A study into the usability of the Formal Systems Model to investigate the Critical Success Factors that have been accepted for the management of an IT project

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25 October, 2010

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Preface

I would like to thank my supervisor, Dr Phebe Mann for her support and guidance throughout the project. I would also like to thank my family, friends and colleagues who have provided valuable advice, support and patience during this project. Most of all, I'm especially thankful for the support, understanding and encouragement given to me by my wife Sue, and my daughters Abigail and Megan.
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Abstract

Critical Success Factors (CSF) are viewed as the key areas within a project where things must go right and that must receive constant and careful attention from management for a project to be a success. The approach is not without its problems. Firstly the inter-relationships between CSFs are at least as important as the individual factors, but the CSF approach does not provide a mechanism for taking account of these relationships. Secondly the factor approach tends to view implementations as a static process instead of a dynamic phenomenon. It ignores the potential for a factor to have varying levels of importance at different stages of the implementation process.

Studies to date have focused on ways of overcoming these difficulties found with the CSF approach. This study investigates the use of two adaptations of the Formal Systems Model (FSM), a model which is claimed to be able to overcome the difficulties found within the factors approach, as well as being able to distinguish between successful and unsuccessful projects. This research was conducted by adopting the Systems Failures Approach (SFA) as a guide to study the data gathered from two UK based implementations of computerised systems. The data was fed into the FSM adaptations to consider the usability of the project-specific FSM in comparison to the FSM when used as a framework for investigating factors critical to success in implemented IT (Information Technology) and IS (Information Systems) projects.

The results of this research show that the project-specific FSM is capable of distinguishing between projects perceived as successful and unsuccessful. It
can highlight factors practitioners may perceive as critical to success, and also be used as a framework for investigating CSFs like the FSM. Whilst the results reveal positive characteristics about the project-specific FSM, such as being more focussed in its approach through having the failings associated with projects mapped directly onto its components. Its biggest challenge must be to overcome the reluctance of Project Managers and Practitioners to use methods and techniques in the management of their projects. Without this increase in use, White and Fortunes claim that the project-specific FSM is more accessible to Practitioners and Project Managers than the FSM cannot fully be substantiated.
Chapter 1 Introduction

This chapter introduces Information Technology (IT) projects and the high rates of failure associated with them. It looks at what tools and methods are available for assessing levels of success and failure within a project, and also the difficulties found with using them. The chapter also presents the research question along with the objectives of the project.

1.1 Background to the research

As people become more reliant on IT, not only in their work, but also in their everyday life (Brown, 2000; Bettley 2004, Fortune and Peters, 2005a), it is staggering to believe there is such a high rate of failure in IT project implementations. Sauer and Cuthbertson (2003) found in a survey of 1500 UK IT Project Managers that only 16% of IT projects were managed to budget, schedule and scope – hardly a figure to be impressed by.

Even less impressive is the ease at which examples of IT system failures can be found. From the more disastrous as described in Leveson and Turners (1993) report of the Therac-25 radiation treatment disaster and the deaths of several patients, Musick’s (2006) exploration of the events leading up to the failure of the London Ambulance Service’s computer aided dispatch system, to DEFRA and the Rural Payment Agency’s stressful, but less disastrous handling of the farming communities Single Payment Scheme (NAO, 2006).
If you hadn’t been presented with these facts, figures and examples of failed projects, and instead obtained all the techniques and methods available to Project Managers, then you’d be forgiven for thinking projects couldn’t possibly fail and the secret for success would be known. As White and Fortune (2002) explain, the project management domain is well developed, and has numerous methods and techniques to cover managing projects from start to finish. So even if opinion exists that suggests IT project performance is better than we believe (intoIT, 2002), is it acceptable for projects to exceed their budgets, run late or fail to meet objectives?

Projects can be assessed from conceptualisation through completion and even into operation. Healthy projects see the project team exhibiting a systems approach embodying proven managerial principles. In contrast, according to Jaafari (2007) on sick projects the project team functions in a haphazard manner, appearing not to demonstrate a systemic approach. Where planning and control approaches are poor, measures of time, cost and quality will show marked deviations from relevant targets. Whilst failures of this nature will always occur, they can also be avoided, particularly if management and project teams learn from their mistakes and the corrective actions they take (Fortune and Peters, 1995a).

Failures can occur where actors are reluctant to learn from the consequences of failure, as seen in Lyytinen and Robey (1999). Actors demonstrated a stubborn
adherence to existing theories that needed revision rather than using the information available to avoid failure. Successful project implementations depend on the rigor of the project management processes. But learning is required to avoid some of the most common implementation issues such as scope creep, poor risk management, inadequate human resource management and vendor management. All of which pose threats to the success of project implementations (Chen et al., 2009). It is argued that we know why projects fail, we know how to prevent their failure, and yet they still fail (BCS 2004a). This suggests there is an inability to learn from mistakes.

If a company records details of successful projects, why then do companies tend not to record their failures. This eliminates the chance to learn from what went wrong and attempt to put it right next time. Learning from failure is not a new idea. Fortune and Peters (2002) described the value of reflecting on previous mistakes, and how this learning process should be an inherent part of the normal management process of an organisation. Though failure and success can be a subjective assessment varying with time and person (Fortune and Peters, 2005b), no matter what the perception there must be as much, if not more to be learnt from reflecting on perceived failures than just successes.

Understanding the risks of failure in IT projects and the analysis and management that accompanies them is possibly trivialised when compared to the undue reliance placed on statistical and financial based techniques. Their
unnecessary accuracy when assessing against the current health of a project can be explained through quantifiable being easier to keep track of, whilst a combination of both quantitative and qualitative data may provide the most complete picture (Camillo et al., 2008). Many of the best known project management methods and techniques disregard this balance. They demonstrate inadequacy because of their failure to sufficiently account for complexity and uncertainty, and also by not considering the “soft” risks, particularly those arising from a project's environment (White and Fortune, 2008). Where the existence of poor project management has impacted project control and implementation, any lessons learnt from the failure should be included in reengineering project management practices in a bid to enhance future implementations. Whilst a company’s project management history may be synonymous with success, any unexpected failures should see lessons logged in the same way as successes.

Reliance on IT is high. But then, failure in IT projects is also high, a point backed up by it being easy to find examples of failure occurring. But then there are many tools and techniques available to support Project Managers in monitoring and controlling their projects. Yet learning from failure doesn’t look as if it is happening, implying a stubbornness to stick with existing approaches whether they’re working or not. There is as much to learn from failure as there is from success, and thus failures should be logged along with successes.
It seems a basic point, but it is perhaps surprising how many projects commence without proper levels of project planning, with the most important features required to achieve success not known. But then even with CSFs, which allow a Project Manager to know the conditions which need to be met to assure the success of their project (Poon and Wagner, 2001), it is interesting that success is still generally considered through the more quantitative measures of budget and schedule without dipping into some of the more qualitative factors critical to success. For instance, according to Mandal and Gunasekaran (2003), factors such as ‘involvement of top management’ exist, and are critical throughout the whole project to monitor progress and provide direction. But projects tend not to include it. This is a point backed up by Fortune and White (2006a), who suggest that a lack of top management support can increase the possibility of failure in a project. Whilst CSFs present well as a solution to some of the above issues, they themselves also have weaknesses that may explain some of the reluctance for their adoption in project planning and control. As Fortune and White explain, it is as important to consider the inter-relationships of CSFs as it is to consider the individual factors. They also point out that project implementations are dynamic and not static processes ignoring that a factor can have varying levels of importance at different stages of the implementation process. In order to resolve this, the FSM is offered as a solution to these and the previously mentioned problems within project implementations.
As demonstrated by Fortune and White (2006a) the FSM (see Figure 1 below) is capable of distinguishing between successful and unsuccessful projects. It can also be used as a way of tackling issues within the human and organisational aspects of systems development projects, as well as being a framing device to deliver the benefits of CSFs, whilst avoiding the associated problems of using a checklist approach. By using all the factors covered by sets of CSFs, the FSM has the advantage of being able to consider the relationships between factors through being dynamic. As explained by Fortune and Peters (2005c), the FSM is adapted from Checkland (1981), who drew ideas from Churchman (1971), particularly his concept of a teleological system, and Jenkins (1969). The FSM is regarded as an “ideal-type”, a robust system capable of purposeful activity without failure. So by comparing the FSM with a conceptualised system, discrepancies can be identified, revealing gaps in the understanding of the situation. It is through this comparison that the FSM can be used in the planning and implementation phases of projects (Fortune and White, 2006a).
Figure 1 – The FSM (Fortune and Peters, 2005a)¹

The examination of projects using the FSM makes it possible to construct a list of factors capable of being applied to analogous circumstances to provide

¹ For more detail of how the Formal System Model will be used as a methodology for comparison of Systems within this research, see Appendix F
regular health checks. Application of such checks relating to requirements, resources or risks can form the foundation of a successful implementation for meeting time, cost and quality criteria. It may be argued that each potential project can be seen as unique, and that any lessons learnt would have to be translated to suit different projects in different ways. But, there is still potential benefit from looking back at successes and failures in equivalent circumstances to encourage forward thinking to predict and prevent failure. Despite the fact that business cases can contain a prioritised list of CSFs reflecting the context that the project will take place in, this list needs relevant quantitative and qualitative measures to be controlled during the project. As Armstrong (2007) suggests, any variation beyond given thresholds for particular CSFs can be interpreted as placing the project at risk.

Despite the FSM being more than capable of taking into account the benefits of CSFs (Fortune and White, 2006a), it does present a weakness through the language it uses. White and Fortune (2008) explain that with the origins of the models language being in systems thinking, it can lead to misinterpretation in the model’s use. To deal with this weakness, Fortune and White have devised a project-specific FSM, making it more accessible to Project Managers and Practitioners alike (see Figure 2 below). The model addresses the previously mentioned language weakness, along with improving user involvement, environmental influences and stressing the importance of having a ‘Project Champion’. 
Figure 2 – The project-specific FSM, White and Fortune (2008)²

² For more detail of how the project-specific Formal System Model will be used as a methodology for comparison of Systems within this research, see Appendix F
With Fortune and White’s claim of the project-specific FSM being capable of reaching audiences beyond those of specialist systems thinkers, allowing them to identify actual or potential weaknesses in project structures or processes, its presentation is still relatively new, with few examples of its use available for review. The main evidence for its use is found in White and Fortune’s (2008) paper. In order to validate this claim of ease of use, the project-specific FSM may not only need testing in its own right, but also to be compared against its predecessor the FSM. This comparison will therefore validate the claim of ease of use when determining the extent to which the models explain success or failures of projects.

1.2 Aims and objectives

1.2.1 Aim of the Research

The aims of this project are:

1. To consider the usability of the FSM to investigate the CSFs which have been accepted for the management of an IT project.

2. To gain information about the situations in order to perform a systemic interpretation of the selected projects and their context.

This project aims to compare the use of the FSM as a framing device for use with CSFs (Fortune and White, 2006a) against the project-specific FSM, exploring White and Fortunes (2008) claim that the project-specific FSM is more accessible to Project Managers and Practitioners alike. There are few examples
of the project-specific model in use to help consider this claim, the most specific being White and Fortunes example in their 2008 article. In contrast there are many examples of the use of the FSM, including published accounts involving Fortune and White (Peters, 1999; Fortune and Peters, 1995a, 2005a), although only one of these accounts relates directly to the model being used with CSFs (Fortune and White, 2006a)

Both FSMs will be used to explore two UK based implementations of computerised systems (for more detail, see the case studies in Appendix B and C). Both implementations are now operational; one perceived as a failure due to not adequately considering the resource constraints of working within a small company requiring a complex and unique system; the other a success by senior stakeholders, as set objectives were viewed as being satisfactorily met. This will give the opportunity to challenge both of the models abilities as framing devices, and the ease at which they enable systems to be conceptualised and compared with a system capable of purposeful activity, that is activity involving decision-making, without failure (Fortune and Peter, 2005d).

It is through these comparisons that the decision as to whether a project has been successful or not will be made. In representing a conceptualised system in the same format as the adapted FSM, a comparison can be made between the projects and a model regarded as an ‘ideal-type’. Through similarities and discrepancies identified along with gaps revealed about the understanding of
the situation, and the presence or absence of components and interactions needed for purposeful activity without failure reveals a project’s success or failure (Fortune and Peters, 2005h).

The intention of this research is to explore the ease at which the two models deal with assessing the IT implementations, and what themes (Fortune and Peters, 1995b) and factors critical to success (Fortune and White, 2006a) emerge through the comparisons of the respective FSMs. *Table 1* below brings together components of both the FSM and the project-specific FSM for comparison, by using Fortune and White’s (2006a) groups of CSFs mapped onto the FSM against the components of White and Fortune’s (2008) project-specific FSM.
1.2.2 Main areas for comparison

<table>
<thead>
<tr>
<th>Components of FSM/Project Attribute</th>
<th>CSFs from Literature mapped to the FSM</th>
<th>Project-specific FSM Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals and Objectives</td>
<td>Clear realistic objectives</td>
<td>Formulates initial design/decides on transformations and Makes known expectations</td>
</tr>
<tr>
<td>Performance Monitoring</td>
<td>Effective monitoring/control</td>
<td>Supplies/Provides performance information; performance monitoring subsystem</td>
</tr>
<tr>
<td>Decision-maker(s)</td>
<td>Support from senior management</td>
<td>Provides resources and legitimates area of operation</td>
</tr>
<tr>
<td></td>
<td>Competent project manager</td>
<td>Makes known expectations</td>
</tr>
<tr>
<td></td>
<td>Realistic Schedule</td>
<td>Provides resources; Formulates initial design/decides on transformations</td>
</tr>
<tr>
<td>Environment</td>
<td>Past experience (learning from)</td>
<td>Environment</td>
</tr>
<tr>
<td></td>
<td>Organisation adaptation/culture/structure</td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td>Sufficient/well allocated resources</td>
<td>Provides resources and legitimates area of operation</td>
</tr>
<tr>
<td></td>
<td>Proven familiar technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good performance by suppliers/contractors/consultants</td>
<td></td>
</tr>
</tbody>
</table>

*Table 1 – Mapping of the FSM and project-specific FSM as grouped by CSFs*

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3 Fortune and White (2006), Table 2 Critical success factors mapped onto components of the Formal System Model - Component of FSM/project attributes column
4 Fortune and White (2006), Table 2 Critical success factors mapped onto components of the Formal System Model - Critical success factors from literature column
5 White and Fortune (2008) Figure 4. The Formal System Model
1.2.3 Research question

Can White and Fortunes (2008) project-specific FSM be used as a framework for investigating factors critical to success in implemented IT projects in much the same way as the FSM (see Fortune and White 2006a)?

- Is the project-specific FSM capable of distinguishing between projects perceived as successful and unsuccessful?
- Can the project-specific FSM highlight factors practitioners perceive as critical to project success?

1.2.4 Objectives

To answer this question the project can be broken down into the following key objectives:

1. To prepare a pre-analysis of the situations being investigated to gather, organise and store information about the situations being considered.

2. To identify significant failures present in the situations being investigated and to select systems for the analysis.

3. To consider the situations using a variety of diagrammatic techniques to depict them in ways which improve the initial understanding and enable conceptualisation of the projects.

4. To model the projects using the FSM to allow a comparison of the projects with an idealised model of a robust system that is capable of purposeful activity.
5. To use the results of the systems comparison as an insight into the selected projects, establishing whether the project-specific FSM can be used as a framework for investigating factors critical to success in comparison to the FSM.

6. To compare the results of the two FSMs, enabling a judgement to be made on their usability for analysing and interpreting implemented projects.

1.2.5 Contribution to Knowledge

Neither of the cases being investigated through this research project could be considered unique, but they will provide real examples of project implementations, and hopefully valuable opportunities for learning. The approaches being used are part of the developing ‘soft’ or interpretive domain of IS thinking, with research approaches deriving from interpretive social science exploring the sense-making behind particular circumstances (OU 2004).

The basis for the approaches being used is the FSM. The model holds its origins in systems thinking, investigating failure situations (Fortune and Peters, 1990), only later progressing to being used as a tool to investigate IS projects (Fortune and Peters, 2005a). A simple search of the literature finds many examples of the FSM being used including Fortune and Peters (1990, 1995a and 2005a), Peters (1999) and Dodd and Fortune (1995). In contrast the
adapted versions of the model, used as a framing device for CSFs (Fortune and White, 2006a) and a project-specific version devised to assist those not fluent in systems thinking language to avoid failure (White and Fortune, 2008), have few if any examples available beyond the authors papers.

Therefore, in using the adapted FSMs against the project implementations to test the utility of the revised models, it is hoped the research will not only demonstrate further use of the models, but also provide further examples for learning. The research will in addition look to validate the claims made by White and Fortune. Firstly, that the FSM is a model that can consider the relationships between CSFs, and through comparison of its components and interactions is capable of distinguishing between successful and unsuccessful projects (Fortune and White, 2006a). And also that their project-specific FSM is more accessible to Project Managers and other Practitioners, providing a robust approach to avoiding failure, and enabling them to identify actual or potential weaknesses in projects (White and Fortune, 2008). The issue of accessibility is raised by Fortune and White, as they suggest the FSM has only managed to reach a specialist audience even though it still manages to deal with many of the weaknesses found in the best-known project management methods and techniques, including failure to take account of complexity, uncertainty and "soft" risks.
By applying both the FSM and the project-specific FSM to two comparative IT project implementations (see Appendix B and C), it is also hoped the research can contribute to failure prevention. A systemic interpretation of the success or failure of the projects examined will hopefully assist failure prevention by improving understanding and conceptualisation of the system or systems that lie at the core of the failure (Fortune and Peters, 2005a). If the project-specific FSM proves more accessible, then its promotion outside of the specialist audience of the FSM may see an increase in failure prevention, along with the use of the FSM as a model to interpret success and failure within a project.

This thesis is to be written in such a way that it can be used as a basis for understanding IS and IT project implementations in business environments, and also as a reference to those of an academic background with an interest in investigating IS or IT project failures. Whilst it focuses on the IT field, this is not to say those interested in project implementations from disciplines outside of the IT field would not find the research useful. Application of the FSM is not restrictive in this way. It can be used as a sense-making tool in codifying knowledge and experience of situations within or outside of the IS and IT fields to modify how we look at things in the future (Fortune and Peters, 2005a).
1.3 Overview of the dissertation

Chapter 2 evaluates the existing range of knowledge for CSFs when considering Success and Failure in IT Projects, the tools and techniques relevant to the IT project domain, and how the FSM and its adaptations fit into Success and Failure of IT projects and CSFs.

Chapter 3 describes and justifies the research methods used by this study, placing them in the context of Success and Failure of IT Projects by using the System Failures Approach (SFA).

Chapter 4 outlines the data collection strategy, along with choice of data sources and how the data was obtained. The process of using the SFA as a guide to the various stages of this research is demonstrated, by drawing on a range of systems concepts to obtain greater understanding of situations.

Chapter 5 presents and discusses results and provides preliminary answers to the research question formulated in Chapter 1.

Chapter 6 outlines the conclusions reached through the project, along with a critical review of the project approach and objectives. Recommendations for future work are also made.
Chapter 2 Literature Review

Chapter 2 reports on the literature reviewed, discussing CSFs along with the methods and tools available to Practitioners and Project Managers alike when assessing the stability of a project.

2.1 Overview – Success and Failure in IT Projects

'Of all the monsters that fill the nightmares of our folklore, none terrify more than werewolves, because they transform unexpectedly from the familiar into horrors. For these, one seeks bullets of silver that can magically lay them to rest'. This is how Brooks (1986) felt a non-technical manager may view a software project, an innocent and straightforward project capable of becoming a monster of missed schedules, blown budgets and a flawed product. This view alone, could relate to any type of project where sufficient controls aren't put in place. Before long, as Brooks suggests, the desperate cries are heard for the silver bullet, a bullet which has magical properties that offers the fastest, most powerful and safest way to slay the fast, powerful and incredibly dangerous werewolf.

