biggest hindrance as the decision making mechanism was not there. Being a democratic politically elected committee who had to make the final decisions no one was brave enough to commit to the decisions required (which included closing a school - political suicide!)

Reference 86 - 0.84% Coverage

The exercise highlighted that there was a covenant on the building that had to be removed, the maximum desk ratio was confirmed. The a/c system was identified. In effect a template lease was developed that could be put to use in the future if the council could get organised. They also learned that if it had been set up as a formal project in the first place the issues would have been highlighted much sooner and they could have managed the situation much more effectively.

Reference 87 - 0.84% Coverage

The project failed. At that point it was then shelved.

Reference 88 - 0.84% Coverage

The work needed to be made into a proper project from the outset. If started earlier it would have been achievable.

Reference 89 - 0.84% Coverage

re-organising it into a proper project set-up. Putting in governance structures, risk and action logs out the whole thing into a proper perspective and enabled the project team to focus and identify exactly what needed doing

Reference 90 - 0.84% Coverage

A project management culture would need to be instilled as this did not exist. For internal projects there was very little understanding of what project management was. Projects that have been done well there was done by third parties. Talking about what was needed to be done for 3 years demonstrated this complete lack of awareness. Scoping out the project fully would have highlighted the dependencies and costs associated.

Reference 91 - 0.84% Coverage

SCORE: 1 The objective was to develop and lease out the floor of the building to generate income and it didn't happen. As a project governance review it was a success and it provided a lesson log and template fordoing again which has subsequently happened.

Reference 92 - 0.84% Coverage

Big lesson is put the planning in first. Spend the time scoping the project, identify the dependencies and get an idea of what the project will look like. Work breakdown structures are very useful. Flag up issue as soon as possible. - First time he had said NO don't do it but this project gave the PM the confidence to know that this can be done if necessary. realised the benefit of supportive sponsor - realised it was a brave decision to stop but it actually generated respect and trust in his competence.

Reference 93 - 0.84% Coverage

Documented outcomes from this project created a formal lesson log and a template for future use and it has been utilised - this is the only time the PM has known that to happen! But there were also lots of lessons learned along the way which PM has benefited from and has used subsequently . Doing and talking seems to be more prevalent

Reference 94 - 0.84% Coverage

No always a lessons log/formal paperwork to access - individuals often have the knowledge. Talk to people who have done something similar or worked on project. previously. When taking over a project (often part-way through) get clarity as quickly as possible - need to identify clear objectives - what are the deliverables and is there a budget. 90% people have perception that PM draws up a plan and then nags people to get it done. Doesn't happen - PM ends up doing lots - just directing the traffic is not how it works!

Reference 95 - 0.84% Coverage

Seems for Public sector/local government often projects are run by consultants - they use their own lesson logs and bring their lessons learned. In a way they are buying their lessons learned and avoiding / transferring the risks. Rather than database of info - create a log of PMs and their projects - then go speak to them - you get a better insight - honesty -advice on stakeholder management

Reference 96 - 0.84% Coverage

Lessons learned always considered. Do not like "re-inventing the wheel". Asked people, drew on experience around her. Had to decide on level of resources and any past issues - talked to people, used documented information, interviewed people who had been through process to check methodology consistent

Reference 97 - 0.84% Coverage

Yes- two groups that help to co-ordinate best practice . Consumer law enforcement and competition law enforcement. Put in place regular meetings with a network of contacts. Also spoke to other regulators to see if they had done anything similar, any suggestions for ways to approach. How best to gather evidence, experience of litigious approach

Reference 98 - 0.84% Coverage

Making sure that way information was asked for elicited the right information and allowing time to do this effectively. Make sure understanding and consensus achieved about standard they were measuring against. Made sure they were clear on what was required - clarity on both sides from the outset

Reference 99 - 0.84% Coverage

Yes - There was a lot of goodwill internally. Companies were keen to resolve the issues. Could be potentially difficult relationships given the nature of the project. Was a high profile project and required lots of briefing and different communication channels. Could often see the lesson, see what you needed to do but it was varying degrees of success in terms of how quickly you could deliver it. A steering group was established early on

Reference 100 - 0.84% Coverage

Getting the right people on the steering group and plugging in to the forums on best practice was really helpful getting everything incorporated

Reference 101 - 0.84% Coverage

Involving a couple of people who had been part of the original drafting of the regulatory obligations gave credibility to defining requirements. It helped a lot as it wasn't always easy persuading people as there were high emotions around the whole process. Project support office was also very helpful ensuring appropriate level of support in place

Reference 102 - 0.84% Coverage

Project grew as it developed from 6 -25/30 people in space of 8 months. Bringing people up to speed and having to keep doing it. Not anticipating this made it a challenge as the project went on. Not knowing what you will find -can't always anticipate what's needed.

Reference 103 - 0.84% Coverage

Enabled the project to progress more quickly and more effectively.. If we hadn't been well prepared could have risked missing a lot of things and not being able to establish the facts as well as we did. Knowledge gained from the external help also enabled preparation of very robust case and led to a swifter conclusion as the companies could see the effort to get it right.

Reference 104 - 0.84% Coverage

Hadn't quite anticipated how big the project would get. Anticipating or just planning for additional support / resources. Also factoring in that if it does grow there must be bigger issues and the timeframe is going to extend.

Reference 105 - 0.84% Coverage

Possibly having fewer people but with more time dedicated to this one project . This would mean spending less time educating and re-remembering so producing good work more effectively. Also more researchers listening and checking through evidence concurrently. Matter of cost to balance though

Reference 106 - 0.84% Coverage

Stakeholder handling. Understanding relationships. Balance of firm but fair. How to elicit information well - time spent researching this made a huge difference. Relationships developed with people in the companies and this was enabled by knowing what does and doesn't work from previous projects. Clear escalation processes and governance support was embedded and invaluable. Setting up of sub-groups to the main board also helped.

Reference 107 - 0.84% Coverage

The turnover of people meant that some parts of the project had more experience on it than others. Also having to get people up to speed wasn't helpful. Limited time to key people - if they had been available all through would have been useful. Better co-ordination between different strands of the project. Making sure they all liaise and aware of issues works with varying success. Tried to gather lessons along the way but hard to know what may have been missed.

Reference 108 - 0.84% Coverage

SCORE: 7 -Timescale was not as son as planned. However, remedies were being put in place as project progressed. It delivered behaviour improvement, compliance and redress so overall was very successful.

Reference 109 - 0.84% Coverage

YES - Personally in terms of managing a project of that scale and carrying forward recognition of the importance of relationships. Managing co-ordination and getting people t contribute more overtly. The lessons log has been used to develop new guidance on how investigations are conducted and processes involved. It set the standard of how files are prepared and documents drafted. Also the ability to require redress was subsequently incorporated in statute

Reference 110 - 0.84% Coverage

I have been an exponent of writing things down in order to pass on knowledge. But peoples natural inclination is to talk to other people. Talking is critical. But also many lessons are learned along the way when doing projects. There are stages in the project where reviews can be undertaken and tweaks made to revise what you are doing - this can assist in planning forecasting in future. Organisational culture makes a difference. Commitment by organisation to try and support makes a difference. All organisation different you always seem to learn "how do you do it here"

Reference 111 - 0.84% Coverage

The wash-up should not jut be for your team but take the key points and share. Take key findings to a governance group, presentation to whole group/organisation. When presented t pa receptive audience they take the information on board, knowing it is a real life project that has been done and identifies who has the experience - educates and embeds more easily. Depending on organisation networks are useful and persevering with educating and writing guidance help.

Reference 112 - 0.84% Coverage

As part of PM mentor role I encouraged project review to be shared on intranet - to give an idea of what's happened and who has been involved - so people can see if a similar project has been done. Was used widely by PM team but not so much across organisation. Another technique is at end of project just to ask the question and "what would you communicate to other people?" The take the key learning and present - can be used for varying audiences but goo learning tool. Different tools and techniques have been packaged into toolkits for PMs and lots of signposting to "how to" do stuff. Not always easy to get people to then identify lessons - key time is just before project end - get all the gripes and all the plaudits - make it positive and turn into useful information

Appendix 8.7 Lessons Learned Journey references - Before,During, After

Name: Lessons Before

Description: Group of questions that relate to start of project

<Internals\\Question Analysis> - § 35 references coded [29.41% Coverage]

Reference 1 - 0.84% Coverage

No not really. V large organisation and it must have been done before but no database or formal knowledge bank to refer to. Due diligence had been done on the acquisition and all legal documents were available. This was basis of going forward

Reference 2 - 0.84% Coverage

No - timeframe didn't allow. Stock market announcement made and team had to hit the ground running