Would those involved in projects see the need to search for Brooks’ mythical silver bullet if it was felt the project had become a monster? Can it ever be simply a case that the project has either succeeded or failed? Take for example the Sydney Opera house. As Lim and Mohamed (1999) explain, the project was 14 times the original budget, from A$7 million to A$102 million. This must surely
be classed as a failure without doubt. But then factor in user satisfaction. Any inadequacies in the project management are suddenly ignored, with the completion criteria becoming insignificant. Satisfaction takes over, with the building being considered an engineering masterpiece and the symbol of Sydney. So, was the project a success? Certainly from the perspective of those who use it, it was. But can this be enough? Neglecting a factor such as budget in search of user satisfaction would certainly point to poor management.

Project failure is nothing new, with poor track records stretching back many years (Morris and Hough, 1987), but then as Baker et al. (1988) explain, neither is the idea that project success is a matter of perception. Projects will most likely be perceived as successful if they meet technical specifications and key people on the project team feel satisfied with the outcome, rather than it being about just sums of money or time. Even with this knowledge, the key factors of budget, schedule and scope still appear as the main measures of success and failure (Sauer and Cuthbertson, 2003; Standish Group, 1995). Add to this the doubt over the accuracy of such reports and their use within academic literature and it becomes even more difficult to understand which projects are successes and which are failures (Glass, 2005). What if the only issue with a project is it was 10% over budget, it would seem unfair to class it a failure if the end users were satisfied with the results.
Fortune and Peters (1995b) offer some insight into why it might seem more projects fail. They point out more organisational activities are being treated as projects crucial to success. Such changes in approach may make failure more explicit than if these tasks were a part of normal routine activity. But even considering this, it shouldn’t make it acceptable, although possibly surprising that projects seem so vulnerable to failure with all the techniques and methods available to Project Managers (White and Fortune, 2008). As White and Fortune explain, the majority of these methods are inadequate through not taking into account complexity, uncertainty and ‘soft’ risks. This argument is supported by Pinto and Slevin (1988) who found that project success is more complicated than meeting cost, schedule and specification. Whilst arguments such as White and Fortunes, and Pinto and Slevin’s gain acceptance, there are still those that believe the key to success is by controlling quality in order to avoid cost and schedule overruns (Jones, 2004).

2.2 Introducing CSFs

It would be churlish to ignore factors such as budget, schedule and specification quality, but at the same time, it may be foolish to only concentrate on these. As Fortune and White (2006a) suggest, CSFs are perhaps the best known approach for tackling human and organisational aspects of projects, and are those few things that must go well to ensure success. As pointed out by Fortune and White, CSFs are usually credited to Daniel (1961) who introduced the concept in relation to ‘the management information crises brought about by too
rapid organisational change’. It was also made known by Rockart (1979) as a method to ensure success for an organisation (Boynton and Zmud, 1984) through defining critical information needs. The approach does have its champions, and as Boynton and Zmud pointed out, in the hands of a capable analyst is very effective at providing a common non-threatening language for managers and analysts offering useful insights for both. Although regarded as being an established approach (Koutsikouri et al., 2008) this is not to say CSFs are regarded as a faultless approach. Boynton and Zmud accounted for the difficulties found in using CSFs, and that an experienced analyst is necessary to successfully apply the method. But then as they suggest, this would be the case for all non-automated IS methodologies.

A second criticism introduced by Boynton and Zmud is that of bias occurring from those using the CSF method. Although they point out Munro (1983) found through two independent studies that analysts were able to provide comparable results. Consequently the weaknesses of bias may not be so much a failing of CSFs as may be a lack of experience in using the tool. Similarly, experience would not only be necessary when using CSFs, but also with any non-automated IS methodology. Bias can occur where human nature will allow it. After all it is previous experience that creates people’s standards, the ideas of what are good and bad. From these standards, certain aspects of situations are filtered out leaving only those perceived to be relevant – these are the facts that demand attention (Checkland, 1985). This argument of perception is further strengthened by Jugdev and Muller (2005), and their view that project success
is ambiguous and highly context dependent. They also suggest that it is personal perception that helps consider what leads to success. So it may merely be this personal preference from previous experience that leads to this bias, or the feeling that bias has occurred.

In their study of CSFs, Fortune and White (2006a) note this issue of personal preference, and how there is a lack of agreement between authors and researchers on which factors influence project success, a point they suggest has been identified by Wateridge (1995). This is reinforced by Koutsikouri et al., (2008), and their evidence of the availability of several success models and frameworks, all of which aren’t particularly consistent in their classification of success factors. Such inconsistency may lead to the conclusions that success factors aren’t universal for all projects, and that different projects may actually require different success factors. This is the argument put forward by Dvir et al., (1998), that success factors are contingent upon specific types of project, and that the list of success factors are far from universal, with projects having less characteristics in common than previously considered. A further criticism that White and Fortune (2006a) draw attention to is pointed out by Nandhakumar (1996) that the factors approach does not provide a mechanism for taking into account the importance of the inter-relationships between factors. This point is further backed up by Liu and Seddon (2009). They suggest there may be a relationship between factors, as do Wong et al., (2005) who acknowledge that CSFs can affect each other in a reinforcing manner, and that this area should
receive more attention in future research in order to establish a robust framework for factor analysis.

Another issue raised by White and Fortune (2008) is the factor approach tends to view implementations as static processes instead of a dynamic phenomenon. This ignores the potential for factors to have varying levels of importance at different stages of the implementation process (Larsen and Myers, 1999). Cule et al., (2000) recognised that success is contingent upon the presence of a set of factors, but these represent a static view of projects. They compared this to the use of risk factors, which they offered as a more dynamic view. Risk factors represent a constant threat, and require managing actively for the entire duration of the project. Acknowledging flexibility would also allow for increased experience to be recognised as part of the process as it evolves over time. Learning from previous experiences may warrant attention as a factor relevant to the dynamic nature of the process, as this may have an impact on factor relationships over time (Proudlock et al. 1998).

2.3 The FSM and CSFs

In their paper, Fortune and White (2006a) introduce the FSM as an approach to overcome these previously mentioned criticisms of the CSF approach. Whilst the FSM has many examples of use within academic literature (Fortune and White, 2006a; Fortune and Peters, 1995a, 2005a; Peters 1999; Dodd and
Fortune, 1995; Mansell, 1993; and Bowonder et al. 1991), there are far fewer examples of the FSM being used as an adaptation to deliver the benefits of CSFs whilst avoiding their problems. In developing their adapted FSM, Fortune and White not only delved into the ‘real world’ experiences of Project Managers, identifying factors they regarded as critical to a project’s outcome, but they also considered 63 publications that focus on CSFs. Such an extensive search supports their conclusions of the overlaps surrounding CSFs within the literature, and to a vast extent mapping of CSFs onto the FSM. Whilst they only considered the FSM as an approach capable of using CSFs through two projects, one successful, the other not, it is possibly the previously mentioned applications of the FSM within literature that backs up the argument that the FSM is capable of distinguishing between successful and unsuccessful projects. Through the relationships between the FSM’s components, it provides a way of making links between factors, plus it is a dynamic model of a system which can respond to decision making and interactions with the environment.

The approach of tackling success by investigating failure may seem strange, and may stop potential users of the FSM delving into its logic to understand how analysing failures can help predict and prevent further failures. Mintzberg (1994) states organisations that will truly excel in the future will be the organisations that discover how to tap people’s commitment and capacity to learn at all levels in an organisation. Fortune and Peters (2005a) FSM is such a tool that can tap into this learning by taking the analyst from the real world into the conceptual world, using systems thinking, qualitative modelling and comparison to provide
the means to achieve understanding. This understanding can then return into
the real world to become a set of lessons. Also, with the CSF approach
acknowledged as being difficult to use (Boynton and Zmud, 1984), there may be
the argument that an already capable analyst, who may believe they can
overcome the weaknesses of the CSF approach, would avoid the use of a
model they’re unfamiliar with. Especially when at present they would find little
evidence of its success when applied to CSFs.

2.4 Perception and Learning as a tool for success

Labelling a project a success or failure, and knowing which factors are the most
critical to success is a far from simple task (Wateridge, 1998; Shenhar et al.,
1997; Fortune and White, 2006a). Having a clearly defined set of objectives
from the start should make determining success or failure easy by deciding if
the objectives were met or not. Clarke (1999) put forward the use of key
success factors as a focus for targeting the main problems and issues in project
management effectiveness. Updating the project plan regularly and having
clearly stated objectives from the start will allow success to be measured more
easily. But then this over-simplified suggestion of the nature of a project falls
down when it is considered that almost all judgements about what constitutes a
failure are subjective. Such judgements are coloured by personal perception,
circumstances and expectations (Fortune and Peters, 1995c). Likewise, Baker
et al., (1983) felt that perceived performance would be a better measure of
project success than using time, cost and performance. The subjective nature of
success can see projects considered a failure to turn out to be a success to their customers, and likewise, those perceived as successful by their implementers, only to be considered a failure by its customers (De Wit, 1986; Pinto and Slevin, 1988).

Perception is becoming a more recognised factor in understanding success and failure (Thomas and Fernandez, 2008); this move towards softer measures to success sees the introduction of people management and its impact on project success. Scott-Young and Samson (2004) found that people management can have a significant impact on project success, further to this Turner and Muller (2005) examined the impact of Project Managers and their leadership style on project success. After all leadership style and competence of the manager can have an impact on the performance of a project (Ammeter and Duerich, 2002; Sutcliffe, 1999). Further impact by people on success can be seen through reluctance to learn from failure. Lyytinen and Robey (1999) found people could demonstrate a stubborn adherence to existing theories that needed revision rather than using the available information to avoid failure. Within this softer approach to understanding factors for success, learning is required to avoid some of most common issues such as poor risk management, inadequate human resource management and vendor management. Such factors pose threats to the success of project implementations (Chen et al, 2009). As Fortune and Peters (1995a) point out, mistakes can be avoided if people learn from them and the corrective actions they take.
Knowledge capability found through learning is being seen as an essential part of evaluating projects (Corlane and Osei-Bryson, 2009). Earlier CSF models seem to avoid the value of learning (Boynton and Zmud, 1984), therefore ignoring the feedback essential to enable continuous improvement. The ability to look forward to failure is a vital part of good project management, but the previously discussed levels of failure suggests this is not being attempted (Fortune and Peters, 1995d). The Standish Group suggest the computer industry covers up failures, leading to projects and Project Managers making the same mistakes over and over again (Standish Group, 1995). This reduces the ability to predict if a project is likely to succeed or fail. The opportunity to learn is in large part dependent on failure being recognised and analysed appropriately. To achieve this, individuals need to be free to share information about failures without fear or recrimination (Fortune and Peters, 1995e), an approach the Standish Group indicate isn’t happening. It could be considered reasonable that for an individual to learn a task fully, lessons should be drawn from mistakes made. As Fortune and Peters (2002) explain, a breakthrough was made when it was realised this tactic could be applied to organisations. Therefore a ‘learning organisation’ is one which gathers information about failures along with successes, using the information to improve and change. Even such a simplistic view of learning is dependent on the quality of the information it is based upon. Although the FSM is capable of delivering such learning, it has only reached specialist audiences due to its use of the systems thinking language and a required familiarity with its concepts. Until the FSM
breaks down these weaknesses, it will sit alongside many other tools available to Project Managers that don’t deliver to expectations (White and Fortune, 2008).

2.5 The tools, techniques and methods available to Project Managers

The widespread techniques in project management are those considered as ‘hard skills’, the easily measured and quantified concepts of time and cost, and the processes, tools and techniques associated with planning and controlling them (Winter et al. 2006). With the dominance of ‘hard’ skills, many techniques don’t satisfactorily deal with the ‘soft’ human issues (Crawford and Pollack, 2004). Methodologies such as Prince2, designed to guide their users through the essentials of running a project, sit more firmly in the hard skill camp (IPMA, 2010). Whilst soft skills are not as developed within the project management domain as hard skills, there is the realisation that soft skills are more important to managing projects than first thought. After all, it is the people that perform the work, not the tools and techniques. Success is achieved through these people and their relationships within the project process. As Koutsikouri et al., (2008) explain the ability to manage people, influence, encourage and motivate individuals and teams is a necessary skill for Project Managers. But then, the emphasis should not shift entirely to the soft domain either.
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There is no doubt a connection between hard skills such as cost and time, and soft skills like communication and emotional intelligence when looking to achieve success in projects. For example, methodologies such as Prince2 can be used to provide the structured processes suitable for projects, and then ‘soft skills’ can be introduced to a project by using other methodologies to compliment the structure already in place. IPMA’s (International Project Management Association) competence baseline (ICB, 2006) recognises the importance of ‘soft skills’, covering areas such as conflict management, communications management and teamwork. The main difference between IPMA and other certifications is their competency credentials benchmark performance within project management rather than assessing knowledge through passing an exam. As previously mentioned, IPMA Certifications don’t compete with methodologies such as Prince2; they provide the standards and guidelines to define the work of the project management personnel with respect to knowledge, experience and personal attitude (IPMA, 2010).

Further considering the split between ‘hard’ and ‘soft’ skills, Koutsikouri et al., (2008) explain through using the review of CSF literature by Chan et al., (2004), that the factors can be grouped in a way that acknowledges both the ‘hard’ and ‘soft’ factors found in projects. This further proves the importance of ‘soft skills’ alongside ‘hard skills’ and their importance in achieving project success. To not acknowledge ‘soft skills’ would mean aspects such as personalities and the relationships amongst team members would be ignored. This could be to the detriment of any project team (OU, 2006), and in the end, project success.
Koutsikouri et al., (2008) through their use of an adapted version of the FSM, suggest it may be timely for managers and practitioners to consider the ‘soft’ domain associated with construction projects when it comes to enhancing positive project outcomes. This could also be considered in areas such as IT projects due to them seeing more than their fair share of failure.

Whilst the FSM has the capability to understand success and failure in projects, and is available as a tool to Project Managers to help avoid failure and delve deeper into the workings of their project, its complexity means it may simply end up not being used like many other project management techniques and methods. Its only contribution to the school could end up being to add to the disagreement found in the literature through trying to balance its complexity in use against the benefits gained. For example, even a cursory glance at project management literature shows there is a lack of agreement concerning the criteria by which projects are judged a success (Tan 1996; Pinto and Slevin 1988; Freeman and Beale 1992; Shenhar et al., 1997; Fortune and Peters, 2005i). As pointed out by White and Fortune (2002), the project management domain is well developed and accepted with Project Managers having many methods and techniques at their disposal, but projects still exceed budgets, run late or fail to meet other objectives. Project Management literature suggests that using just schedule and budget performance is an inadequate measure of project success (Baker et al., 1988), although they are still important measurements. The success of being to specification is entwined with technical and functional objectives, the perceived quality of which is subject to variation.
by different project stakeholders. Taking this perception of quality further, Baker et al., argue that what matters is whether those affected by a project are satisfied, as being to schedule and budget means little if a poor end product is delivered.

As with their research into CSFs (Fortune and White, 2006a), White and Fortune (2008) have considered the issues associated with project management methods and techniques. Whilst their article considers a construction project, they do state that IT and IS projects are at least as likely to experience failure, and that these projects can be mapped onto the model. They also cite two IS projects being used to test the utility of the model, although the results are not presented. The adapted model is the result of an extensive UK based survey undertaken by White and Fortune (2002). The investigations implicated existing project management techniques and methods in two different ways. Firstly, the methods and techniques have inadequacies that many authors suggested may in use suffer from a number of limitations. As White and Fortune describe, they’re unable to deal ‘with complexity, uncertainty, the influences of the environments of projects, human error and other “soft” risks’. Cicmil et al., (2006) explained that conventional methods can be potentially disastrous for complex projects, although on the other hand Dvir et al., (2003) argue that there is a need to invest in project management processes to support planning, as this can reduce uncertainty and increase the likelihood of success. Planning doesn’t guarantee success, but lack of planning probably guarantees failure. Whilst this doesn’t fully take account of complexity,
there may be argument to support the impact of Project Manager experience and qualifications on achieving success in complex projects (Dvir et al., 1998; BCS, 2004b)

A second criticism found is that benefits from these methods and techniques are not being realised, because they're not being used. Of the 236 respondents to White and Fortunes (2002) survey, 66 respondents did not use any method or methodology, 123 respondents did not use any decision making techniques and 154 respondents did not use any risk assessment tools. These findings are backed up by a study conducted by The Royal Academy of Engineering and British Computer Society (BCS, 2004a) to improve the understanding of complex IT projects. The study argued that a significant percentage of IT project failures could have been avoided by using techniques we already know how to apply. A simple assumption here would be that the CSF approach is one of the methods or techniques that are not being used. After all tools, techniques and skill levels are easily identified within CSF studies (Fortune and White, 2006b).

2.6 The project-specific FSM

As a solution to these inadequacies found with project management methods and techniques, White and Fortune (2008), in their second adaptation of the FSM present the project-specific FSM to be used by Project Managers and other Practitioners. The model is designed to pass on the strengths of the FSM
missing from many of the available methods and techniques. For example, identifying potential weaknesses in a project’s structure and taking into account the viewpoints of those directly and indirectly affected by a project. In an attempt to breakdown previous barriers associated with the FSM, White and Fortune’s model is not tied to a specialised audience of systems thinking. In supporting the model’s effectiveness White and Fortune demonstrate the project-specific FSM being used as a comparison to an actual system. This may demonstrate to a Project Manager or Practitioner that this simplified version of the FSM is more accessible to those not familiar with systems thinking. What is not known is if any of those 236 respondents who didn’t use decision making techniques, or risk management tools would now use the project-specific FSM to reveal the risks and weaknesses in their projects.

2.7 In Conclusion

Despite there being many examples of the FSM being used to investigate failure and deal with soft aspects of projects, at present there are only the examples of the FSM adaptations being used in White and Fortunes papers. Outside of these instances they are few and far between. Also, in many ways it seems reasonable to want to merge the purpose of both of the models to create a framing device that is capable of resolving the criticisms of CSFs, and also be accessible to Project Managers and other Practitioners alike.
It does become apparent through White and Fortune’s adaptation of the FSM that both adaptations are presented as having valuable but unique strengths. This could lead to the argument that a further adaptation is required to merge the strengths of the two models, having an accessible model capable of performing health checks. Although it would be questionable as to whether this would resolve one of the other problems associated with the project management world and the techniques and methods available – getting people to use the techniques. White and Fortune may argue that their project-specific FSM is the model to open the systems thinking door to Project Managers and Practitioners alike, but that doesn’t necessarily mean that they’ll be adopted. After all, when faced with a complex IT project, and you’re in the group of the 236 respondents from White and Fortune’s survey who didn’t use decision making techniques on their projects, would they be likely to adopt an unfamiliar method no matter how accessible and successful it claimed to be? If White and Fortune’s adaptations can achieve the notoriety that the FSM has in the IS domain (White and Fortune, 2008), then this could be a major step in achieving adoption of the model in the project management world.

Finally, when assessing projects the two FSM adaptations undoubtedly worked well for Fortune and White. But surely the real test would be for others to use the models in their adapted forms to verify the claims being made. For instance, can the models be used as part of project to discover CSFs, and be capable of highlighting risks and weaknesses in the structure of the project? The models have yet to be used to the same extent as the FSM. So judgements will have to
be reserved about these adaptations as to whether they could answer those earlier mentioned desperate cries of a non-technical manager for a silver bullet to solve that monster of a project, experiencing missed schedules or blown budgets.

2.8 Summary

CSFs offer Project Managers many benefits, but also some disadvantages, especially for inexperienced users. Knowing which factors influence project success can be down to personal preference, and getting the factor approach to view implementations as dynamic phenomenons rather than static processes may be a challenge too far.