Reference 3 - 0.84% Coverage

List of key people available to talk to new staff. Key elements to complete, two workstreams:
HR/Payroll assimilation. IT/Technical integration

Reference 4 - 0.84% Coverage

Yes - HR/Payroll and IT became the two main workstreams. What was missed in due diligence was that one IT contract could not be novated to SERCO at NO COST. Was essential software and had to be negotiated and paid for again

Reference 5 - 0.84% Coverage

Wasn't done. Relied on individual/team knowledge

Reference 6 - 0.84% Coverage

No not really. As this programme linked many projects there was a lessons learned process run by the PMO. When every project completed a lessons learned review was logged, put in a shared folder and promptly forgotten about

Reference 7 - 0.84% Coverage

No - Not really - don't go to other sectors to learn about IT projects. Benchmarking is good practice but that more for leadership styles/how do others operate/implementing quality systems. Previously part of PM groups in public sector but never really came together for good sharing as experiences very diverse - so either too generic. Public sector also different - happy to share unlike private sector! Personal networks most useful

Reference 8 - 0.84% Coverage

Having come in in 2009 (project started in 2006) it was clear that there were problems with previous releases, a lack of governance overall and Risk identification was also poor

Reference 9 - 0.84% Coverage

YES -The key was to identify all the lessons/issues and embed a method of working, incorporating strong governance procedures and risk management

Reference 10 - 0.84% Coverage

Within IT projects experience states that processes need to be formalised. This clarifies critical milestones and dependencies. This facilitates better communication and better awareness.

Reference 11 - 0.84% Coverage

Yes - Started planning early. Having been the only one involved in previous similar project he was the existing knowledge database

Reference 12 - 0.84% Coverage

No - they were the field leaders

Reference 13 - 0.84% Coverage

Tactics of engagement, how to deal with key stakeholder. Needed to own and control the model. Identified key help (consultants). Must start early as preparation key

Reference 14 - 0.84% Coverage

Yes- plan to adopt model put in place and negotiated. Restricted and determined the scope as required. Took control. Knew Process must include talking to right people and having right people in place to support and execute

Reference 15 - 0.84% Coverage

Knew he wanted to manage the process. Knew what scope was wanted. Knew who he needed

Reference 16 - 0.84% Coverage

YES - previous shift change project - there was lots of difficulties, lots of delays and very difficult to implement. Union opposition was fierce. Although different project had some similarities so used the learning. There is a PMO and projects are documented but not yet accepted in organisation. Individuals can pass on knowledge but organisational memory not logged

Reference 17 - 0.84% Coverage

No - Leaders in the field anyway

Reference 18 - 0.84% Coverage

Smaller group, more senior group and much less risk of union action or union opposition. From previously Communication was key. Keep to the original scope and be very clear.

Reference 19 - 0.84% Coverage

As project team were all uniform staff proposals were very robust. They had first hand experience of the working environment that they were trying to change. Aware of conditions. Knew how the command structure worked. Knew what would and wouldn't work. represented a sample user group. incorporated internal knowledge needed.

Reference 20 - 0.84% Coverage

Knew the lessons to use and avoid but had to work around the project sponsor who was not always receptive to what was felt to be the best proposals. Lots of back-up work needed in order to convince sponsor expectations

Reference 21 - 0.84% Coverage

YES - a very good evaluation document had been produced as part of the Edgware project. Was mainly outcome data rather than PM guidance. They had done a "customer" survey before and after

Reference 22 - 0.84% Coverage

Yes- for specific things such as building specifications and models of care. It was a new initiative wanted to see what would work well, staff working, effective for pregnant women, cost effectiveness

Reference 23 - 0.84% Coverage

The clinical guidelines were critical. To ensure safe practice transfers and emergencies were key. Identified no formal agreement in place with the London Ambulance Service (LAS) and this was needed to ensure critical guidelines met

Reference 24 - 0.84% Coverage

Yes - was a key element

Reference 25 - 0.84% Coverage

Yes, Mostly - Worked closely with them to set up procedures and include in SLA. Did live drills and learning exercises which provided loads of learning. Risks identified protocols set up

Reference 26 - 0.84% Coverage

First task was to put some governance structure around all the existing minutes, notes and meetings. Having collated all the existing material and knowing what needed to be done given a set timescale. A series of actions was drawn up to present to the steering group.

Reference 27 - 0.84% Coverage

No not taken into account

Reference 28 - 0.84% Coverage

Needed to identify staff numbers, technical details needed to be confirmed. Air conditioning a key factor but had dependencies and security.

Reference 29 - 0.84% Coverage

These were critical factors for the project to work and decisions on them needed to be made quickly. This was not achieved

Reference 30 - 0.84% Coverage

Turned the meetings into a project board and identified the sponsors. Needed two sponsors as effectively two organisations. Experience and technical expertise was incorporated and this led to big reality check for project board who realised that they could not incorporate what they wanted in the timescale available

Reference 31 - 0.84% Coverage

Lessons learned always considered. Do not like "re-inventing the wheel". Asked people, drew on experience around her. Had to decide on level of resources and any past issues - talked to people, used documented information, interviewed people who had been through process to check methodology consistent

Reference 32 - 0.84% Coverage

Yes- two groups that help to co-ordinate best practice . Consumer law enforcement and competition law enforcement. Put in place regular meetings with a network of contacts. Also spoke to other regulators to see if they had done anything similar, any suggestions for ways to approach. How best to gather evidence, experience of litigious approach

Reference 33 - 0.84% Coverage

Making sure that way information was asked for elicited the right information and allowing time to do this effectively. Make sure understanding and consensus achieved about standard they were measuring against. Made sure they were clear on what was required - clarity on both sides from the outset

Reference 34 - 0.84% Coverage

Yes - There was a lot of goodwill internally. Companies were keen to resolve the issues. Could be potentially difficult relationships given the nature of the project. Was a high profile project and required lots of briefing and different communication channels. Could often see the lesson, see what you needed to do but it was varying degrees of success in terms of how quickly you could deliver it. A steering group was established early on

Reference 35 - 0.84% Coverage

Getting the right people on the steering group and plugging in to the forums on best practice was really helpful getting everything incorporated

Name: Nodes\\Question Analysis\Lessons During

Description: Questions relating to what happened during the project

<Internals\\Question Analysis> - § 35 references coded [29.41% Coverage]

Reference 1 - 0.84% Coverage

Good Team, Formation of Project Management Office. Due diligence information, good governance chaired by MD of integrated business so vested interest productive monthly board meetings. Positive internal culture for problem solving rather than blaming

Reference 2 - 0.84% Coverage

New upgrade to corporate system had happened internally.6 months later could have been smoother transition. Disjointed internal teamwork due to internal market system. Location - core team co-located but individual expertise various places nationally. Having the right people assigned to the team.

Reference 3 - 0.84% Coverage

Lessons learned identified that internal costing had to be accounted for - knowing this and how to deal with it saved a lot of time and effort

Reference 4 - 0.84% Coverage

SERCO culture didn't allow time for identifying previous lessons learned. Assumption that all contracts had been checked in due diligence was a costly mistake. Business case was optimistic and key objective "to win more business" - there was no way to prove and was impacted by external factors outside of the project teams control

Reference 5 - 0.84% Coverage

Not having a dedicated IT team member. Internal organisation prevented good teamwork with IT and corporate systems - made it disjointed and difficult to hit timelines

Reference 6 - 0.84% Coverage

A "release manager" was appointed who was across the various workstreams. Procedural changes were put in place, change freezes implemented to ensure dependencies highlighted. Suppliers on board with making improvements. As things improved credibility soared and more improvements made

Reference 7 - 0.84% Coverage

Persuading Client that improvements reduced risks & justified extra funding. Persuading teams internally that it wasn't just another layer of bureaucracy Underlying behaviours needed addressing and that took time

Reference 8 - 0.84% Coverage

Less issues, less delays, happier suppliers. Introducing good processes makes things happen BETTER

Reference 9 - 0.84% Coverage

Delays, multiple issues, defects, multiple re-working, loss of reputation. If you don't apply lessons you become exposed and credibility and reputation compromised. Consequences at different levels - customer can refuse to pay, individuals brought to task for not adapting and performing

Reference 10 - 0.84% Coverage

There were some technology constraints that that if not there would have made life easier

Reference 11 - 0.84% Coverage

Having been involved in a similar project with relative success, credibility was already established. Steering Group with supportive manager and project champion. Strong governance critical. Weakness of opposition. Very clear objective

Reference 12 - 0.84% Coverage

Not very much. Sometimes project getting team together was difficult as not co-located

Reference 13 - 0.84% Coverage

Control of the project. Ability to steer. Experience allowed to get ahead in the negotiations and keep control