From the literature surveyed it seems there are a number of possible solutions for dealing with the CSF approaches issues. Fortune and White (2006a) present the FSM as one of these solutions. Whilst the model demonstrates overcoming the CSF approach issues, it has so far only reached specialist audiences due to its strong association with systems thinking. To overcome this, White and Fortune (2008) developed the project-specific FSM, a model designed to pass on the strengths of the FSM, without tying the model to a specialist audience who need to be fluent in the language of systems thinking.
Chapter 3 Research Methods

Chapter 2 reviewed the available literature for CSFs and the levels of success and failure within IT software projects. This chapter considers the suitable research methods and their validity to this project.

3.1 Methods Overview and Justification

The previous works of Fortune and Peters (1995a, 2005a) and White and Fortune (White and Fortune, 2008; Fortune and White, 2006a) have been taken into consideration when deciding which research methods to be used. The same approaches to gathering, organising and testing information about the projects have been used as in their investigations from using the FSM and the adaptations which are central to this research (OU 2005a; Fortune and Peters 2005e; White and Fortune, 2008; Fortune and White 2006a). Therefore the main methods of data collection are structured and semi-structured interviews.

3.1.1 Interviews

Structured and semi-structured Interviews have been used as a means to develop an interview plan to reliably keep the interviews focused to the research in question and to be able to compare and contrast interview responses. The nature of the semi-structured interviews benefits this research enabling the flexibility for new questions to be introduced to further probe interviewee responses. By adopting this approach, the interviews are tailored
to the people being interviewed and the context of the interviewee’s role in the situation (Lindlof and Taylor, 2002).

In an ideal world, using similar interview schedules across the investigation of two projects would ensure greater correlation between the studies. This is not possible due to the differing amounts of information and numbers of interview candidates available for the two projects considered. Results of the two projects can still be used to further understand the aim of this research – to consider the usability of the FSM when investigating CSFs that have been accepted for the management of an IT project, but, the smaller of the two projects will be used as a form of pilot study. It was envisaged that the quality of the research would be improved by allowing for this validation of the interview approach, along with ensuring credibility, feasibility and comprehensibility of the analysis in a real situation, exposing any problems (OU, 2007a).

As an approach, questionnaires were not seen as being as suitable for this project due to weaknesses such as not being able to probe or follow-up on candidate answers. In contrast, interviews can provide a richness of evidence that can be subjected to analysis (OU, 2007b). By using interviews to gather the information, the interviewee can be allowed to respond in their own words, explaining their behaviour in terms of their own values, goals and expectations, allowing interviewees to provide clarification to their ideas. It is acknowledged interviews can suffer from bias and distortion within responses. Appreciation will be given to data validation to avoid such weaknesses (OU,
2007c), as the higher quality information provided by interviews will be of more benefit to this project (Sharp et al, 2002).

Selected candidates for this study will have significant involvement in the projects of interest making interviewing them worthwhile. Candidates will be selected from each business area that had a stake in the system, and also had a business representative for that area on the project. Candidate ability to communicate openly about the situation is taken into account. Along with considering candidates from the bottom-up, suitability will be considered from top-down with senior stakeholders being questioned to understand different perspectives of the situation. The previously mentioned pilot study allows for practicing of interviewing skills, along with improvement of interview scripts.

Another key reason for using interviews as an information gathering technique rather than questionnaires is to be able to develop case studies of the situations being investigated (OU, 2007d).

### 3.1.2 Case Studies

Case studies were chosen as a suitable method to attempt to enable the consideration of the inter-relationships of CSFs, and their varying levels of importance at different stages of the implementation process. A case study is an in-depth, longitudinal examination of a situation, and as such should be able to consider the inter-relationships found in CSFs in an organisation or
environment. The situations being examined are real life project implementations, and with the wealth of information available, the case study approach is required to collect a wide variety of data to provide an understanding of the area (Cornford and Smithson, 2006). It is acknowledged that when building a case study many observers try to describe everything, and as Weick (1979) suggests, describe nothing. In order to overcome this weakness, the SFA is adopted as a suitable method to keep some intellectual control over the building of the case descriptions.

3.1.3 The System Failures Approach

Case study information is fed into the SFA (see Figure 3 below), to help interpret situations. The SFA is used to guide the various stages of this research. The approach draws a range of systems concepts together and assists in obtaining greater understanding of situations (Fortune and Peters, 2005j). As explained by Fortune and Peters (2005a), the Approach has many advantages which benefit this study, including providing the capability to take the interview results and use them to conceptualise and model the situation as a system. This requires the purpose of the study, the different viewpoints, perspectives and information about the situation along with its history to be gathered and brought together (Fortune and Peters, 1995e).

Further advantages of the SFA can be seen in its pre-analysis stage. The stage ensures the adequacy of information gathering for the situations through organising the information using diagrammatic methods such as rich
pictures and spray diagrams, as described by Fortune and Peters (2005g). The pre-analysis stage is well suited to this project, as whilst there are a variety of techniques available to assist in gathering and organising the information, the decision as to which techniques to use, rests with whoever is carrying out the study (Fortune and Peters, 2005k). Another key reason for using the SFA is its ability to incorporate the FSM, the model central to this research.
Pre-analysis

Identification of significant failures

System selection

System modelling

Comparison

Further analysis

Synthesis

Purpose

Viewpoints/perspectives

Information about situations

System techniques

Formal system model

Pre-analysis

Purpose

Design/redesign

Lessons

Agenda for change

Figure 3 – The System Failures Approach (Fortune and Peters, 2005a)
The FSM is used as the method of comparison of a system with a model of a robust system capable of purposeful activity without failure. It is by comparing the components, links and other features of the models which allows for actual or potential weaknesses in the system’s structure or processes to be identified – the point at which aspects of the system begin to be considered a success or failure. The SFA guides its users to synthesise the results of the comparison to reveal lessons about the situation. This is the final stage of the approach which has taken the analyst from the real world into the conceptual world of systems thinking, qualitative modelling and comparison. This stage provides the means to understanding whether a situation can be deemed a success or failure from which lessons can be learnt (Fortune and Peters, 1995d).

3.2 Validity, Bias and Costs

This study is a retrospective observation of cases that have already occurred as it is of no benefit to the project to study live cases in the hope one would eventually be deemed a failure. It will always be necessary to study failures after the event (Sauer, 1993).
It is also acknowledged that the fewer the viewpoints and perspectives, the more partial the picture of the situation will become. In bearing this in mind, it is also recognised that a four-way balancing act exists within this research (Fortune and Peters 2005f) –

- The requirement to be holistic, which underpins systems work,
- The purpose of the study,
- The time and cost constraints and
- The need for the investigation to be manageable

In adopting an approach that builds case studies, a balancing act needs to be managed to make sure there is enough breadth and depth in the source material. This allows sufficient scope to apply the systems concepts, techniques and methods required to make the study beneficial. The aim here is to accumulate enough evidence of sufficient value whilst still being aware of the constraints of collection and analysis costs. The pre-analysis stage of the SFA has the capability to check that all aspects of the situation are considered, and in essence, focuses the study through having the purpose, time and cost constraints fed into it as pre-defining factors. This stage will therefore manage the trade-off of the unavoidable costs of data collection and analysis, and the need to collect sufficient data within budget to make sure the study is fit for purpose. Interviewing selected candidates and turning the information into case studies is the major cost incurred by this investigation. Each interview can take an hour or more, with transcribing and collation of results to be followed by their transformation into a case study.
A series of diagrammatic tools will be used for organising and storing information, providing working tools for checking that all aspects of the situations are considered and options generated (Fortune and Peters, 2005k). This results in the build up of sufficient knowledge of the situations in systems terms to be able to represent relevant aspects in an appropriate form. The SFA is ideal for uncovering all the data for analysis through the learning cycles facilitated by the approach (OU, 2005b). As Fortune and Peters explain, the SFA allows information to be organised and stored, making sure all aspects of the situation have been considered, helping determine if further questioning is required. The approach allows iteration to take place at every stage to allow further investigation and modelling where necessary. This allows for stages to be revisited where gaps are found in the analysis, or if previous choices appear to be inappropriate. Also, as the model requires viewpoints to be fed in at early stages of the analysis, it allows for the analysis to make a number of passes through the entire approach considering the different viewpoints, and therefore different ways of interpreting the information.

3.2.1 Summary

As a guide to this research, the SFA is the most appropriate method – a tried and trusted approach that has many advantages relative to this project. These include steering its user to make sure that all areas of the study are covered,
considering different viewpoints and perspectives which are relevant to the CSFs essential to this study and collecting data through the use of interviewing and building a case study of the situation. Most importantly it incorporates the FSM as one of its own stages. Therefore using the SFA is a logical step in managing this projects research approach.
Chapter 4 Data Collection and Evaluation

The aim of this project is to consider the usability of the FSM to investigate the CSFs that have been accepted for the management of an IT project. This Chapter will apply the SFA as described in Chapter 3, to gain information about the situations in order to perform a systemic interpretation of the selected projects and their contexts (Fortune and Peters, 2005a, Chapters 6 and 7).

4.1 Preparing a pre-analysis of the situations

4.1.1 Pre-analysis

In fulfilment of objective 1, a pre-analysis has been prepared for the situations being investigated (Fortune and Peters, 2005a, pp97). A variety of techniques have been used to focus the application of the approach deciding which potential failures can be conceptualised to advance understanding. Interviews have been used as the main method for gathering the information. The interviews focussed on the experiences of those involved in the projects to evaluate different perspectives of the same situations. Those selected had to of worked on the projects, be affected by them in some way, and in selected cases were able to influence the situation. The interview followed a script based upon the components of FSM model to keep it focussed to the research in question. Use of the script was not exclusive with questions introduced to further probe interviewee responses, along with interviews being
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tailored to the role of those being interviewed (to view the interview script see Appendix E).

The information has then been organised and stored using rich pictures and spray diagrams. These techniques play a big part in the pre-analysis assisting in making sure all aspects of the situation are being considered. Fortune and Peters stress at this point the situation must not yet be represented in terms of a system (Fortune and Peters, 2005a, pp98)

4.1.2 Organised and stored information on the considered situations

The rich picture shown in figure 4 captures the instrumental and cultural relationships (Checkland and Scholes, 1990) found for Project-A. It depicts the salient features of the situation, and is used as the output to the pre-analysis stage (Fortune and Peters, 2005, pp100).
Along with the Rich Pictures, the pre-analysis stage makes use of spray diagrams (see Figure 5) to organise the information, facts and issues into a structure to help clarify the understanding of the projects.

The complete Rich Pictures and Spray Diagrams for Project-A and Project-B can be found in sections 2 and 3 of Appendix B and C respectively.

A comparison of the rich pictures revealed how Project-B’s situation is far more complicated than Project-A’s. The busier rich picture highlights issues such as a lack of necessary skills and experience, poor communication, a lack of project governance, poor requirements and a project consumed in politics. This complexity is backed up by the spray diagrams through Project-A easily represented using a single spray diagram, where as Project-B had to be broken down into multiple spray diagrams in order to clarify issues surrounding the project, whilst maintaining a level of understanding.

These findings serve as inputs into the next section of the SFA in identifying significant failures.
4.2 Identifying significant failures

To fulfil objective 2, the next step in the analysis is to identify significant failures present in the situations and to select systems for the analysis (Fortune and Peters, 2005a, pp103–5). The concerns that could be regarded as failures have been identified from Project-B due to the project containing more significant failures than Project-A. The identified failures are emphasised using the Project Attributes as found in Table 1 in Chapter 1, as the main areas for comparison.

A more detailed account of the identified failures can be found in Appendix D, with the Identified Failures for comparison being –

1. Clear and Realistic Objectives – Requirements Engineering System

Project-A and Project-B both produced high level objectives/requirements. Whilst this didn’t seem a problem for Project-A, for Project-B the requirements proved to be un-useable within the project.

2. Performance Monitoring – Project Monitoring and Control System

There is a clear contrast between the Performance Monitoring found in the two projects. Project-A employed a number of approaches to make sure performance was to an acceptable standard, something which Project-B did not.
3. Decision Making – Project Management System

There are many failings in the decision making process found within Project-B, including the conflict found through differences in opinion of senior members of the project. This is in direct contrast to Project-A, where there is a clear meeting of minds.

4. The Environment – Project Governance System

Those involved in both projects felt that past experience was an important factor when considering project success, although there is a clear difference in the projects when considering the use of past experience.

5. Resources – Supplier System

There are mixed feelings within Project-B as to the adequacy of resources provided, whilst Project-A made sure it had sufficient resource in place to successfully implement the system.

In order to select the systems for modelling the situations, the identified failures will serve as inputs into the next section of the SFA.
4.3 Modelling of the Systems

To fulfil objective 3, the situations have been considered using systems maps (see figure 6 below) and influence diagrams (see figure 7 below) developed from the identified failures. This enables improved understanding and conceptualisation of the projects (Fortune and Peters, 2005a, pp107-10).

*Complete systems maps and influence diagrams for Project-A and Project-B can be found in sections 5 and 6 of Appendix B and C respectively.*

*Figure 6 – Project-B Requirements Engineering Systems Map*
The systems maps and influence diagrams show the named and defined components and their relationships in the environment of each system. This has been done to establish the structural relationships between the components and identify the relationships between the variables that describe the behaviour of the systems (Stewart and Fortune, 1995). They have been used as the basis for constructing the FSMs.

4.4 Comparison of the systems using the FSMs

In fulfilment of objective 4 the projects have been modelled using the adapted FSMs to allow for their comparison with an idealised model of a robust system that is capable of purposeful activity (see figures 1 and 2, Chapter 1). The systems have been represented in the format of the adapted FSMs to reveal discrepancies or comments about the considered situations. (Fortune and
See Appendix F for more detail on the methodology for comparison of Systems using the FSMs. For the complete FSMs and comparison tables relating to Project-A and Project-B, see sections 7 and 9 of Appendix B and C respectively.

Figures 8 and 9 below show Project-B’s Requirements Engineering System represented in the format of the FSM and the project-specific FSM respectively. These models were compared with their particular versions of the FSM to discover which elements were in place, and also the number of discrepancies or omissions existing within the systems. The example comparisons shown in Table 2 for the FSM and Table 3 for the project-specific FSM below are set out in the same format as demonstrated by Fortune and Peters (2005a) in their comparisons using the FSM (The CSFs in red are those identified as failures).
4.4.1 Fortune and White’s (2006a) Framing Model

Figure 8 – Project-B – Clear and Realistic Objectives System FSM
### 4.4.2 Comparisons using the FSM

<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment - <em>(The CSFs in red are those identified as failures)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>The wider system and system did not consider environmental influences adequately. There is clear evidence a different sort of system was selected to what was expected <em>(Identified CSFs - Organisational adaptations/culture, Environmental Influences, Past Experience (learning from))</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>There wasn’t a firm business case, with initial ideas and plans being formulated without one. Risks and complexities about the type of system being selected weren’t understood <em>(Identified CSFs - Skilled/suitably qualified/sufficient staff/team, Good communication/Feedback)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>The Client provided the budget. The contractor supplied inexperienced requirements engineers along with claimed experience of package selection providers. <em>(Identified CSFs - Adequate Budget, Sufficient/well allocated resources, Good performance by suppliers/contractors)</em></td>
</tr>
<tr>
<td>Makes known expectations</td>
<td>The deadline, which overly constrained the project, was set by the original Project Champion. The requirements were left as high level as it was felt there wasn’t enough time to produce them properly. <em>(Identified CSFs - Clear realistic objectives, Strong business case/sound basis for project)</em></td>
</tr>
<tr>
<td>Supplies performance information</td>
<td>There is no real evidence of a performance monitoring subsystem. <em>(Identified CSFs - Effective Monitoring/control, Planned close down/review/acceptance of possible failure)</em></td>
</tr>
<tr>
<td>Decision-making subsystem</td>
<td>The decision making team is not consistent even at this early stage of the project. Different members of the supplier appear and disappear, particularly in key roles. <em>(Identified CSFs - Support from senior management, Competent project manager, Realistic schedule)</em></td>
</tr>
<tr>
<td>Subsystems that carry out transformations</td>
<td>There is no evidence people supplied by the contractor were skilled and experienced enough. <em>(Identified CSFs - Skilled/suitably/sufficient staff/team)</em></td>
</tr>
<tr>
<td>Performance monitoring subsystem</td>
<td>There is no real evidence of a performance monitoring subsystem in the project. <em>(Identified CSFs - Effective monitoring/control, Planned close down/review/acceptance of possible failure)</em></td>
</tr>
<tr>
<td>Boundaries</td>
<td>The number of people involved in the project should be more than adequate for its size. <em>(Identified CSFs - Project size/level of complexity/number of people involved/duration)</em></td>
</tr>
<tr>
<td>Others</td>
<td>It is felt within the project that possibly not all the people involved in the project were the right people. <em>(Identified CSFs - User/client involvement, Different viewpoints (appreciating), Project sponsor/champion, Effective change management)</em></td>
</tr>
</tbody>
</table>

*Table 2 – FSM Clear and Realistic Objectives Comparison Results*
4.4.3 White and Fortune’s (2008) project-specific FSM

Figure 9 – Project-B – Clear and Realistic Objectives project-specific FSM
### 4.4.4 Comparisons using the project-specific FSM

<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment - <em>(The CSFs in red are those identified as failures)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>The client and contractor thought they were selecting a COTS package, not framework. <em>(Identified CSFs – Environmental Influences, Past experience (learning from))</em></td>
</tr>
<tr>
<td>Wider system – (places project system in context)</td>
<td>The Wider System failed to understand the context of the project and fully consider the effects of resistance to change. <em>(Identified CSFs – Organisational culture, effective change management)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>No real requirements gathering methodologies were used, nor were there any clear measures of performance or criteria for success. <em>(Identified CSFs – detailed plan kept up to date, clear realistic objectives, strong business case, skilled staff)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>The Wider System provided a budget thought to be adequate, and appointed the contractor. The contractor provided resources to undertake the requirements sweep. <em>(Identified CSFs – Adequate budget, skilled team, sufficient resources (to do work), good performance by contractors)</em></td>
</tr>
<tr>
<td>Makes known expectations</td>
<td>The Wider System failed to adequately control the project, allowing the contractor too much freedom. <em>(Identified CSFs – Effective monitoring/control)</em></td>
</tr>
<tr>
<td>Communication Channels</td>
<td>There is evidence of a communication plan; there is no evidence of one being implemented. <em>(Identified CSFs – Good communication/feedback)</em></td>
</tr>
<tr>
<td>Supplies performance information</td>
<td>There is evidence to suggest that misleading information was communicated around the project. The requirements were regarded as being high level, but adequate.</td>
</tr>
<tr>
<td>Decision-making subsystem</td>
<td>Responsibility lies with the client for selecting the contractor and deciding they had the necessary skill set. <em>(Identified CSFs – Good leadership)</em></td>
</tr>
<tr>
<td>Subsystems that carry out transformations</td>
<td>There is evidence that skilled requirement engineers were not used. Requirements gathering were constrained by time. <em>(Identified CSFs – Strong business case, skilled staff)</em></td>
</tr>
<tr>
<td>Performance monitoring subsystem</td>
<td>There is no real evidence of a performance monitoring system. <em>(Identified CSFs – detailed plan kept up to date, realistic schedule, effective monitoring/control)</em></td>
</tr>
<tr>
<td>Boundaries (including viewpoints)</td>
<td>There is a failure to fully consider the view of end-users. <em>(Identified CSFs – Different viewpoints (appreciating), project complexity)</em></td>
</tr>
<tr>
<td>Project Champion</td>
<td>The original Project Champion is responsible for the impossible dead line. <em>(Identified CSFs – Project sponsor/champion – original)</em></td>
</tr>
<tr>
<td>Change Agent</td>
<td>There is acceptance of the change taking place at the requirements and package selection stage.</td>
</tr>
</tbody>
</table>

Table 3 – Project-specific FSM Clear and Realistic Objectives Comparison Results
4.5 Synthesis of systems using the FSMs

To fulfil objective 5, the results of the systems comparison have been used as an insight into the selected projects (Fortune and Peters, 2005a, pp135 – 6). They also consider if there are any gaps in the analysis, draw the threads together to build an understanding of the situation and judge the situation by considering the viewpoints, perspectives and purpose that informed the pre-analysis (see Fortune and Peters, 2005a, pp136).

*Tables 4 and 5* below are compiled from selecting relevant information from the recurring themes and then representing them using the areas of comparison set out in *Table 1 Chapter 1*, based on the components of the FSM and project-specific FSM, as used in section 4.2, when identifying the significant failures.

For more detail, the complete synthesis results are available in *sections 8 for the FSM and 10 for the project-specific FSM of Appendix B and Appendix C* for Project-A and Project-B respectively.
### 4.5.1 Project-A FSM and project-specific FSM Synthesis Results

<table>
<thead>
<tr>
<th>CSF Group</th>
<th>Project-A – FSM Recurring Themes</th>
<th>Project-A - project-specific FSM Recurring Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals and Objectives</td>
<td>Requirements were well managed and realistic, pitched at a level that suited the project. The project benefited from a clear business plan giving a sense of direction.</td>
<td>The requirements were realistic and well managed with human issues considered before technical. The project also benefited from a clear business plan along with risks being managed well.</td>
</tr>
<tr>
<td>Performance Monitoring</td>
<td>There was an implemented communication plan. The project benefited from good communication. Performance was quality assured with an approach that suited the project and was agreed to by those involved in the project.</td>
<td>The project had strong communication and was run in an open and honest way. Performance information was quality assured, an approached welcomed by those on the project.</td>
</tr>
<tr>
<td>Decision-maker(s)</td>
<td>The project benefited from support of Senior Management mainly gained through the MD being the Project Champion. The Project Managers were highly experienced, including having experience of the implemented system. The schedule was realistic, but tight, and well managed.</td>
<td>The schedule and the project were realistic. The project benefiting from Senior Management Support gained through the Project Champion being the MD. The Project Managers were highly experienced. The Project Manager supplied by Financial Systems had previous system experience.</td>
</tr>
<tr>
<td>Environment</td>
<td>Being a new company with not much experience made change management easier. People understood the need for the change. Learning was achieved through recruiting people with the necessary skills and experience</td>
<td>The need for change was fully understood, and there was little resistance to change. People on the project learnt from those recruited with the necessary skills and experience</td>
</tr>
<tr>
<td>Resources</td>
<td>The project made use of recruiting necessary skills and experience. Recruited consultants had a proven track record. A Provider was selected with proven technology. Contractors and suppliers worked well together. All work was quality assured.</td>
<td>Consultants that worked on the project were recruited due to their skills, experience, and proven track records. The provider selected supplied proven technology, performing well in their role. Supplier/contractor performance was good with all work quality assured.</td>
</tr>
</tbody>
</table>

*Table 4 – Project-A – FSM Adaptation Comparisons*
### 4.5.2 Project-B FSM and project-specific FSM Synthesis Results

<table>
<thead>
<tr>
<th>CSF Group</th>
<th>Project-B – FSM Recurring Themes</th>
<th>Project-B - project-specific FSM Recurring Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals and Objectives</td>
<td>The project’s requirements were poor being regarded as ambiguous causing problems throughout the project.</td>
<td>The complexity of the system wasn’t understood through poor requirements that resulted in the wrong system being selected.</td>
</tr>
<tr>
<td>Performance Monitoring</td>
<td>Performance monitoring was poor. Information wasn’t quality assured. The Project Manager added spin to information.</td>
<td>Performance information was inaccurate and was prone to spin by the Project Manager through not being governed or quality assured.</td>
</tr>
<tr>
<td>Decision-maker(s)</td>
<td>Decisions could be made without the knowledge of the client due to contractors and the Project Manager being given too much power. The Project Manager wasn’t considered capable, and didn’t manage the plan well. The project structure was overly complicated impacting communication.</td>
<td>The Project Manager was given too much trust, and wasn’t competent within their role as demonstrated by their poor management of the schedule. At one stage they were nearly removed from their duties. The Schedule was considered unrealistic being based on an impossible deadline which the contractor never questioned.</td>
</tr>
<tr>
<td>Environment</td>
<td>The client forgot everything they knew about projects believing the contractor was experienced enough to lead the project. Change Management was considered out of scope through the contractor providing a ‘grandiose’ quote.</td>
<td>The client believed they didn’t have the experience to manage the project so recruited consultants believed to be capable. Change Management was badly handled and considered out of scope. Users originally accepted change, but lost faith as things went wrong.</td>
</tr>
<tr>
<td>Resources</td>
<td>The project was under-resourced lacking the necessary skills and experience. There is no evidence of the contractor having a proven track record. The technology selected didn’t suit the clients business. The Performance by contractors was not good enough.</td>
<td>The client did not govern the project resulting in poor resource management and poor performance by the contractors. There was a lack of skilled resource on the project. The technology selected was not proven within the client’s type of General Insurance and also was more complicated than expected.</td>
</tr>
</tbody>
</table>

*Table 5 – Project-B – FSM Adaptation Comparisons*
Figures 10 to 15 below represent lists of CSFs identified through the comparisons of the adapted FSMs (see tables 2 and 3 above as an example, or for more detail of all the identified CSFs see the factors highlighted in the comparison tables found in sections 7 and 9 of appendix B and C for Project-A and Project-B respectively). The results are shown through using wordles (Wordle, 2011), with the larger the word meaning it is more common throughout the results.
Figure 10 – Project-A FSM Wordle – Achieved CSFs
Figure 11 – Project-A project-specific FSM Wordle – Achieved CSFs
Figure 12 – Project-B FSM Wordle – Achieved CSFs
Figure 13 – Project-B FSM – Unachieved CSFs
Figure 14 – Project-B project-specific FSM Wordle – Achieved CSFs
Figure 15 – Project-B project-specific FSM Wordle – Unachieved CSFs
4.6 Summary

The above results provide a systemic interpretation of the situations. This has been done through identifying significant failures to represent the situations as systems, modelling the projects using the adapted FSMs and then using the synthesised results to provide an insight into the projects. These will be used to establish whether the project-specific FSM can be used as a framework for investigating factors critical to success in comparison to the FSM.
Chapter 5 Results

In Chapter 4 a systemic interpretation of the selected systems was performed. This Chapter will use the results of the interpretation in order to consider the usability of the FSMs with CSFs accepted for the management of an IT project.

In fulfilment of objective 6 firstly it will be considered if the project-specific FSM is capable of distinguishing between projects perceived as successful and unsuccessful. It will then be considered if the project-specific FSM can highlight factors practitioners perceive as critical to project success. Finally, the main focus of this research will be considered, to determine if the project-specific FSM can be used to investigate factors critical to success in much the same way as the FSM.

5.1 The capability of the project-specific FSM when distinguishing between projects perceived as successful and unsuccessful

The FSM has previously demonstrated a certain capability when distinguishing between successful and unsuccessful projects (Fortune and White, 2006a; Fortune and Peters, 2005h). The results of this study demonstrate that the project-specific FSM is capable of distinguishing between success and failure albeit in a more focussed manner. Looking at the recurring themes produced using the FSMs for Project-B (see Table 5) would
suggest the project was unsuccessful. A successful implementation can depend on the rigor of the project management processes, and the ability to avoid some of the most common failure issues such as inadequate management of requirements, risks, resources and suppliers (Chen et al., 2009). In the case of Project-B, all of these areas were poorly managed. In contrast to this, Project-A (see Table 4 above) which was considered a success addressed these common failure issues as the recurring themes show.

Consideration of the viewpoints of those involved in the project or on the receiving end of an implemented system can also determine whether a project is a success or failure. Both models were also able to consider the viewpoints and perceptions of those involved in the project. For example, in considering the wordles shown in figures 10 and 11 above, we can see that both the FSM and project-specific FSM show ‘different viewpoints’ as one of the main factors achieved in Project-A. This was mainly achieved in the FSM through the CSF ‘Different viewpoints (appreciating)’ (Fortune and White, 2006a), and in the project-specific FSM through the prompt to ‘consider viewpoints’ being incorporated (White and Fortune, 2008). Project success and failure depends on a lot more than simply sums of money or time, perception is also a strong influence (Baker et al., 1988; Jugdev and Muller, 2005). Both the FSM and project-specific FSM agreed with the perceptions of those interviewed when determining if the projects were successful or unsuccessful.
Perception can go someway to explaining how Project-A could still be considered a success even though 75% of functionality was delivered in the first phase, which was below the target of 80%. Being led in an open and honest way, those involved in the project understood that the must hit deadline was tight, so the original plan included ‘ideals’ such as web-enabled functionality which was not mandatory. This flexibility meant functionality could be deferred to the second phase of the project. Also, Project-A used perception as a measure of schedule performance through using ‘guesstimates’. Interestingly this perception translated to the project performing closely against the traditional measures of schedule, scope and budget, as seen in the FSM and project-specific FSMs synthesis results (see table 4). In contrast, Project-B was predominantly considered a failure by those involved, a point backed up by the FSM and project-specific FSMs synthesis results in table 5. Whilst there is mention of success in the project because a system was delivered, those interviewed said it wasn’t delivered to schedule, scope and budget. They also said that although the expectation of a system being delivered was met, it wasn’t the system the users expected or wanted.

When considering the abilities of the models in interpreting success and failure there are a lot of similarities in the results. However there is also an interesting difference. This can be seen with Project-B and the ‘support from senior management’. Fortune and White (2006a) suggest that a lack of top management support can increase the possibility of failure in a project; a point
backed up by Project-A benefiting from such support. A difference worthy of note in the two models results occurs here. In the recurring themes the FSM reports that Project-B did receive management support (see figure 12 above), although this support was misguided and lacked the necessary experience for the system type being implemented. The project-specific FSM on the other hand omits the project gaining management support from its results (see figure 14 above). There is argument to suggest that management support wasn’t picked up due to it being a weakness, and also through the previously mentioned focus of the model. This would suggest the project-specific FSM interpreted the project as not gaining the necessary support from senior management.

5.2 The project-specific FSM and highlighting factors practitioners perceive as critical to success

As Fortune and White (2006a) have already demonstrated, the FSM is capable of taking into account the benefits of CSFs. The models main weakness is being tied to a specialist audience with its users needing to be fluent in the language of systems thinking (White and Fortune, 2008). Therefore In breaking down these barriers and creating the project-specific version of the FSM, can the model highlight factors practitioners perceive as critical to success?
Tables 6 and 7 below show the CSFs found by the FSM alongside the perceived practitioner importance. In considering Project-A, table 6 shows that 44 percent of the CSFs considered were deemed very important, and almost all of the factors considered very important were found by both models with the exception of just one – ‘Correct choice/past experience of project management methodology/tools’. Whilst this was considered an important factor by those interviewed for Project-A, neither FSM picked up on this due to those managing Project-A deciding it was more suitable for the project not to use any tools and methods. Whereas in Project-B’s case (see table 7), 80 percent of the CSFs were considered to be very important, of which most of them were not found by either of the FSMs. As already discussed above, Project-B was considered a failure, and as table 7 illustrates, Project-B failed to take account of many of the CSF perceived to be important by those interviewed. Not considering these factors ultimately led to the failure of the project.
<table>
<thead>
<tr>
<th>Critical Factor</th>
<th>FSM - Taken Account of</th>
<th>Project-specific FSM – Taken Account of</th>
<th>Practitioner Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support from Senior Management</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Clear realistic objectives</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Strong/detailed plan kept up to date</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Good communication/feedback</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>User/Client involvement</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Skilled/suitably qualified/sufficient staff/team</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Effective change management</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Competent project manager</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Strong business case/sound basis for project</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Sufficient/well allocated resources</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Good Leadership</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Proven/familiar technology</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Realistic Schedule</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Risks addressed/assessed/managed</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Project sponsor/champion</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Effective monitoring/control</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Adequate budget</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Organisational adaptation/culture/structure</td>
<td>Y</td>
<td>Y</td>
<td>Not very</td>
</tr>
<tr>
<td>Good performance by suppliers/contractors/consultants</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Planned close down/review/acceptance of possible failure</td>
<td>Y</td>
<td>N</td>
<td>Quite</td>
</tr>
<tr>
<td>Training provision</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Political stability</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
<tr>
<td>Correct choice/past experience of project management methodology/tools</td>
<td>N</td>
<td>N</td>
<td>Very</td>
</tr>
<tr>
<td>Past experience (learning from)</td>
<td>Y</td>
<td>Y</td>
<td>Very</td>
</tr>
<tr>
<td>Different viewpoints (appreciating)</td>
<td>Y</td>
<td>Y</td>
<td>Quite</td>
</tr>
</tbody>
</table>

*Table 6 – Project-A CSF Practitioner Importance*
Critical Factor | FSM Taken Account of | Project-specific FSM Taken Account of | Practitioner Importance
---|---|---|---
Support from Senior Management | Y | N | Very
Clear realistic objectives | N | N | Very
Strong/detailed plan kept up to date | N | N | Very
Good communication/feedback | N | N | Very
User/Client involvement | N | N | Very
Skilled/suitably qualified/sufficient staff/team | N | N | Very
Effective change management | N | N | Quite
Competent project manager | N | N | Quite
Strong business case/sound basis for project | Y | N | Very
Sufficient/well allocated resources | N | Y | Very
Good Leadership | N | N | Very
Proven/familiar technology | N | N | Quite
Realistic Schedule | N | N | Quite
Risks addressed/assessed/managed | N | N | Very
Project sponsor/champion | Y | Y | Very
Effective monitoring/control | N | N | Very
Adequate budget | Y | N | Very
Organisational adaptation/culture/structure | Y | N | Very
Good performance by suppliers/contractors/consultants | N | N | Very
Planned close down/review/acceptance of possible failure | N | N | Quite
Training provision | N | N | Very
Political stability | N | N | Very
Correct choice/past experience of project management methodology/tools | N | N | Very
Past experience (learning from) | N | N | Very
Different viewpoints (appreciating) | N | N | Very

*Table 7 – Project-B CSF Practitioner Importance*

Further to this, in comparing the wordles for each project and the recurring themes shown in *tables 4 and 5* above, the results further strengthen the argument that the project-specific FSM is capable of highlighting the main factors practitioners perceive as critical to success. The results also propose
that the project-specific FSM is more focused than the FSM. Whilst both models were able to pick up on factors such as good communication, good leadership, competent project manager, different viewpoints and detailed plan kept up to date, the FSM was able to reveal a wider spread of factors. This is explained by the fact the project-specific FSM has the failings from project management literature mapped directly onto its components. This is done to prompt and provide support for those using the project-specific FSM to investigate project failures (White and Fortune, 2008). Whilst CSFs are mapped onto the components of the FSM, its use is not restricted by this, with users of the model still able to represent findings as normal in the form of the FSM, then evaluating the model against the CSFs.

Clarke (1999) put forward the use of key success factors as a focus for targeting the main problems and issues faced by projects. By clearly stating objectives from the start of a project allows for success to be measured more easily. Also, included in this, the judgements and perceptions of those involved in the project have to be considered (Fortune and Peters, 1995c). In judging Project-A, the similarities between the two models and the interview results are quite clear (as shown in Table 8 – a comparison of CSFs found by both the FSM and the project-specific FSM, and CSFs felt to have been considered as part of Project-A by those interviewed). The results of the two FSMs are comparable on all bar one CSF. Along with this they match the opinions of those interviewed from Project-A. This demonstrates a strong performance by both models, particularly by the project-specific FSM. A
notable difference in the results is that of Political Stability. Whilst both the FSM and project-specific FSM suggest this occurred on the project, the interview results suggested it was not considered. The reason for this is that it was felt project politics did not need to be considered within Project-A, as internal politics were managed by the Project Champion, with the project being run with the emphasis on ‘honesty’.

In considering Project-B (see table 9 below), an initial examination may suggest both FSMs did not compare well against those interviewed, even though the FSM and those interviewed had the most similarities when considering CSFs found, albeit not many. A possible explanation for this could be that by pure chance the FSM and those interviewed agreed on a number of CSFs being present. This was because the interviewees for Project-B guessed rather than made accurate observations about factors on the project – no doubt through not fully understanding the approach. However, the results of the two FSMs compare well if you considered Project-B is as previously discussed, regarded as unsuccessful. The results pattern highlights a strong relationship between the FSMs results due to CSFs not being found by the models, as these were not given the necessary attention.
<table>
<thead>
<tr>
<th>Critical Factor</th>
<th>FSM - Taken Account of</th>
<th>Project-specific FSM – Taken Account of</th>
<th>Project-A Interview Results – Used in Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support from Senior Management</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Clear realistic objectives</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Strong/detailed plan kept up to date</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Good communication/feedback</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>User/Client involvement</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Skilled/suitably qualified/sufficient staff/team</td>
<td>Y</td>
<td>Y</td>
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</tr>
<tr>
<td>Effective change management</td>
<td>Y</td>
<td>Y</td>
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</tr>
<tr>
<td>Competent project manager</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Strong business case/sound basis for project</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Sufficient/well allocated resources</td>
<td>Y</td>
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<tr>
<td>Good Leadership</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>Proven/familiar technology</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>Realistic Schedule</td>
<td>Y</td>
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<td>Y</td>
</tr>
<tr>
<td>Risks addressed/assessed/managed</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Project sponsor/champion</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Effective monitoring/control</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Adequate budget</td>
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<td>Y</td>
<td>Y</td>
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<td>Organisational adaptation/culture/structure</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>Good performance by suppliers/contractors/consultists</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>Planned close down/review/acceptance of possible failure</td>
<td>Y</td>
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<td>Political stability</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
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<tr>
<td>Correct choice/past experience of project management methodology/tools</td>
<td>N</td>
<td>N</td>
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</tr>
<tr>
<td>Different viewpoints (appreciating)</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Counts of ‘yes’</td>
<td>24/25 = 96%</td>
<td>23/25 = 92%</td>
<td>23/25 = 92%</td>
</tr>
</tbody>
</table>

*Table 8 – An evaluation of Project-A in relation to the critical success factors identified by Fortune and White (2006)*
Critical Factor | FSM Taken Account of | Project-specific FSM Taken Account of | Project-B Interview Results – Used in Project
--- | --- | --- | ---
Support from Senior Management | Y | N | Y
Clear realistic objectives | N | N | Y
Strong/detailed plan kept up to date | N | N | Y
Good communication/feedback | N | N | N
User/Client involvement | N | N | Y
Skilled/suitably qualified/sufficient staff/team | N | N | N
Effective change management | N | N | Y
Competent project manager | N | N | N
Strong business case/sound basis for project | Y | N | Y
Sufficient/well allocated resources | N | Y | N
Good Leadership | N | N | N
Proven/familiar technology | N | N | Y
Realistic Schedule | N | N | Y
Risks addressed/assessed/managed | N | N | Y
Project sponsor/champion | Y | Y | N
Effective monitoring/control | N | N | N
Adequate budget | Y | N | N
Organisational adaptation/culture/structure | Y | N | Y
Good performance by suppliers/contractors/consultants | N | N | N
Planned close down/review/acceptance of possible failure | N | N | N
Training provision | N | N | Y
Political stability | N | N | N
Correct choice/past experience of project management methodology/tools | N | N | Y
Past experience (learning from) | N | N | N
Different viewpoints (appreciating) | N | N | Y
Counts of ‘yes’ | 5/25 = 20% | 2/25 = 8% | 13/25 = 56%

Table 9 – An evaluation of Project-B in relation to the critical success factors identified by Fortune and White (2006)

What the above tables and wordles do help to show is that the project-specific FSM can highlight factors practitioners may perceive as critical to success,
both when they occur, and don’t occur in a project. There is also evidence, as White and Fortune (2008) suggest that it can consider the softer risks to projects beyond budget, schedule and requirements. For example, both the project-specific FSM and the FSM highlighted good communication and different viewpoints as strengths in Project-A, the project considered a success, and a weakness in Project-B, the project considered a failure. Soft risks are an aspect of the FSM that White and Fortune suggest are missing from many of the methods and techniques presently found in the project management domain. Although this may be a point that could only be proved by considering the models against such techniques, it is an argument supported by Pinto and Slevin (1988) who also found that project success is more complicated than meeting cost, schedule and specification.