Reference 14 - 0.84% Coverage

Knowing the amount of work, the small team was a constraint and left a great deal of work for individuals

Reference 15 - 0.84% Coverage

Anything that got in the way was outside the control of the project. This sometimes created internal pressure

Reference 16 - 0.84% Coverage

Make up of the team was critical. Innate knowledge already gained meant proposals were sensible and knew they would be acceptable. Also this gave the team credibility amongst the major stakeholders and those affected by project

Reference 17 - 0.84% Coverage

Pre-conceived ideas of the project sponsor. He did not support the idea of a non-uniformed PM. Director appointed CB as a more independent PM due to nature of project an therefore no vested interest in outcome. Sponsor found it difficult. Because of lack of support credibility was compromised. Much of resources worked directly for sponsor and this therefore had a knock-on effect. This led to a difficult group dynamic overall.

Reference 18 - 0.84% Coverage

Team knowledge - awareness of pitfalls and best way to engage staff / stakeholders. Knew preparation had to be good and were able to "road-test" options with team. Very aware of political sensitivities due to previous issues. Easier to engage with finance /HR. Communication - Type/Culture of organisation misinformation is rife so distribution of clear, succinct and timely key messages needed. Also having the right people gets the job done.

Reference 19 - 0.84% Coverage

If lessons learned not used project board not right, project team not right, Delays, irritated stakeholders. Lots of proposals would not have been of any use. Misinformation and rumour would have been rife.

Reference 20 - 0.84% Coverage

There was a PMO manager but not taken seriously in organisation. There was a database but it is difficult getting information to individuals. knowledge is held about a vast range of projects. PMO office can point in the direction of similar projects but if the individuals go then that knowledge will be lost. People don't read large volumes of information.

Reference 21 - 0.84% Coverage

1. Buy-in from LAS 2. Good executive sponsor. 3. PM had good relationship with CEO on commissioning side and Director of estates. All high status and able to use their leverage and ensure buy-in. All about relationships

Reference 22 - 0.84% Coverage

Information to women - critical safety information available that had been road tested. Processes in place for continuous monitoring of transfers and outcomes. Increased credibility and trust. Lots of back-up information and controls in place

Reference 23 - 0.84% Coverage

Staff team building. A lot of financial input. Much time and resource on recruitment - only suits certain people so this took longer. Thus reduced timescale to open and commitments already in place. 1 month delay in opening but still very tight timescale and team working not established in first 3 months. issues arose 2 staff left (20%) - led to demoralised team.

Reference 24 - 0.84% Coverage

Remote PMO , initially unaware of PM role. Once identified it provided documentation and process advice bit it was acknowledged that there should have been more support and someone allocated from PMO to assist but that hadn't happened. Trust in the steering group, tensions about reporting because two routes from commissioners and Hospital trust, not clear on who made the decisions. Governance issue. Structure and time not honoured.

Reference 25 - 0.84% Coverage

The sponsors fully understood the issues. They were aware of what was needed.

Reference 26 - 0.84% Coverage

The county council operating method was the biggest hindrance as the decision making mechanism was not there. Being a democratic politically elected committee who had to make the final decisions no one was brave enough to commit to the decisions required (which included closing a school - political suicide!)

Reference 27 - 0.84% Coverage

The exercise highlighted that there was a covenant on the building that had to be removed, the maximum desk ratio was confirmed. The a/c system was identified. In effect a template lease was developed that could be put to use in the future if the council could get organised. They also learned that if it had been set up as a formal project in the first place the issues would have been highlighted much sooner and they could have managed the situation much more effectively.

Reference 28 - 0.84% Coverage

The project failed. At that point it was then shelved.

Reference 29 - 0.84% Coverage

A project management culture would need to be instilled as this did not exist. For internal projects there was very little understanding of what project management was. Projects that have been done well there was done by third parties. Talking about what was needed to be done for 3 years demonstrated this complete lack of awareness. Scoping out the project fully would have highlighted the dependencies and costs associated.

Reference 30 - 0.84% Coverage

Involving a couple of people who had been part of the original drafting of the regulatory obligations gave credibility to defining requirements. It helped a lot as it wasn't always easy persuading people as there were high emotions around the whole process. Project support office was also very helpful ensuring appropriate level of support in place

Reference 31 - 0.84% Coverage

Project grew as it developed from 6 -25/30 people in space of 8 months. Bringing people up to speed and having to keep doing it. Not anticipating this made it a challenge as the project went on. Not knowing what you will find -can't always anticipate what's needed.