5.3 The project-specific FSM used as a framework for investigating CSFs in implemented IT projects in much the same way as the FSM

Up to now consideration has been given to the project-specific FSM as a tool for distinguishing between successful and unsuccessful projects, and also demonstrating its ability to highlight factors practitioners perceive as critical to success, albeit in a more focused manner. These points begin to provide evidence to suggest the project-specific FSM can be used as a framework for investigating CSFs in implemented IT projects in much the same way as the FSM. Further consideration of the project-specific FSMs performance compared to the FSM is needed to fully determine its use in investigating CSFs.
Boynton and Zmud suggested that bias could occur when using the CSF approach. A possible solution for this is found in the project-specific FSM. With the most common failures found in project management literature incorporated into the project-specific FSM as “prompts” for considering viewpoints, the ability for bias to creep in is reduced. The more focussed nature of the project-specific FSM would keep the practitioner without FSM knowledge more concentrated, potentially avoiding bias. After all, the FSM has more scope for the user to include their own viewpoints and opinions as there are fewer boundaries placed on the models components. On the other hand, as Munro (1983) found through two independent CSF studies that experienced analysts were able to provide comparative results. In a similar way the comparable results in this study suggest that a more experienced user of the FSM would also not allow bias to creep into their work. It would be anticipated they would be able to remove any biased agenda from their study, particularly if there were no expectations placed on the results. It would also be anticipated that a more experienced user would be able to translate the real situation into abstract terms giving a fairer view.

One of the reasons for the project-specific FSM was due to many project management methods and techniques being unable to deal with complexity (White and Fortune, 2008). Within Project-B an issue picked up on by both the FSM and the project-specific FSM was that of ‘complexity’ (see figures 13 and 15 above). Both models were able to interpret the project’s complex nature.
This included being able to unravel the influences of the project environment, the human errors associated, along with highlighting softer issues such as leadership ability, staff skill levels and the lack of learning found in the project (see table 5 above, or sections c.8 and c.10 in Appendix C for more detail on the recurring themes found in Project-B).

Another area where the project-specific FSM seems to have performed equally as well as the FSM is taking into account the importance of the inter-relationships between CSFs. White and Fortune drew attention to Nandhakumar’s (1996) point that the CSF approach does not provide a mechanism for taking into account this inter-relationship, something which White and Fortune felt the FSM was capable of. Both the FSM and the project-specific FSM picked up on Project-B's poor requirements and their links with the unrealistic schedule and lack of requirements engineering experience. Also they both hit upon the uniqueness and lack of understanding of the system being selected affecting the Project Manager’s performance. After all, the Project Manager was regarded as having a lot of experience of much larger projects, but none that could be regarded as relevant to Project-B’s case. The validity of these links is further backed up by the results seen in Project-A, where realistic requirements were developed against a sensible schedule coupled with the relevant experience. Again, a highly experienced Project Manager was used, but this time one who had previous experience of the system being delivered.
In comparing the achieved CSFs highlighted in the wordles for Project-A, a successful project (*Figures 10 and 11*) against the unachieved CSFs for Project-B, a failed project (*Figures 13 and 15*), similarities are seen in the results of factors critical to projects. Furthermore, as previously discussed, there is also a similarity in the results of the FSM compared to the project-specific FSM, as seen through the wordles, the recurring themes in *tables 4 and 5* above, along with the identified CSFs in *tables 6 and 7* also above. This indicates that as Fortune and White (2006a) suggest with the FSM, that the project-specific FSM is also capable of overcoming one of the difficulties found in using CSFs – that of requiring experience to use the approach. As Boynton and Zmud (1984) emphasised, an experienced analyst is necessary to successfully apply the CSF approach. This is a similar conclusion to White and Fortune (2008) when considering the barriers restricting the use of the FSM. This provided their impetus for designing the project-specific FSM. In this research project the analysis has been performed with previous experience of using the FSM, and a minimal experience of using the CSF approach, with knowledge of the project-specific FSM being achieved through studying White and Fortunes 2008 paper. Despite differing experience of the approaches used, this research has seen two versions of the FSM provide comparative results when analysing two separate projects. Whilst similar results have been provided by the two FSMs, with the odd exception, what this research cannot categorically say is whether the project-specific FSM can breakdown the barriers of specialised systems thinking that restricts the use of the FSM. This could only be fully demonstrated through the project-specific
FSM being used by a Practitioner or Project Manager who would be daunted at the prospect of using the FSM.

Possibly the biggest challenge facing the project-specific FSM is the reluctance of Project Managers and Practitioners to use methods and techniques in the management of their projects. White and Fortune (2008) found that nearly a quarter of Project Managers they surveyed did not use any methodologies, more than half of them did not use any decision making techniques and two thirds of them did not use any risk assessment tools. Within Project-B, there was a limited use of tools on the project. The project was assessed by the FSMs to be overly complex in its nature and also considered a failure. An argument that comes to mind here, is if tools and methods already considered established within the domain aren’t being fully adopted, particularly on projects like Project-B, then would the project-specific FSM be able to overcome such a barrier.

An area this research has not been fully able to consider is that of Larsen and Myers (1999) criticism of the factor approach. Fortune and White (2006a) offered the FSM as a solution to CSFs viewing implementations as a static process, instead of a dynamic phenomenon that ignores the potential for a factor to have varying levels of importance at different stages of the implementation process. Due to the time constraints associated with this
research it was not possible to consider enough systems to fully realise the
dynamic nature of the projects.

5.3.1 Summary

The results show that the project-specific FSM has the capability to
distinguish between projects perceived as successful and unsuccessful, and
has done so by providing comparable results to the FSM, a model with a
proven track record in examining success and failure. The project-specific
FSM has also shown that it has a similar, if not more focused capability than
the FSM when highlighting factors practitioners may perceive as being critical
to success. It has done this by not only showing the most important factors in
success, but also by showing these same factors as the most critical in failure.
Overall the project-specific FSM has shown that it can be used as a
framework for investigating CSFs in implemented projects in much the same
way as the FSM. Although it displays a more focussed approach, it has shown
that the significant findings of the two models in analysing complexity and
inter-relationships of CSFs are analogous.

Whilst this is the case, this research has not been able to fully substantiate
White and Fortunes claims that the project-specific FSM is more accessible
than the FSM without the model being tested amongst Practitioners and
Project Managers, and also its use to show the varying levels of importance of
CSFs at different stages of the implementation process.
Chapter 6  Conclusions

Chapter 5 presented the results of the project. This chapter concludes with a review and evaluation of the project, along with suggestions for further research.

6.1 Project review

The project began by discussing the high rates of failure associated with IT Projects and the availability of tools and techniques within the Project Management Domain. The usability of the FSM was considered in its adapted form, along with its capability as a framing device to deliver the benefits of CSFs whilst still being able to distinguish between successful and unsuccessful projects.

The project asked the research question “Can White and Fortunes (2008) project-specific FSM be used as a framework for investigating factors critical to success in implemented IT projects in much the same way as the FSM (see Fortune and White 2006a)?”. Two sub-questions probed further into the capability of the project-specific FSM to consider the models ability to distinguish between successful and unsuccessful projects and whether the model could highlight factors practitioners perceive as critical to project success. The objectives were used to guide this project’s analysis. Information was gathered through interviews about two IT project situations to perform a systemic interpretation enhancing understand and facilitating learning. The situations were compared using the FSM and the project-
specific FSM to supply the results of the models usability in investigating CSFs in implemented IT projects.

The current literature discussing CSFs along with methods and tools available to Practitioners and Projects Managers alike was studied delving into success and failure in IT Projects and its interpretation. Consideration was given to the usefulness of the FSM and the project-specific FSM and their usability within the project management domain and the barriers that might restrict this.

This research was conducted through interviews being designed to gather the necessary data to build case-studies of the situations under consideration. The SFA was used to help interpret the situations and guide the project through the various stages of the research, through to comparing the usability of the FSM and project-specific FSM when used as a framework for investigating factors critical to success in implemented IT projects.

This research found that the project-specific FSM was capable of distinguishing between projects perceived as successful and unsuccessful. It could highlight factors practitioners may perceive as critical to success and also be used as a framework for investigating CSFs like the FSM. The comparisons show that the project-specific FSM was more focussed in its approach through having the failings associated with projects mapped directly
onto its components, providing support for those using the model to investigate project failures. The focus of the model also reduces the potential for bias to creep into its use, although as this research shows there is a lot of similarity in the results of the FSM and the project-specific FSM. Both of the models have also shown an ability to deal with complexity, particularly when interpreting the failures associated with Project-B and being able to unravel the influences found in the projects environment. Whilst the project-specific FSM exhibits many positive characteristic, its biggest challenge must be to overcome the reluctance of Project Managers and Practitioners to use methods and techniques in the management of their projects. Without this increase in use, White and Fortune’s claim that the project-specific FSM is more accessible to Practitioners and Project Managers than the FSM cannot be fully substantiated.

This project followed the recommended approach for using the FSM, applying the SFA as a guide to the various stages of the research. A Project Manager or Practitioner could adopt the approach identifying weaknesses in their project’s structure or processes and looking for difficulties in the relationships between the project and the context in which it is or will be taking place.

6.2 Project Evaluation

The research question focussed the study on the project-specific FSM being used as a framework for investigating factors critical to success in
implemented IT projects in much the same way as the FSM. The approach of preparing, analysing and synthesising the data associated with the situations were appropriate to the projects considered. A number of points should be considered when illustrating the results to the IS or Project Management communities. The pre-analysis, analysis and synthesis of the data used as the basis of the results were compiled by the researcher from a number of interviewed sources. These analysis stages along with the results have not been verified by any third party, and it cannot be guaranteed that there wouldn’t be disagreement with them from any other member of the projects considered. Alternative views may exist, with differing results possible if the project were considered from one of these views.

With the research needing to be manageable, the number of viewpoints considered for both projects had to be constrained by the time available. Whilst it is acknowledge that the fewer the viewpoints and perspectives, the more partial the picture of the situation will become. It is felt that including more viewpoints would not have added to the understanding of the situations, and the breadth and depth of the source material gained through the interviews was of a sufficient scope to apply the necessary concepts, techniques and methods.

The results of the studies were based on the researchers understanding and personal experience of the FSM and the understanding of the project-specific
FSM gained from the literature reviewed. An IS expert may have formed different opinions about the projects examined, ultimately providing different results. Nevertheless, it is believed the same conclusions for this project would have been reached, that the project-specific FSM can be used as a framework for investigating CSFs, is capable of distinguishing between projects perceived as successful and unsuccessful, and can highlight factors practitioners perceived as critical to project success – albeit in a more focussed manner.

6.3 Further Research

This project offers a number of opportunities for further research formed from this projects finding –

- Whilst there are many published accounts of the FSM being used, there are few examples of the project-specific FSM beyond White and Fortunes (2008) paper. This research has aimed to consider White and Fortunes claim that the model is accessible to Project Managers and Practitioners alike. The effectiveness of the claim could be assessed by analysing the models use by Project Managers and Practitioners in real life project situations, and also to assess if the users of the models are more likely to adopt the approaches.

- Due to the time constraints that restricted this research, a more substantial project could be used to fully consider the project-specific FSMs ability to show the varying levels of importance of CSFs at different stages of the implementation process.
This research has examined the use of the project-specific FSM in comparison to the FSM as framing devices to deliver the benefits of CSFs. The research has shown there are similarities in the models results in analysing two separate projects, although this has been achieved through one researcher using both models. As with Munro’s (1983) analysis of bias occurring within CSFs, the comparative use of the models may benefit from independent analysts providing the results.

Both adaptations of the FSM are presented as having valuable but unique strengths. In merging the adaptations, practitioners and Project Managers could avoid the need to use both models – one to perform health checks through CSFs, and the other being a more accessible and easier to understand model. A further adaptation to the FSM may be required to merge the strengths of the two models.
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Appendix A: Extended Abstract
Introduction
As we rely more and more on Information Technology (IT) in our everyday lives it may be surprising the ease at which examples of IT project failures can be found. This may seem even more surprising with all of the techniques and methods available to Project Managers. To how much we can class these projects as failures, seems to depend on the undue reliance placed on statistical and financial based techniques. Whilst it is easier to keep track of a project through quantifiable measures, it is probably more accurate to use a combination of both quantitative and qualitative measures. It is true that quantifiable data is easier to keep track of, but it is probably equally as true that without the balance of qualitative data, the most complete picture of a project is missed.

Critical Success Factors can help projects commence knowing the most important features required in order to achieve success. But whilst qualitative measures exist in Critical Success Factors, users still seemingly adopt the more quantifiable measures of budget and schedule when assessing success. Along with tendencies to sway towards quantitative measures, the importance of the inter-relationships between Critical Success Factors is ignored. Project implementations are not static, so each Factor can have differing importance throughout the life of a project. As a solution to this Fortune and White (2006) offer...
the Formal Systems Model (FSM) as a model that can not only distinguish between successful and unsuccessful projects, but also as a framing device to deliver the benefits of Critical Success Factors.

One of the main features that hold the FSM back is its use of systems thinking that can lead to misinterpretation. As a solution to this, White and Fortune (2008) also present the project-specific FSM to make the model more accessible to project managers and practitioners alike. A point in question is that if the project-specific adaptation can make the model more accessible to project managers, can it still provide the benefits found in its predecessor and be used to investigate factors critical to success, along with being capable of distinguishing between successful and unsuccessful projects.

Method and Results
This research was conducted through building case-studies of two UK based implementations of computerised systems. Both implementations are operational; one considered a failure and the other a success. The FSM and the project-specific FSM where used to investigate the factors critical to success for both the situations, with the models usability and ability to explore the situations compared once the investigations were complete.
A list of factors were used in order to assess both of the models abilities when highlighting factors critical to success –

- Clear realistic objectives
- Effective monitoring and control
- Support from Senior Management
- Competent Project Manager
- Realistic schedule
- Past experience (learning from)
- Organisation adaptation and culture
- Sufficient and well allocated resources
- Proven familiar technology
- Good performance by contractors

These comparison points were mapped to the components of the FSM and the project-specific FSM.

The results presented in the tables below show the recurring themes discovered by the models through investigating the situations. These results show that the project-specific FSM is capable of analysing and interpreting the implemented projects in much the same way as the FSM. Whilst there were similarities in the results of the two models, it was noted that the project-specific FSM’s results were more focussed. Also, both the FSM and project-specific FSM were both able to show the most important factors in success along with the most critical in failure.

**Project A – FSM and project-specific FSM Comparison**

<table>
<thead>
<tr>
<th>Critical Success Factor</th>
<th>Formal Systems Model</th>
<th>project-specific Formal Systems Model</th>
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<tbody>
<tr>
<td>Clear realistic objectives</td>
<td>Well managed requirements</td>
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<tr>
<td>Effective monitoring and control</td>
<td>Quality assured performance</td>
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<td>Competent Project Manager</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Realistic Schedule</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Past Experience (learning from)</td>
<td>Yes – recruited necessary experience</td>
<td></td>
</tr>
<tr>
<td>Organisation adaptation and Culture</td>
<td>Understood reason for change</td>
<td></td>
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<tr>
<td>Sufficient and well allocated resources</td>
<td>Well resourced with necessary skills</td>
<td></td>
</tr>
<tr>
<td>Proven familiar technology</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Good performance by contractors</td>
<td>Yes</td>
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**Project B – FSM and project-specific FSM comparison**

<table>
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<tr>
<td>Clear realistic objectives</td>
<td>Poor requirements</td>
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<td>Past Experience (learning from)</td>
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<td>Organisation adaptation and Culture</td>
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<tr>
<td>Sufficient and well allocated resources</td>
<td>Lacked necessary skills and resources</td>
<td>Poor resource management</td>
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<td>Proven familiar technology</td>
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<tr>
<td>Good performance by contractors</td>
<td>Poor performance</td>
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**Analysis**

The FSM had previously demonstrated a capability in distinguishing between successful and unsuccessful projects (Fortune and White, 2006). This research found that the project-specific FSM was also capable of distinguishing between projects perceived as successful and unsuccessful. The above results help demonstrate the abilities of the models when interpreting success and failure in the projects through similarities seen between the two models findings.

The results provided above also suggest that the project-specific FSM can be used as a framework for investigating factors critical to success in much the same way as the FSM. A comparison of the results reveals there is a strong association between the factors found by both models. This occurs not only in discovering factors on a successful project as in Project A, but also on a project considered to have failed, such as Project B.

The main reason for the project-specific FSM was to allow those not fluent in the language of systems thinking to gain the benefits of using the FSM. Whilst results have already demonstrated that the project-specific FSM can provide the benefits of the FSM to practitioners, this research has not been able to fully substantiate its accessibility outside of those fluent in systems thinking. Although this research does provide evidence of ease of use through just an understanding gained from the literature reviewed.


Discussion
There are many tools and techniques available to Project Managers to help them monitor and control their projects. But, if there are presently those who avoid using them, then why would Project Managers adopt yet another tool in their endeavours to manage their projects. Without doubt the FSM has proved successful in investigating and interpreting success and failure in projects, and has the track record to prove it. In this research, the project-specific FSM has also proved as capable.

The project world seems fixated with quantifying a project to assess its success or failure. It is not a case of disposing of quantifiable measures, but possibly accepting that there is more to consider than money or schedule. Through using the adapted FSMs this research has seen that there is more to interpreting a projects performance, such as the people on the project, the skills and experience they bring and how they are dealt with.

This research set out to consider the usability of the FSM adaptations to investigate Critical Success Factors, using the models to interpret the context of the projects selected. Whilst the research has achieved this, and also suggests there is potential for the project-specific FSM to be accessible to Project Managers and Practitioners alike. It needs to be remembered that beyond White and Fortunes (2008) article there are few examples of the project-specific adaptation in use, something this project contributes towards.

The research showed that the project-specific FSM managed to investigate factors critical to success; it was able to distinguish between successful and unsuccessful projects and was also able to highlight factors critical to project success. But with this researcher having previous experience of the FSM, it would be fair to say there may be some doubt of the usability of the adapted model unless it is tried and tested in the hands of a Project Manager who is not fluent in the language of systems thinking.

References

Appendix B: Project A – Package Selection and Implementation Project for Insurance Services

B.1 – The Pre-analysis Case Study

Project A: Key –

Consultants – Project Services

Insurance Company – Insurance Services

Package Provider – Financial Systems

A Case Study of an IT System Implementation in Insurance Services, a small insurance company

Introduction and Background

Project A is based around a package selection and implementation project undertaken by Insurance Services, a relatively new Insurance company. Although the project was to include both package selection and implementation within its remit, only one budget was set to cover the project. The project was intended to take place over a short time period, with 75% of the solution implemented within 12 months from the start. The intention was to implement 80% of the required solution as a first phase, with the rest of the functionality deferred to later phases, but time ran out, so additional functionality was also deferred.

The project itself was managed by Project Services, a consultancy that chose an off-the-shelf package solution from Financial Systems, a provider with a proven track record within the insurance industry – some fifteen years insurance industry experience with a global customer base. Although managed by the consultancy, the package provider had their own Project Manager for the implementation, with the consultancy programme managing the implementation.

Insurance Services were a new company operating through manual systems which held their risk portfolio. One of the advantages of this was there was little resistance to change, and also very little data to migrate to the new solution. The reason for the implementation was to allow Insurance Services to launch products that could be sold and administered by brokers without referring to underwriters. Before the implementation the process was very labour intensive.

Insurance Services MD was the project sponsor, and had a clear vision that the processes should be based on the package; however one of Project Services selection requirements was that the package should be a complete solution that would not need to be configured. Insurance Services were happy to accept this as a solution.
**Accepting the Project was going ahead**
The viewpoints of departments and stakeholders were considered through the Project Team containing representatives from all functional areas. The underlying requirement was that a software solution was urgently needed and this focussed the group’s attention avoiding differing motives to enter the mix. The simple fact was that Insurance Services needed a suitable system that would allow them to attract clients.

The views of the end users were not directly considered - the managers of the end users agreed the requirements document for the package selection, individual users were not interviewed. This did result in some resistance to change, but in the end all employees were aware of the urgent need to implement a software solution.

All the staff was aware of the benefits of the project, as it was a well publicised aim of the company – i.e. to implement software to improve the operability of Insurance Services. This also helped reduce any resistance to change. As a start up company, the system was an imperative. The culture within the company was fresh and up for a challenge, particularly as Insurance Services had only been trading for a limited amount of time. The new solution was intended to set the structure of the company, and as such it was expected that the culture would be flexible in accepting this.

The Senior Stakeholder provided support by being involved in the software selection process, although they were not part of the implementation steering group. Their involvement was through monthly update meetings where all stakeholders attended.

**The Requirements**
The requirements for the project were done to quite a high level meaning there was possibly some ambiguity. It was felt that requirements had to be realistic rather than simply clear. This wasn’t an issue though as the users were keen to get a software solution and were happy to accept impositions that the software imposed. The requirements didn’t change much over the course of the project, particularly due to the implementation taking less than six months. Any apparent omissions found during User Acceptance were costed and impact assessed and combined with other functionality that wasn’t to be delivered within the present release – therefore falling into a later phase. A small implementation budget was set aside for changes and was controlled by Insurance Services project manager. Any changes required outside of this budget were put forward to the Steering Committee for further discussion and a final decision.

**The planning, monitoring and control of the project**
The package selection was managed by Project Services, and as such their experience within the insurance provider field paid dividends as they were able to use their good links with the available software providers. Project Services plan was based on fairly sound experience, in that once the package was selected; the software provider took the lead on planning. Financial Systems were selected due to them having a good previous track record for implementing the software. This decision was also supported by Financial
Systems involvement of tendering in the package selection process enabling them to get a good handle of Insurance Services requirements. Insurance Services Project Manager worked around Financial Systems plan, with Project Services acting as Quality Assurance and Programme Managers. As such Project Services selection was not so much concerned about the familiarity of the technology being selected to Insurance Services, but more so with the notion that the technology was proven.

Whilst the schedule was considered realistic, it was always going to be tight. The implementation date was viewed as a ‘must hit’ deadline, and was treated as a time-boxed development. Some requirements were deferred to enable the project to be delivered to scheduled, but this only meant 75% of the solution being delivered within the project rather than the originally planned 80% solution. Future phases were expected, but weren’t planned their content took shape as the project progressed.

All performance was measured by achievement of milestones and was specified in percentage completed. Although the percentage was a guesstimate and it wasn’t always accurate, it did work well on the project and so became the standard approach. Added to this, a traffic light was used to show whether the percentage achieved was what was expected again using a guesstimate approach. This approached worked well as both Insurance Services and Financial Systems were keen to work in an ‘honest and open’ environment, and were happy to use Project Services to Quality Assure performance against the plan checking the progress that was being claimed.

The percentage completed and traffic light guesstimates were used to report performance to the Steering Committee. It was the responsibility of the Project Services Programme Manager to combine the plans of both Financial Systems and Insurance Services Project Manager’s performance in order to report progress clearly. The short timescale of the project did cause a relatively abbreviated form of reporting, although this didn’t seem to impact communication of progress.

**Management of the Project**

Insurance Services’ Project Champion performed well in their role, and kept the project focussed. Any ‘distractions’ were dismissed/deferred unless a very good case was made for them. Insurance Services and Financial Systems Project Managers worked well together, especially as they were both focussed on the need to get something delivered. The Programme Management function provided by Project Services was also effective in keeping the two sides on the same track. Any differences between the Project Managers were in the most resolved prior to the Steering Committee meetings through pre-meetings being held with the Project Managers.

In particular, Financial Systems Project Manager was hugely experienced. They led much of the planning through previous implementation experience of the software, and were keen to use Project Services to provide unbiased Quality Assurance. Insurance Services Project Manager fitted in with Financial Systems plans. This along with the fairly detailed nature of both sets of plans meant Project Services programme management was relatively straight.
forward. No methods or techniques were used in the management of the project apart from the use of Microsoft Project to help produce and control the schedule.

There was a business plan in place, but this was only produced at a high level. The idea was that the plan was to be flexible, and be based on the software that was delivered. For example, some of the web-enabled functions were seen as ‘ideals’ and not as mandatory requirements.

As part of the project set up a number of risks were identified. These were considered for ‘relevance’ throughout the project, however, there was no contingency budget for the majority of risks. The only contingency provision was related to any changes to requirements. When managing the project items such as project politics and uncertainty weren’t considered per se. internal politics were managed by the Project Champion with emphasis being placed on ‘honesty’, particularly within the selection process. Project Services used their previous good and bad experiences with suppliers when making choices within the selection process which was seen as one of the main reasons for selecting the right supplier.

People involved in the Project
Commitment was high within the project. Insurance Services were keen to get a new system. Most of the staff had been employed with the understanding that a new solution would be chosen and implemented so the expectation was already their, and commitment was good. The focus for the project was there, and Project Services ensured that Financial Systems treated Insurance Services as an ‘important’ client, especially as Project Services knew Financial Systems had no other major implementations ongoing.

Another key aspect of the project was that within Insurance Services, Project Services and Financial Systems no people in senior stakeholder or project roles changed or left. This kept a consistency in the project and also showed that the right people were put into the right positions from the start. Teams were built as part of the selection process and they stayed together right through the implementation phase. Everyone took a good level of ownership throughout the project, not just in the selection process.

Project members also benefited from the right people and tools being selected for the jobs, with reliable technology for them to undertake their work, an adequate budget and also making sure that staff were properly qualified and experienced enough for their position in the project. The project itself was software led, although not technology led. IT had virtually no say in the selection process seeing the business select the software and agree a rapid implementation approach based on the software being acceptable.

Communication
Communication and feedback within the project was effective working well at both project team and Steering committee levels, and as such the project implemented a Communication plan as part of its Quality plan. The Quality plan was put together at the start of the project by Financial Systems, and then quality assured and enhanced by Project Services. It was decided that the project was to be managed in an honest way, so the Programme
Management function tried to ensure that bad news was delivered in an agreed and impartial way. For example, where both Financial Systems and Insurance Services had their own views on problems and issues, these were consolidated in pre-Steering committee meetings. Bad news was delivered to the Steering committee with suitable options for redress of the issue. In the end it was the presence of a strong project sponsor who helped to dissuade a plethora of differing views.

**Implementing the Project**
The underlying technology was largely ignored by the business staff as it was not viewed as their issue. The main concern was ‘would it be supportable’, especially as staff had no long-standing practices and change was expected. Financials Systems employed their own experienced Systems Architect who produced an overview of the technical structure of the system. This extended beyond the project in hand to encompass future enhancements. Future enhancements were to be undertaken by Financial Systems, although immediate day to day support of the system was to be carried out by Insurance Services IT staff. Training for both end users of the system, and systems support staff was carried out by Financial Systems. The training worked well and was only delivered once through the system being fairly stable.

**Overall view of the project**
The main factors critical to success for the project was that ‘end-to-end processing of new business’ and ‘support for existing business’ needed to be implemented within 12 months of the start of the project (see *table B.1* for more detailed look at CSFs). That this was the case was very clear to those involved in the project. This fairly simple success factor enabled the project to get buy in.

In the end the project was viewed as a success by Insurance Services. They had a system that enabled them to process new business with only minor levels of manual intervention and maintain existing policies all within 12 months of the start of the project. This was also achieved within the existing budget with only a small amount of functionality de-scoped.
### Table B.1 – CSFs associated with Project A

<table>
<thead>
<tr>
<th>CSF</th>
<th>Used in Project</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Realistic Objectives</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Senior Management Support</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Strong business case/ Sound basis for project</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Effective monitoring/control</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Realistic Schedule</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Project reviews (the monitoring and control against objectives)</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Skilled/suitably qualified staff</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Competent Project Manager</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Communication and Feedback</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Political Stability</td>
<td>No</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Past Experience</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Organisation culture and structure</td>
<td>Yes</td>
<td>Not very important</td>
</tr>
<tr>
<td>Adequate Budget</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Sufficient and well allocated resources</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Training Provision</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Proven/Familiar Technology</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Good Leadership</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Good performance by suppliers/contractors/consultants</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Risks are addressed, assessed and managed</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>User Involvement</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Appreciating the different viewpoints of stakeholders</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Project sponsor/champion</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Effective change management</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
</tbody>
</table>

**CSFs associated with Project A**
B.2 – The Pre-analysis Rich Picture
B.3 - The Pre-analysis Spray Diagram
B.4 – Failure and Systems Identification

See Appendix D for Failure and Systems Identification. Failures have been identified from Project B, the Tarka Project – a project with more significant failure.

Project B is based around a package selection and implementation project undertaken by Tarka Insurance, a small insurance company that offers accidental insurance products direct to customers rather than via brokers. The idea behind the project was to enable future potential business growth by implementing a system able to offer new products and be more flexible in the sales approach rather than deliver the growth itself. The project was managed by T-BUS, a consultancy that already provided Tarka with their technical services, and was therefore already an integral part of Tarka’s IT support.

T-BUS and Tarka chose an off-the-shelf solution from TFP, a policy administration system for general insurers. TFP have a global customer base of more than 50 insurance companies. The package was tailored and implemented by a separate firm of consultants, ORASQL, who were found by T-BUS. Whilst the system was eventually delivered, although a lot later than expected, costing more than budgeted for, and probably with more work-arounds than the users were expecting, the general consensus within Tarka is that the project was a success as a system was delivered. But there was a lot to be learnt from the experience. As different user groups have their opinions over the system, there are still those who are bitter over their experiences from the project nine months after the system was finally implemented. For more information on the Tarka project see Appendix C.

The identified failures and then selected systems from the Tarka Project will be used as a route to comparison between Project A and Project B. This will allow the testing of the validity of the selected FSMs as frameworks for investigating factors critical to success in implemented IT projects.
B.5 – Project A System Maps

Clear and Realistic Objectives – Requirements Engineering System
Performance Monitoring – Project Monitoring and Control System
Decision Making – Project Management System
The Environment – Project Governance System
Resources – Supplier System (System Selection)
B.6 – Project A Influence Diagrams

Clear and Realistic Objectives (Requirements Engineering System)
Performance Monitoring (Project Monitoring and Control System)
Decision Making (Project Management System)
The Environment (Project Governance System)
B.7 – Project A Comparison – The FSM

*Clear and Realistic Objectives (Requirements Engineering System)*
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Environmental Influences were considered when selecting the package. Insurance Services appointed a consultant with a proven track record, along with knowledge and experience of package selection. The main influence coming from the wider system and system are through Project Services knowledge and experience to assist Insurance Services in making decisions, for example in buying a complete solution that would not need to be configured. The Environment fully understood the complexity of the situation, and hence made sure they appointed a consultant with the experience and knowledge of the package provider market. Insurance Services MD had a clear vision of what they wanted, although they were flexible within this vision if reasons for changes were backed up with knowledge, experience and sense. Insurance Services had a culture that was up for the challenge, understanding what was required of them. Senior support for the project and the need for a new system meant staff accepted the change.</td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The wider system kept the system well informed through a clear, logical business plan that fitted in with the needs of the company. This message was passed on clearly through clear and realistic objectives and a sound plan setting out the level of quality required through the Project Services Project Manager to the requirements Engineers. Project Services played a part in designing and implementing both a Quality and Communication plan, along with these they helped set out measures of performance for the quality required.</td>
</tr>
</tbody>
</table>

*Identified CSFs - Environmental Influences, Past Experience (learning from), Organisational adaptations*

*Identified CSFs - Skilled/suitably qualified/staff, Good communication/feedback*
| Provides resources and legitimates area of operation | Insurances Services MD provides the funds and skilled staff from Insurance Services for the project, and as such appointed Project Services to use their knowledge and experience when selecting a package provider. Project Services provided the resources, skills and experience to undertake their role in the requirements engineering and package selection aspects of the project – using them to select an experienced provider of proven technology. The requirements selection was well resourced, with qualified and experienced staff put into the correct positions, positions which they stayed in for the duration of the project. The budget was adequate and in the end it was enough. There was little contingency set aside. There was no real tension between the resources provided; the projects approach was to be open and honest. (Identified CSFs - Adequate Budget, Sufficient/well allocated resources, Proven technology, Good performance by suppliers/consultants) |
| Makes known expectations | The original project deadline was set by Insurance Services MD; the project schedule was worked out by Project Services. A system had to be delivered by a set date, so scope of functionality changed in order to hit deadlines. Rather than 80% functionality being delivered in phase 1, 75% of the planned solution was delivered instead. There was little resistance to change in the project as all staff understood the reasoning behind the project, so gaining commitment wasn’t a problem. This was seen as an advantage to the project. (Identified CSFs - Clear realistic objectives, Strong business case/sound basis for project) |
| Supplies performance information | From the outset Project Services implemented both a communication and quality plan. Along with this, the project was to be run in an open and honest way. This also benefited performance information, as good along with bad information was communicated right to the top. Where information was deemed bad, then solutions were communicated along with the problem. (Identified CSFs - Effective Monitoring/control) |
### Decision-making subsystem

The Project Services Project Manager managed the requirements and selection phase of the project (eventually becoming the Programme Manager of the implementation phase for consistency). They bought with them good knowledge and experience of selecting package providers with a 15 year track record.

*(Identified CSFs - Support from senior management, Competent project manager, Realistic schedule)*

### Subsystems that carry out transformations

Project Services carried out the transformations for the requirements sweep and provider selection. Their experience and knowledge proved successful as they selected Financial Systems, a provider with a good track record.

Rather than the Users being used in the requirements sweep, their line managers were used instead. This did cause a small amount of tension, but in the end the users understood the need for the system, so this didn’t last long.

*(Identified CSFs – Skilled staff)*

### Performance monitoring subsystem

There is evidence of a performance monitoring system for the package selection phase of the project. Again, this was mainly through Project Services who managed this phase of the project, and is evidenced through the implementation of their quality and communication plans. Decisions are verified as part of the quality standards, and with no budget, schedule or staffing issues worked well.

*(Identified CSFs - Effective monitoring/control)*

### Boundaries

The project was well resourced for its size and complexity. There was a set deadline that was met, even if the functionality was slightly reduced to meet this deadline.

*(Identified CSFs - Project size/level of complexity/number if people involved/duration)*

### Others

Users weren’t fully involved in this phase of the project, although their line managers were.

For speed, all viewpoints couldn’t be considered, although a number of viewpoints were considered, particularly those with the experience of such projects.

There is little evidence of effective change management, but at the same time, it is acknowledged that there was little resistance to change – in many respects this was down to the culture of the company being more accepting.

*(Identified CSFs - client involvement, Different viewpoints (appreciating), Effective change management)*
Performance Monitoring (Project Monitoring and Control System)

- Users
- Insurance Services
- Future Releases
- Environment
- Budget
- Risk Management System
- Business Plan

PROJECT SERVICES / INSURANCE SERVICES

- Sets out quality assurance guidance and standards, specifies performance measures, formulates schedule
- Provides Programme Management and Project Management Resources, including previous successful experience, knowledge and suitable skills
- Expectations known that performance to be guesstimates, using traffic light approach, and approach to be open and honest

PACKAGE IMPLEMENTATION SYSTEM

- Decides on objectives, measures of performance, how to meet quality standards
- Provides team, skills, past experience and knowledge
- Suggests proven approaches to technology use, development approach and honest approach to work
- Provides quality assured information to Programme Management subsystem
- Provides performance information

Implementation Project Team subsystem

- Provides quality assured performance information checked against plan
- Influences through quality assurance

Programme Management subsystem

Disturbs

Wider System Boundary
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>The influences received from the system and wider system were well trusted through communications being quality assured against the set out quality plan – in which case the influence was welcome and valuable. The complexity of the situation was fully understood as demonstrated through the appointment of an experienced consultant and package provider. Insurance Services MD wanted to make sure the project was a success by hiring those capable of doing so. Their experience is shown by the quality of the appointments made, and the ease at which the company adapted when accepting the changes they faced. <em>(Identified CSFs - Environmental Influences, Past Experience (Learning from), Organisational adaptations)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The wider system provided quality assurance guidance, specifying the performance measures as well the schedule. The system used this to form the objectives, and how their measures of performance would be used along with how to meet the quality standards. The project was well planned coupled with a good performance monitoring approach. Performance was measured and quality assured through the Programme Management function of the project, which was managed by the Project Services Project Manager. <em>(Identified CSFs - Skilled/suitably qualified/sufficient staff/team, Good communication/Feedback)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>The wider system provided the resources. Insurance Services provided the funds and some skilled workforce. Project Services were recruited to provide the experience and knowledge required to select a skilled provider, and also oversee the project. Whilst there is no evidence of specific qualifications, there is evidence that recruited staff was qualified and experienced enough to do their jobs. This is emphasised by the fact both the Project Services and Financial Systems Project Managers were said to be very experienced. Teams were well resourced, with the right people in the right position, and more specifically in that position for the duration of the project. The recruited contractors bought with them the required skills, past experience and knowledge. <em>(Identified CSFs - Adequate Budget, Sufficient/well allocated resources, Good performance by consultants/suppliers, Proven technology)</em></td>
</tr>
<tr>
<td>Makes known</td>
<td>Performance expectations were set from the start. It was fully</td>
</tr>
<tr>
<td>expectations</td>
<td>understood that performance was to be based on guesstimates using a traffic light approach. All information provided was to be open and honest – and would eventually be quality assured by the Programme Manager. The methods used were proven particularly in the context of the project type. Project Services and Financial Systems bought their own experience with them, and as such worked very well together with Project Services Programme Managing the project and Financial Systems using their knowledge to implement the system. <em>(Identified CSFs - Clear realistic objectives)</em></td>
</tr>
<tr>
<td>Supplies performance information</td>
<td>The performance information provided was based on guesstimates through Project Services Traffic Light approach along with completion of set milestones. Project Services quality assured the information, aggregating it before it was communicated up the lines of command. The open and honest approach proved invaluable, allowing for any bad news to be communicated with good. Where bad news did occur, it was expected that solutions would be provided along with the issue. All of the quality assured performance information was checked against the plan. <em>(Identified CSFs - Effective Monitoring/control)</em></td>
</tr>
<tr>
<td>Decision-making subsystem</td>
<td>Project Services provided a consistent decision making team throughout the project – from project managing the selection of the provider, through to programme managing the implementation of the system. They were recruited by Insurance Services to perform this role, and as such did so very effectively. Performance monitoring was based on the previous experience of Project Services, and was probably very effective because of their previous knowledge of Financial Systems. This can be further backed up by the unquestioned experience of Project Services and Financial Systems Project Managers. Project Services also ensured that Financial Systems treated Insurance Services as an ‘important’ client, especially as Project Services knew Financial Systems had no other major ongoing implementations. <em>(Identified CSFs - Strong/detailed plan kept up to date, Realistic schedule, Good leadership, Competent Project Manager, Correct choice/past experience of project manager)</em></td>
</tr>
</tbody>
</table>
| Subsystems that carry out transformations | Overseeing performance monitoring was the responsibility of Project Services; they set out the guidance and came up with the approach. Working in an open and honest environment supported the approach allowing all those involved in the
Paul Taylor

| **Performance monitoring subsystem** | Project Services supplied the resource for the performance monitoring of the project. They bought their knowledge and experience to the project along with the requirement for the project to be managed in an open and honest way.