Reference 32 - 0.84% Coverage

Enabled the project to progress more quickly and more effectively.. If we hadn't been well prepared could have risked missing a lot of things and not being able to establish the facts as well as we did. Knowledge gained from the external help also enabled preparation of very robust case and led to a swifter conclusion as the companies could see the effort to get it right.

Reference 33 - 0.84% Coverage

Hadn't quite anticipated how big the project would get. Anticipating or just planning for additional support / resources. Also factoring in that if it does grow there must be bigger issues and the timeframe is going to extend.

Reference 34 - 0.84% Coverage

The turnover of people meant that some parts of the project had more experience on it than others. Also having to get people up to speed wasn't helpful. Limited time to key people - if they had been available all through would have been useful. Better co-ordination between different strands of the project. Making sure they all liaise and aware of issues works with varying success. Tried to gather lessons along the way but hard to know what may have been missed.

Name: Nodes\\Question Analysis\Lessons After

Description: Were lessons reviewded at the end of the project and were they used subsequently

<Internals\\Question Analysis> - § 21 references coded [17.65% Coverage]

Reference 1 - 0.84% Coverage

Ideal world - work with the mergers and acquisition team more fully - this would improve business case and get project team up to speed from the start

Reference 2 - 0.84% Coverage

Experience of importance of governance. Decision makers on board. Knowing the risks, clearly identifying and having contingencies in place.

Reference 3 - 0.84% Coverage

YES - Be very strategic with selection of team members, co-locate as many of the team as possible - this allows you to utilise your team knowledge bank. Each project expands individual knowledge/experience and this is what you can draw on. Specifically next project was very clear on business case, more realistic with forecast and led to turning down acquisition

Reference 4 - 0.84% Coverage

Make the client adapt to work in a more Agile way - processes very rigid but that caused difficulties when requirements very fluid

Reference 5 - 0.84% Coverage

Putting a governance structure in that managed the risks already known from problems in the past. Took lessons forward and incorporated into improved risk management approach that was then able to deal with more effectively

Reference 6 - 0.84% Coverage

YES - Current new project - lessons - standards not in place, governance lacking - all these needed to be put in place again - corrective action to re-structure and re-process

Reference 7 - 0.84% Coverage

Ensured additional help for all of the essential administration and internal processes

Reference 8 - 0.84% Coverage

Able to take control. Put in place appropriate processes. Clear direction for external consultants. Had the credibility. Had the support of senior management who trusted his experience. Saved a lot more money so improved the overall goal and benefit

Reference 9 - 0.84% Coverage

Making sure you have management buy-in. Get the right support at the right level. Better to flag issues sooner rather than later. Some cultures more accepting of this depends on the culture of the organisation. Get people involved if they have a vested interest

Reference 10 - 0.84% Coverage

Different sponsor - this may have changed the power dynamics. Project team selection could have been more strategic. Many with the same mindset which limited creativity and was sometimes difficult to manage. Organisation as a whole not open to new ideas. More convincing support a senior level

Reference 11 - 0.84% Coverage

Was able to avoid the "bear traps" highlighted by previous bad project

Reference 12 - 0.84% Coverage

YES - As PM gain as much clarity as you can of who is on the project team and why - who put them there, what was the motivation. Make sure that responsibility is given to the right people. PM is responsible but needs good support from the team and needs to be able to trust them to do

Reference 13 - 0.84% Coverage

Timeline for completion would have been extended. Smoother opening and allow time for team building

Reference 14 - 0.84% Coverage

SLA improvement. Good processes from start. Team building elements that worked. Senior manager identified as being needed in centre - real improvement on support, troubleshooting and ensuring better outcomes. Identified PM needed eventually (not at start!)

Reference 15 - 0.84% Coverage

YES-Another birthing centre developed in Barking three years later. Not able to run project but project model and lessons learned log used and PM available for consultancy. Shared guidance, training materials, discussed specifications - what did and didn't work. PM is the knowledge database for this type of project. Sees her role as to share the story very practically. Has used the knowledge from this project to go forward with confidence , knows the language, able to challenge in many different areas.

Reference 16 - 0.84% Coverage

The work needed to be made into a proper project from the outset. If started earlier it would have been achievable.

Reference 17 - 0.84% Coverage

re-organising it into a proper project set-up. Putting in governance structures, risk and action logs out the whole thing into a proper perspective and enabled the project team to focus and identify exactly what needed doing

Reference 18 - 0.84% Coverage

Big lesson is put the planning in first. Spend the time scoping the project, identify the dependencies and get an idea of what the project will look like. Work breakdown structures are very useful. Flag up issue as soon as possible. - First time he had said NO don't do it but this project gave the PM the confidence to know that this can be done if necessary. realised the benefit of supportive sponsor - realised it was a brave decision to stop but it actually generated respect and trust in his competence.

Reference 19 - 0.84% Coverage

Possibly having fewer people but with more time dedicated to this one project . This would mean spending less time educating and re-remembering so producing good work more effectively. Also more researchers listening and checking through evidence concurrently. Matter of cost to balance though

Reference 20 - 0.84% Coverage

Stakeholder handling. Understanding relationships. Balance of firm but fair. How to elicit information well - time spent researching this made a huge difference. Relationships developed with people in the companies and this was enabled by knowing what does and doesn't work from previous projects. Clear escalation processes and governance support was embedded and invaluable. Setting up of sub-groups to the main board also helped.

Reference 21 - 0.84% Coverage

YES - Personally in terms of managing a project of that scale and carrying forward recognition of the importance of relationships. Managing co-ordination and getting people t contribute more overtly. The lessons log has been used to develop new guidance on how investigations are conducted and processes involved. It set the standard of how files are prepared and documents drafted. Also the ability to require redress was subsequently incorporated in statute

Appendix 8.8 NVIVO Node Coding Summary

08/09/2014 00:04

Coding Summary

Dissertation 2

08/09/2014 00:04

Hierarchical Name	Aggregate	Coverage	Number Of Coding References	Number Of Users Coding
Dataset				
Internals\\Question Analysis				
Node				
Nodes\\Culture	Yes	7.77 %	38	1
Nodes\\Governance_ Sponsors	Yes	10.90 %	44	1
Nodes\\Lesson Ideas	Yes	1.67 %	9	1
Nodes\\Lessons Info	Yes	23.57 %	73	1
Nodes\\Methodology	Yes	6.65 %	28	1
Nodes\\Processes	Yes	14.44 %	49	1
Nodes\\Question Analysis	Yes	100.00 %	0	1
Nodes\\Question Analysis\Lessons After	Yes	17.64 %	0	1
Nodes\\Question Analysis\Lessons After\Are there any lessons learned that you have incorporated into subsequent Projects	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons After\What overriding elements do you think improved the project, that was a result of utilising lessons learned	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons After\With no Constraints what couldwould you have done differently	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons Before	Yes	29.41 %	0	1
Nodes\\Question Analysis\Lessons Before\Did you look at any best practice externally i.e. same sector, or any other related type of project	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons Before\Having identified best practice from previous projectssector experience, did you incorporate this knowledge into your project and was it possible to incorporate everything	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons Before\Were these incorporated into the project	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons Before\What, if any, were the key factors you identified from the information already available	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons Before\When starting the project did you consider lessons learned from any previous internal project	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons During	Yes	29.41 %	0	1
Nodes\\Question Analysis\Lessons During\What , if any, were the benefits gained by using lessons learned	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons During\What ,if any, were the consequences of not using lessons learned	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons During\What key factors helped you incorporate the lessons learned	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons During\What key factors hindered or stopped you using valuable knowledge experience	No	5.88 %	7	1
Nodes\\Question Analysis\Lessons During\What key factors stopped you using some form of previous knowledge that you think would have increased the success or improved the project	No	5.88 %	7	1
Nodes\\Question Analysis\Success or Failure	Yes	5.88 %	0	1

Hierarchical Name	Aggregate	Coverage	Number Of Coding References	Number Of Users Coding
Nodes\\Question Analysis\Success or Failure\Scale of 1-10, How successful was this project	No	5.88 %	7	1
Nodes\\Question Analysis\Supplementary	Yes	17.64 %	0	1
Nodes\\Question Analysis\Supplementary\Any Ideas on ways to capture knowledge	No	5.88 %	7	1
Nodes\\Question Analysis\Supplementary\Do you believe that documented lessons learned are utilised or can lessons only be learned by Doing	No	5.88 %	7	1
Nodes\\Question Analysis\Supplementary\Lessons Learned - What do you do	No	5.88 %	7	1
Nodes\\Relationships_Networks	Yes	10.52 %	44	1
Nodes\\Team	Yes	12.88 %	43	1