They implemented a traffic light system based on guesstimates. Although not always totally accurate, the system worked well and suited the project becoming the standard. Performance was also measured through the completion of milestones.

The project had a planned close down date, and was managed to meet this. The specific criterion for this was the amount of functionality to be delivered. Expectations were based on 80%. 75% was delivered, which Insurance Services were pleased with.

*Identified CSFs - Effective monitoring/control, Planned close down*

| **Boundaries** | The performance measuring approach used suited the project size and complexity. The approach had to be one that people could understand and could be turned around quickly with durations being tight.

*Identified CSFs - Project size/level of complexity*

| **Others** | Different viewpoints were appreciated within performance monitoring. It was the responsibility of the Project Services Programme Manager to aggregate any information before communicating it around the project and being sent to the steering committee.

*Identified CSFs - Different viewpoints (appreciating)*

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project carrying out the transformations to provide as accurate as possible information.

The sub systems that carried out the transformation were seen as effective at doing their work. They worked well with Project Services approach and carried out what was expected of them from the decision making system.

*Identified CSFs - Skilled/suitably/sufficient staff/team*
**Decision Making (Project Management System)**

- **Insurance Services MD**
- **Financial Systems**
- **Implementation Steering Group**

**Environment**

**INSURANCE SERVICES / PROJECT SERVICES / FINANCIAL SYSTEMS**

- **Project Management Subsystem including Financial Systems Project Manager**
  - Provides performance information
  - Keeps project focussed by dismissing/deferring distractions
  - Provides quality assured performance information
  - Previous good and bad experiences are used when making choices, honesty is considered above politics
  - Provides resources, knowledge, project steer, champion and assurance for the project

**PACKAGE IMPLEMENTATION SYSTEM**

- **Project Management Subsystem including Financial Systems Project Manager**
  - Set expectations that a new solution is to be implemented within the expressed timeframe
  - Provides quality assurance information to
  - Provides the right qualified, experienced people and tools for the job at hand, with reliable technology

**Risk Management and Business Plan Subsystems**

**Programme Management Subsystem**

**Disturbs**

Wider System Boundary

- Influences decisions with suitable options for redress where necessary

**System Boundary**

**Insurance Services**

**Implementation**

**Steering Group**

**Insurance Services Project Management**

**Insurance Services**
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
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<tbody>
<tr>
<td>Environment</td>
<td>The system and wider system considered the influences from the environment throughout the project from knowledge of the available providers through to making sure project communications were openly and honesty fed back. As the system and wider system communicate back to the environment, both good and bad news is communicated. Where news is bad, options for redress are to be included. The Environment fully understands the complexity of the situation, and as such provided adequate funding for the project, and also made sure that fully qualified and experienced staff was placed in the correct positions to make sure the system was delivered to the set deadline. The environment through the Implementation Steering Group/Committee had the power to influence the system and subsystem. They had the power over final decisions. Decisions were based on information communicated to them via the Programme Manager. There is evidence that Insurance Services MD is experienced and capable, and used their position of Project Champion to great effect. It was their presence as a strong project sponsor that helped dissuade differing views when issues occurred that required immediate redress. <em>(Identified CSFs - Environmental Influences, Political Stability, Past experience (learning from))</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The wider system kept the project focussed, making sure that distractions were dismissed or deferred where necessary. In order to make sure decisions were clear and based on fully understood information, Project Services implemented both a communication and quality plan. Information about the project was quality assured. Problems could be solved at appropriate levels, although if issues needed communicating up the chain, then these had to be supplied with options for redress. One of the reasons for appointing Financial Systems was due to their experience. They supplied their own Project Manager who worked well with Project Services. They maintained the focus to get something delivered. Financial Systems Project Manager was hugely experienced and</td>
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Paul Taylor

<table>
<thead>
<tr>
<th>Provides resources and legitimates area of operation</th>
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<tbody>
<tr>
<td>Insurance Services, Project Services and Financial Systems all took responsibility for their own resources. Whilst Insurance Services provided the funds and some skilled employees, both Project Services and Financial Systems were recruited due to their experience and skill levels. All kept the right people in the right positions throughout the project's life.</td>
</tr>
<tr>
<td>Whilst there isn't much evidence of actual qualifications throughout the project, there is a lot of evidence of experience and qualifications being suitable for the project.</td>
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<tr>
<td>The project was adequately funded, and there is no evidence of further budget being required.</td>
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<tr>
<td>There is little if any evidence of their being tensions within the project. Any tensions are resolved within project pre-meetings and a strong Project Sponsor.</td>
</tr>
<tr>
<td>(Identified CSFs - Adequate Budget, Sufficient/well allocated resources, Good performance by suppliers/consultants)</td>
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<th>Makes known expectations</th>
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<tr>
<td>With experience, expectations have been set. Whilst the initial vision was set by the Project Sponsor, they recruited Project Services to assist with the project. Project Services were able to bring their experience in and help influence Insurance Services MD where appropriate. Financial Systems were brought in due to their previous experience, and used their own Project Manager for the implementation. Each area fitted in with the expectations of those above them, with the project ultimately fitting in with the expectations of the Project Sponsor.</td>
</tr>
<tr>
<td>Financial Systems controlled the eventual training of staff, including for those staff who would be undertaking immediate day to day support of the system.</td>
</tr>
<tr>
<td>Expectations were also set that the project would be handled in an open and honest way with quality assured information being communicated around the project. There is no doubt this assisted in decision making.</td>
</tr>
<tr>
<td>Post Production support was dealt with through Financials Systems employing their own experienced Systems Architect to produce an overview of the technical structure</td>
</tr>
</tbody>
</table>
Paul Taylor

| Subsystems that carry out transformations | Transformations were carried out by Financial Systems Project Manager, the results of which were then quality assured by Project Services Project Manager. In the end, one of the key requirements for the project was making sure that the people recruited had the right experience. Whilst the delivery date was met, functionality was slightly behind expectations. This didn’t bother Insurance Services, and it would seem that Financial Systems managed to carry out what was expected of them. The system seemed to meet expectations, although there isn’t much evidence of what testing took place. This is almost implied through the capability and experience of the Financial Systems Project Manager that it was tested adequately, particularly as it did work. *(Identified CSFs - Skilled/suitably/sufficient staff/team)* |
| Supplies performance information | Project Services as a Programme Management function provided quality assured information around the project. The information is ultimately communicated to the Steering Group who had the final say on decisions. *(Identified CSFs – Effective, Monitoring/control)* |
| Decision-making subsystem | Decision making occurs at all levels of the project, from the implementation of the system with the highly experience Financial Systems Project Manager, the quality assurance and experience of Project Services Programme Manager, the strength of the Project Sponsor who kept the project focussed, up to the Steering Committee who had the final say on decisions. All decisions were made with the knowledge of the decision making subsystem, information was aggregated by the Programme Manager, and then communicated to the Steering Committee for the final decision. This approach was set out by Project Services via their communication and quality plans. The Financial Systems Project Manager used their previous experience and knowledge to make sure all decisions had been made in relation to the implementation of the system. Coupled with the experience of Project Services Project Manager, decisions were in safe hands. *(Identified CSFs - Support from senior management, Competent Project Manager, Strong/detailed plan kept up to date, Realistic Schedule, Good Leadership)* |
| of the system and also handling the training of support staff. Financial Systems would also handle support and future enhancements of the system. *(Identified CSFs - Clear realistic objectives, Strong business case/sound basis for project)* |
| **Performance monitoring subsystem** | Project Services provided the performance monitoring system using their previous project experience. This was welcomed by Financial Systems as through the open and honest approach, the assurance was provided in an unbiased way.

Project Services monitored aspects such as schedules and milestones, progress and financial information all based around the standards which they’d set. This information was then communicated around the project in adherence with their communication plan.

There were no staffing difficulties reported within the project, recruitment of contractors was based on previous experience and capability *(Identified CSFs - Effective monitoring/control, Planned close down/review/acceptance of possible failure)* |
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<tr>
<td><strong>Boundaries</strong></td>
<td>The decision making approach seemed appropriate for the size and complexity of the project being undertaken. As the project duration was short with a lot going on, a quick but efficient approach was required. <em>(Identified CSFs - Project size/level of complexity/duration)</em></td>
</tr>
</tbody>
</table>
| **Others** | There were processes in place to make sure that decisions were made at the right level for the project. Where issues were communicated upwards, this could only be done with suitable redress included.

The Project Sponsor was strong within their role, keeping the project focused and also managing the views of those involved where necessary.

There isn’t much evidence of any change management in place in the project. Due to the company being relatively new, and people accepting that a new system was required, in essence change was expected and accepted. *(Identified CSFs - Project sponsor/champion)* |
The Environment (Project Governance System)

- **Insurance Services**
- **Financial Systems**
- **Business Plan**
- **Users**
- **Software Providers**
- **Environment**
- **Risks**
- **Existing System**
- **Wider System Boundary**
- **Disturbs**
- **Supplies quality assured performance information**

**INSURANCE SERVICES MD**

- **Sets out a flexible vision for the system, completion date, business plan and quality standards**
- **Sets out requirements for budget, staff, technology and system**
- **Defines vision for system, impact on Insurance Services, and backing**

**The Steering Committee/Implementation Group**

- **Uses experience to set out goals and objectives, schedule, business, quality and communication plans**
- **Uses experience to provide governance to the project**
- **Suggest the methods and approaches to be used, honesty and openness supporting team members**

**Project Services**

- **Package Selection and Package Implementation Systems**
- **Project Services Programme Manager**

**Provides performance information**
<table>
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<tr>
<td>Environment</td>
<td>The Wider System considered the influences of the environment. Insurance Services MD knew the company needed a new system soon, as before it was implementation they were using a manual system to hold their risk portfolio. They needed to launch products that could be sold and administered by brokers without referring to underwriters. The process was very labour intensive. Project Services was able to use their experience and knowledge of the package provider market to help influence package selection decisions. The reasoning behind using Project Services and Financial Systems was due to their previous experience. This helped influence decisions to meet business needs. Financial Systems also treated Insurance Services as an important client. This further highlighted how the Environment understood the importance and complexity of the situation by making sure the right people were in the right positions ensuring the required system was delivered. <em>(Identified CSFs - Environmental Influences, Past experience (learning from))</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>As Project Sponsor, Insurance Services MD had a strong presence in the project and was able to keep it focused. The vision they set was flexible although there was a must hit deadline with certain quality standards. This was echoed by the Steering Committee and Project Services, the latter using their experience to set out goals and objectives in line with the Project Sponsors visions, along with quality and communication plans for the project. Project Services were keen to appoint a provider with the necessary skills and experience to implement a system to meet Insurance Services needs. Whilst they handled the initial plan, they handed the implementation and its plan over to Financial Systems as they had a very experience Project Manager to undertake this. Project Services provided unbiased quality assurance which was welcomed by Financial Systems. <em>(Identified CSFs - Skilled/suitably qualified staff, Good communication/feedback)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>Insurance Services provided a single budget for package selection and implementation. From a Governance point of view Project Services brought their previous experience to the project along with the necessary skills to manage and govern the project. Whilst there is no evidence of actual qualifications, it is suggested that all staff, including Financial Systems and Insurance Services along with Project Services were</td>
</tr>
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</table>
adequately qualified to undertake their roles. Because the working environment was so open and honest, and had people functioning properly within their roles, there was little if no conflict or tension between the resources.

*(Identified CSFs - Adequate Budget, Sufficient/well allocated resources, Good performance by suppliers/consultants)*

| Makes known expectations | Insurance Services MD set out their vision for what the system would be, along with the budget, the implementation date, the staff they could provide and the technology to achieve it. Along with these, Project Services created the high level, but realistic requirements. These along with their previous experience enabled them to govern the project with the support of the Project Sponsor.

Employees were committed to the changes through knowing Insurance Services needed a new system to replace their labour intensive system and also to sell improved products. Along with this there was strong support from the Project Sponsor – Insurance Services MD.

There is evidence of risk management taking place within the project, and taking place throughout the projects life cycle. There wasn’t much of a contingency budget for the risks – the contingency budget was mainly reserved for requirements changes.

Project Services suggested the methods and approaches to be used within the project along with the ‘guesstimate’ and traffic light progress reporting. The project was run in an open and honest way which supported this system.

*(Identified CSFs - Clear realistic objectives, Strong business case/sound basis for project, Risks addressed/assessed/managed)*

| Supplies performance information | Performance information was supplied around the project. The information was quality assured as part of the quality standards set out and managed by Project Services. Financial Systems were keen to work in the open and honest environment suggested, and were also happy to use Project Services to quality assure performance against the plan checking claimed progress.

In the end, all final decisions were made by the Steering Committee. The aggregated quality assured information was communicated to them by the Project Services Programme Manager.

*(Identified CSFs - Effective Monitoring/control)*

| Decision-making | The project managed to keep all of the key people in their positions for the duration of the project which kept decision
| Subsystems that carry out transformations | The roles throughout the project were clearly defined. For instance Project Services started off using their experience to select a provider and manage the selection stage of the project. Once the provider had been selected they brought their own Project Manager with the necessary experience to implement their system. This enabled Project Services to move their role to Programme Management letting the provider get on with their job. People were focused on their own job within the project and not hindered with work elsewhere.

Clearly defined roles, an open and honest environment, and fully governed project meant the subsystems carrying out transformations were effective and carried out what was expected of them. |

| Performance monitoring subsystem | All of the performance information on the project was quality assured by Project Services Programme Manager. This was welcomed by Financial Systems Project Manager, as they were keen to work in an open and honest environment.

This meant that all decisions were verified, along with checking progress against the plan. This information was then fed back to the Steering Committee – both good and bad. Any bad news would only be offered with solutions for redress. |
| Boundaries | The project governance for the size and complexity of the project was effective. It was known from the start that whatever was put in place couldn’t slow the project down as the first phase had a short timescale and a system had to be delivered.  
*(Identified CSFs - Project size/level of complexity)* |
|---|---|
| Others | The Project Sponsor supported Project Services through their appointment.  
*(Identified CSFs - Project sponsor/champion)* |
Resources (Supplier System – System Selection)

- REPLACEMENT SYSTEM PROJECT
  - Project Management Subsystem
    - Provides performance information
  - Wider System Boundary
    - Influences through previous experience

- PACKAGE SELECTION SYSTEM
  - Project Management Subsystem
    - Appoints Project Services as managing consultant with required experience, sets out funds
    - Sets expectations that a new system is required to replace manual system, launch new products and improve operability
    - Supplies quality assured performance information

- Requirements Engineering and Tendering subsystems
- Package Selection Project Team provides Performance-monitoring subsystem

- Sets out the high level objectives from the business plan, how performance will be measured and quality standards
- Brings past experience to the project, helps appoint team, appoint funds and select provider
- Suggests approach for project, communication, quality and provider selection
- Provides quality assured information to

- Business Plan
- Implementation System
- Project Services
- Existing Sales System
- Environment
- Risks
- Financial Systems
- Insurance Services
- Users
- Budget
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<tr>
<td>Environment</td>
<td>The system and wider system fully considered the environmental influences when selecting the package provider. Insurance Services MD selected Project Services due to their past experience and knowledge of insurance system providers. The System provided the influence to the environment to select Financial Systems. Project Services chose Financial Systems as a provider of an off-the-shelf solution. They knew that Financial Systems had 15 years experience of the insurance industry along with a global customer base and were also able to project manage the implementation themselves. This is knowledge that Insurance Services would have struggled to have known themselves. The choice of selecting the consultants shows that Insurance Services understood the complexity of the situation and that they would require help. The Environment was able to influence the suppliers through the constraints of budget and timescales set on them. The project did have an adequate budget but the first phase of the project needed to be delivered quickly. <em>(Identified CSFs - Environmental Influences, Past Experience (learning from))</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The wider system set out the proportion of the budget to be used in the system selection, it made the business plan clear along with the schedule and the standard required for the requirements. At this point the expectations set on the system were to provide clear and realistic requirements along with selecting a provider who is capable of delivering a system to meet Insurance Services needs – as set out in the business plan. <em>(Identified CSFs - Skilled/suitably qualified/sufficient staff/team)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>Insurance Services MD as the Project Sponsor appointed Project Services to get the project rolling. Project Services had the required experience and knowledge of the insurance systems market and were capable of working within the budget set out by the Project Sponsor. There is evidence that the resources were more than adequate for the project, with the required experience, knowledge and qualifications found in the roles. There is no evidence of any tensions between resources on the project. *(Identified CSFs - Sufficient/well allocated resources,</td>
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<tr>
<td>Good performance by suppliers/contractors/consultants</td>
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<td>------------------------------------------------------</td>
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<tr>
<td><strong>Makes known expectations</strong></td>
<td>Project Services set out the original schedule based on the deadline set by Insurance Services MD. A supplier was selected who was capable of meeting this deadline. There isn’t much evidence of staff needing to be managed to accept the change. They were all fully aware of the need for the new system, and also the tight timescales involved in implementing it. This, along with the company having a ‘young and fresh’ culture was seen as the reason for such easy acceptance. (Identified CSFs - Clear realistic objectives)</td>
</tr>
<tr>
<td><strong>Supplies performance information</strong></td>
<td>All performance information is communicated around the project in accordance with the communication plan set out at the start of the project. Project Services provided the necessary communication on the project, with all the required information being supplied to the Steering Committee for them to make their decisions (Identified CSFs – Effective Monitoring/Control)</td>
</tr>
<tr>
<td><strong>Decision-making subsystem</strong></td>
<td>The project benefited from having a consistent decision making team throughout its life time. Project Services were responsible for providing the experience and knowledge in the package selection stage of the project – although the Steering Committee did have the final say on all decisions. The necessary decisions were made in relation to selecting a capable package provider to meet Insurance Services business needs. Project Services provided a very experienced Project Manager to the project, and as such they used their experience to pitch the requirements at the right level, and select an experienced package provider. (Identified CSFs - Competent Project Manager, Good leadership)</td>
</tr>
<tr>
<td><strong>Subsystems that carry out transformations</strong></td>
<td>Project Services provided the resource to undertake the requirements trawl, although line managers rather than users were used when interviewing staff. This did cause some resistance to change, but all the employees were aware of the urgent need to implement a software solution. There is evidence to support that the resource in place for the package selection did a good job, pitching the requirements at the right level for the project, and also selecting a package provider to meet Insurance Services needs. (Identified CSFs - Skilled/suitably/sufficient staff/team)</td>
</tr>
<tr>
<td><strong>Performance monitoring subsystem</strong></td>
<td>There is evidence that the performance monitoring system put in place by Project Services was very effective. There is evidence that this stage of the project did not go over budget.</td>
</tr>
</tbody>
</table>
All necessary decisions were verified within the project, with information being communicated to the Steering Committee. There were no staffing difficulties on the project, with staff remaining in the same positions throughout the project. *(Identified CSFs - Effective monitoring/control)*

### Boundaries

The package selection was managed well for the size and complexity of project. There seemed to be the correct number of people appointed on the project for its size and for the expected duration.

*(Identified CSFs - Project size/level of complexity/number if people involved/duration)*

### Others

Whilst it could be questioned about whether it was the right decision to use line managers rather than users in the requirements, this didn’t seem to affect the project. As much as possible different viewpoints were considered within the project – although it should be noted it was working to a tight schedule.

The Project Sponsor managed their role well, appointed an experienced consultancy and also keeping the package selection focused.

Managing Change didn’t seem as necessary on the project as everyone was aware of the importance of the new system. It could be said this was managed well as people were aware.

*(Identified CSFs - Client involvement, Different viewpoints (appreciating), Project sponsor/champion)*
Resources (Supplier System – System Implementation)

Package Implementation System

Project Management Subsystem

Provides performance information

Wider System Boundary

Implementation Steering Group

Uses previous experience to set requirements to meet the quality standards set, and deliver the required system on time

Uses and shares past experience to deliver system, and provide resources necessary to do so

Programme Management Subsystem

Provides quality assured information to

Project Management Subsystem

Set expectations that a system has to be implemented by delivery date to replace existing manual system

Provides the funds, making necessary staff available for project

Systems Package Selection

Deferred Requirements

Budget

Environment

Existing Sales System

Set out approach and formulates the implementation plan and schedule

Influences through past successful experiences as a provider

Insurance Services

Users

Risk

Package Selection

Financial Systems

System Boundary

Insurance Services MD

disturbs

Environment

Users

Deferred Requirements

Wider System Boundary

Influences through past successful experiences as a provider

Supplies quality assured performance information

Budget

Environment

Users

Deferred Requirements

Wider System Boundary

Influences through past successful experiences as a provider

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<tr>
<td>Environment</td>
<td>The wider system and system considered the environmental influences well. Project Services used their previous experience and knowledge of available package providers well to select a provider that could meet Insurance Services needs. The system influenced the environment with Project Services making sure that Financial Systems treated Insurance Services as an important client. Project Services knew Financial Systems had no other major implementations ongoing. Through the tendering process, Financial Systems (the Environment) were fully aware of the complexity of the situation. Insurance Services MD’s ability and experience is further emphasised by the selection process they started by appointing project services and by the fact they provided an adequate budget, the required resources and all within a manageable timeframe. <em>(Identified CSFs - Environmental Influences considered, Learning from previous experience, Encouraging political stability within the project)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The wider system set out the approach and implementation plan and schedule. Financial Systems Project Manager used their experience to deal with this information to meet the quality standards that had been set and deliver the system to the requirements by the specified time. Delivering 75% rather than 80% of functionality by the delivery date were deemed a success by Insurance Services. Financial Systems Project Manager created the implementation plan for the system. One of the reasons for the selection of the provider was their experience with providing insurance systems. They provided their own highly experienced project manager. There is evidence of quality standards being in place as set out by Project Services – the consultants responsible for appointing Financial Systems. Project Services and Financial Systems had a good working relationship, and as such welcomed the open and honest approach to the project. Financial Systems also welcomed Project Services as Programme Managers and their provision of quality assurance. <em>(Identified CSFs - Skilled/suitably qualified/sufficient)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>The main resource provider was Insurance Services MD who made the budget available and provided any resources required from Insurance Services. Project Services provided all of the Programme Management resources, along with quality and communication plans using their previous experience. Financial Systems provided all the resource to implement the system, including a highly experienced Project Manager, and also an applications architect. Financial Systems also provided the resource for training of users and those undertaking daily support. Whilst there is no evidence of the resources having any particular qualifications, there is substantial evidence that the staff was highly experienced and did have the necessary qualifications to undertake their roles. There were no major tensions between staff working on the project. <em>(Identified CSFs - Sufficient/well allocated resources, Training Provision, Good performance by suppliers/contractors/consultants)</em></td>
</tr>
<tr>
<td>Makes known expectations</td>
<td>The project schedule was managed in line with the original vision of the Project Sponsor. From this point the Financial Systems Project Manager used their experience to deliver the system within these constraints. Financial Systems provided resources for training of Insurance Services staff as well as their support staff. They also demonstrated their loyalty to Insurance Services and their system by not having any other major clients/ projects on the go at the same time. With both an experienced Programme Manager and Project Manager performance monitoring worked very well. Project Services quality assured the work of Financial Systems – a process which was welcomed by all. Financial Systems resources provided the plan and managed the implementation of the system. Financial Systems used their own Systems Architect to produce a technical overview for the system (which also included details of future enhancements). Financial Systems would undertake future work and support for the system. The immediate day to day support of the system would be managed by Insurance Services. <em>(Identified CSFs - Clear realistic objectives, Strong Business Case)</em></td>
</tr>
</tbody>
</table>
### Supplies performance information

All of the performance information was quality assured by Project Services against the standards set in the quality plan, and also against the schedule. This approach was welcomed by Financial Systems.  
*(Identified CSFs - Effective Monitoring/Control)*

### Decision-making subsystem

Through selecting a quality provider (Financial Systems) and in many ways through appointing and keeping an experienced consultant in place (Project Services) decision makers remained consistent through out the project. This made it clear who was managing the project and the roles people played within it.  
Financial Systems were fully aware of how the project would work when they were recruited by Project Services. They welcomed the approach of the project, particularly the open and honest environment and quality assurance.

There is evidence that all the necessary decisions were made in relation to the implementation of the system – particularly when the functionality target was slightly missed. This functionality was added to Phase Two. The business plan was flexible e.g. Phase One included functionality that was seen as ‘ideal’ but not a mandatory requirement.  
*(Identified CSFs - Good leadership, Realistic Schedule)*

### Subsystems that carry out transformations

The main transformations were carried out by Financial Systems, and as such they fulfilled the role they were recruited for by Project Services. Insurance Services remained Financial Systems main client throughout the project, with Financial Systems not being distracted throughout the life cycle – a requirement set out by Project Services.

There is evidence to suggest the Financial Systems did a good job in implementing a system under the constraint of the tight deadline – and did so within budget. Whilst there is no evidence relating to testing of the system, the fact the project was considered a success and a system was implemented, and Financial Systems were developing Phase 2, then testing was most likely adequate.  
*(Identified CSFs – Skilled/suitably/sufficient staff/team)*

### Performance monitoring subsystem

There is evidence that the performance monitoring was adequate for the project, and more importantly was welcomed as an important part of the project with Financial Systems welcoming Project Services quality assuring their work.

All work was checked by Project Services against the plan, which in essence was the implementation plan set out by Financial Systems using milestones, guesstimates and
Project Services Traffic Light system. Again this was also quality assured.

The main decision that was verified was which functionality would be deferred to Phase 2 of the project. This functionality was functionality from the business plan that was seen as ‘ideal’ but not a mandatory requirement.

There is no evidence of staffing difficulties on the project – again the project was approached in a very professional manner.

(Identified CSFs - Effective monitoring/control, Planned close down)

**Boundaries**

The resources provided for the implementation were adequate for the size and complexity of the project. One of the key factors was not just amount of people, but the level of experience, knowledge and qualifications they held that helped make the project a success within the constraints placed on the duration of the project.

(Identified CSFs - Number of people involved/project size, Level of complexity)

**Others**

Through the Steering Committee and the experience of both Project Services and Financial Systems, as many viewpoints were considered as possible. The Project Sponsor kept these focused throughout the project.

Change management seemed effective throughout the project, as there is no evidence of any real resistance to change.

(Identified CSFs - Project Sponsor, Different viewpoints (appreciating), Effective change management)

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**B.8 – Synthesis – Recurring themes using the FSM**

**Previous Experience** - A pivotal recurring theme found within the Insurance Systems project has to be that of skills and experience. There were clearly defined roles within the project that were filled with the necessary skills and previous experience.

These positions were not only filled with the correctly skilled people, but also the role holder remained in the position throughout the duration of the project creating consistency within the role.

Not only were Project Services recruited because of their ability to manage the project, but also because of their high levels of knowledge of the Insurance provider field.
Project Services were able to select Financial Systems due to their experience, proven track record, global customer base, and also their record of previously working together.

Key positions were filled with experienced staff on the project, including a highly experienced Project Manager to manage the implementation and a highly experienced Programme Manager who quality assured the Project.

**Communication** - Within communication, the two key points on the project have to be that the project not only had a communication plan, but it was implemented and managed. Within this an important point has to be that bad information was communicated along with good, and that where information was bad, then options for redress also had to be supplied. The open and honest approach to the project has to be regarded as a factor to success and a possible reason as to why it didn't suffer from politics.

**Quality Assurance** - The project was well monitored and controlled. It benefited from using an approach said to suit the project by performance monitoring through using guesstimates and milestones for tracking. All work done was quality assured by an experienced Programme Manager who produced and implemented a quality plan. This was agreed to by the Project Manager whose work would be tracked. The experience of the Project Manager was crucial to the project, not only had they implemented such projects before, but they also made sure the project benefited from having an Implementation Plan.

**Requirements Management** - The requirements were well managed and designed to be realistic. Capable people were recruited to undertake the requirements sweep, with what was deemed to be the right people to cover the right viewpoints throughout the process.

The complexity of the situation was understood by using Project Services, a highly experienced consultancy, and as such they made sure the requirements were realistic, and were able to match the needs of Insurance Services to the right provider, one who was highly experienced, had a proven track record and would be able to make Insurance Services feel like an important client.

**Change Management** - Change Management in Insurance Services was either very easy to manage, or very well managed as those involved understood the situation. Insurance Services culture very much accepted the reasons for the change as they knew the need for the system.

**Senior Management Support** - A major benefit to the project was the support of the Project Champion who performed well in their role, and kept the project focussed. Any ‘distractions’ were dismissed/deferred unless a very good case was made for them.

Through the Project Champion, the project also benefited from having Senior Management support clearly gained from the Project Champion being the Managing Director.
Others - The project also benefited from having a clear business plan giving it an understandable sense of direction which was part of Insurance Services culture. This vision was fully funded, as the project was adequately budgeted for.
Clear and Realistic Objectives (Requirements Engineering System)

- Introduces high level objectives through vision although is flexible where sees value through experience. Uses the experience of Project Services to develop milestones and measures of performance.
- Sets realistic budget, recruits experienced consultants with knowledge of insurance package provision.
- Sets expectations of tight schedule, but keeps project focused dismissing distractions without a strong case.
- Communicates and feeds back information on requirements and package selection.
- Considers risks for relevance throughout project (although limited budget to manage), plans project, sets objectives.
- Manages budget, schedule, provides valuable experience.
- Uses experience to set success criteria, involves relevant parties (line managers), manages communication and targets.
- Performance-monitoring subsystem (including Package Selection Steering Committee).
- Provides performance information.
- Senior Stakeholders act as Change Agents.
- Changes required outside of budget discussed by steering committee.
- Uses requirements and discussion to selection correct provider.
- Environment including the Business Plan and the Existing Sales System.

B.9 – Project A Comparison – The project-specific FSM
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>There is clear evidence of Insurance Services MD considering the Environment by appointing Project Services. This enabled them to manage any uncertainty they may have had about undertaking such a project as Project Services brought with them their past experience and knowledge of package selection. (Identified CSFs - past experience (learning from), organisational culture)</td>
</tr>
<tr>
<td>Wider system – (places project system in context)</td>
<td>There is evidence of the values and beliefs of Insurance Services being considered. There is a distinct need for a system to replace the manual system, and this in its self has helped limit resistance to change. Insurance Services need the new system to move forward as a business. (Identified CSFs – Different Viewpoints (appreciating), organisational adaptation)</td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>Requirements were identified at a high level, and it was decided that they had to be realistic rather than simply clear. There was also a high level business plan in place, which was designed to be flexible and based on the software being delivered. Insurance Services appointed Project Services due to their experience. Project Services helped produce a realistic schedule, implemented their own tracking systems, clear measures of performance and a communication plan. (Identified CSFs – Clear realistic objectives, strong business case, strong/detailed plan kept up to date, skilled staff)</td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>Project Services used their experience of the package provider market to select a reliable system provider. Insurance Services provided an adequate budget for the project, and where necessary the required skilled employees. (Identified CSFs – adequate budget, skilled staff)</td>
</tr>
<tr>
<td>Makes known expectations</td>
<td>Insurance services used the experience of Project Services to control the project. Commitment from Insurance Services was easy to gain, as all fully understood the need for the replacement system. This was possibly made even easier with the company being very new with a ‘fresh culture’. Insurance Services Project Champion was very good at keeping the project focussed, dismissing distractions that didn’t have a strong case. They made sure people were fully aware of the benefits of the system.</td>
</tr>
</tbody>
</table>
Any resistance to change was controlled by Project Services who used their experience to set clear success criteria, involved the relevant parties and managed communication on the project. *(Identified CSFs – Good leadership, Competent Project Manager, Effective Change Management, Clear Realistic Objectives, Strong Business Case)*

<table>
<thead>
<tr>
<th>Communication Channels</th>
<th>Through their experience Project Services implemented a communication plan for the project. <em>(Identified CSFs – Good Communication/feedback)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplies performance information</td>
<td>Project communication was controlled by Project Services who implemented a communication plan. Information was communicated around the project about the requirements and package selection progress. The system communicated to the wider system about progress of the requirements and package selection. <em>(Identified CSFs – Good communication/feedback)</em></td>
</tr>
<tr>
<td>Decision-making subsystem</td>
<td>Project Services Project Manager managed the requirements and package selection well. They used their experience and industry knowledge to make sure they selected a provider that suited the needs of Insurance Services. <em>(Identified CSFs – Competent Project Manager, Skilled staff)</em></td>
</tr>
<tr>
<td>Subsystems that carry out transformations</td>
<td>The Requirements and Package selection was carried out well by the systems that carry out transformations. Teams seem to have been directed well as there is no evidence of problems with the requirements later in the project, and the system met the requirements of the business plan. <em>(Identified CSFs – Strong business case)</em></td>
</tr>
<tr>
<td>Performance monitoring subsystem</td>
<td>Performance was measured and monitored via the standards set by Project Services. The information was fed back to the Project Manager in order to monitor the state of components and check them against the milestones set in the schedule. <em>(Identified CSFs – Effective monitoring/control, realistic schedule, detailed plan kept up to date)</em></td>
</tr>
<tr>
<td>Boundaries (including viewpoints)</td>
<td>Whilst there was some resistance to change with the users not being consulted as part of the requirements sweep – this was only minor as the users understood the need for the system and the fact it was needed sooner rather than later. The requirements were mainly considered from the viewpoint of the business, although line managers were the main points for signoff. The views of the Project Champion along with the experience of Project Services were also considered within the project.</td>
</tr>
<tr>
<td>Role</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Project Champion</td>
<td>The Project Champion was effective at keeping the project focussed and dismissing distractions. They were realistic with budget and deadlines, but also understood the need for experience when making sure the project needed to be a success.</td>
</tr>
</tbody>
</table>
| Change Agent           | The need for change was accepted within Insurance Services, and therefore there was little resistance.  
Project Services understood the organisation and were able to recruit a package provider to suit Insurance Services needs – one that would make them feel important. |
Performance Monitoring (Project Monitoring and Control System)
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Insurance Services knew they’d not got the experience to manage such a project, so they appointed Project Services a consultant with the necessary skills and experience. Project Services monitored and controlled the project, including adding the measures of performance, a traffic light system and also guidance for quality standards and a communication plan. Although they didn’t manage the implementation, they programme managed it and also quality assured the work done. Project Services used their experience within the insurance provider field to find Financial Systems, a provider with a proven track record within the insurance industry – some fifteen years. This probably helped with Financial Systems want and acceptance of being quality assured. <em>(Identified CSFs – Past experience (learning from), Environmental Influences)</em></td>
</tr>
<tr>
<td>Wider system – (places project system in context)</td>
<td>There was little resistance to change within or outside of the project. Experienced Professionals were recruited to undertake the work, and through the tendering process Financial Systems fully understood what was expected of them. Whilst there was some resistance to change by the users, this had no impact on the control of the project – and in the end everyone understood the need for the system. There is evidence to suggest that communication within and outside of the project was good. <em>(Identified CSFs – Good Communication/feedback, different viewpoints (appreciating), client involvement)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The requirements were realistic; the project had quality assurance guidance and standards. Performance measures were clearly specified with a method for measuring performance against the plan (guesstimates and traffic light system). Project Services also implemented a communication plan. <em>(Identified CSFs – Good communication/feedback, detailed plan kept up to date, realistic objectives)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>Insurance Services provided an adequate budget for the project along with the necessary technology to develop and implement the system. They also appointed Project Services who brought their Project Management and Programme Management experience with them.</td>
</tr>
</tbody>
</table>
including their previous successful experience and relationships in the Package Provider market.

Project Services appointed Financial Systems who implemented the system. They had a lot of successful experience within the Insurance market at providing systems. They managed their own implementation bringing a very experienced Project Manager with them. They also had a good relationship with and previous experience of Project Services.

There is evidence to suggest that Insurance Services were willing to adapt to any new system that came in, as their present system was labour intensive and no longer met business needs.

*Identified CSFs – Adequate budget, skilled staff, sufficient/well allocated resources*

| Makes known expectations | Expectations were set that both Project Services and Financial Systems were brought in due to their skills and experience. Project Services managed the requirements and package selection, then Programme Managed the Implementation – which Financial Systems managed. It was known the project would be run in an open and honest environment, be quality assured, using guesstimates and Project Services’ traffic light method to monitor progress. The approaches used were proven and implemented in an open and honest way. There is limited evidence of resistance to change.  
*Identified CSFs – Good leadership, Competent Project Manager, effective monitoring/control, good communication/feedback* |
|--------------------------|---------------------------------------------------------------------------------|
| Communication Channels   | Project Services implemented a communication plan along with a quality plan and standards which they managed as part of their responsibilities.  
*Identified CSFs – Good communication/feedback* |
| Supplies performance information | Financial Systems provided performance information to the Project Services Programme Manager. This information was quality assured by Project Services – something which Financial Systems were happy with. Project Services provided quality assured information (which was checked against the plan) to the Wider System and Environment. Both good and bad news was communicated – where bad, options for redress were also supplied.  
*Identified CSFs – Effective monitoring/control, good communication* |
| Decision-making          | Insurance Services appointed Project Services to Project Manage the requirements and package selection and |
| subsystem | Programme Manage the Implementation. They monitored and controlled the project and as such were appointed due to their previous experience and knowledge about package selection and implementation.  
*(Identified CSFs – Competent Project Manager, good leadership, realistic schedule, detailed plan kept up to date, skilled staff)* |
|---|---|
| Subsystems that carry out transformations | There was a good working relationship between Project Services and Financial Systems, as there was with Insurance Services. The project was managed in an open and honest way. 
Both Project Services and Financial Systems were appointed due to their knowledge and experience, along with their previous track record.  
*(Identified CSFs – Skilled/suitably qualified team)* |
| Performance monitoring subsystem | Performance monitoring was handled by Project Services who implemented quality standards and a communication plan. They were also responsible for quality assuring the information provided against the plan using guesstimates and their traffic light system – this worked well on the project.  
*(Identified CSFs – Detailed plan kept up to date, effective monitoring/control, realistic schedule, Competent Project Manager)* |
| Boundaries (including viewpoints) | Where necessary the views of those involved in the project were considered. On the whole this had to be managed well as the system was being implemented very quickly. The Project Champion kept the project focussed. Any ‘distractions’ were dismissed/deferred unless a very good case was made for them.  
*(Identified CSFs – Different viewpoints (appreciating))* |
| Project Champion | The Project Champion was responsible for appointing Project Services to bring their knowledge and experience to the project. They knew that Insurance Services didn’t have the experience to select a provider and implement a system. The Project Champion was also effective at keeping the project focussed.  
*(Identified CSFs – Project sponsor/champion)* |
<p>| Change Agent | Senior Stakeholders and Project Services Quality Assurance acted as Change Agents. There was acceptance of the need for change, with the reasons being well communicated. The Project Champion’s vision was translated into the context of the project with the message clearly communicated to the project. Rapid adaptation was needed due to the pace of the project – this was managed well and accepted by Insurance Services. |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Environment</td>
<td>The Project Champion provided support by being involved in the software selection process. Although they were not part of the implementation steering group they were kept regularly updated. Project Services and Financial Systems made decisions to within their powers, more important decisions were made by the Steering Committee and communicated to the Project Champion. <em>(Identified CSFs – Past experience (learning from), Political Stability, Senior Management Support)</em></td>
</tr>
<tr>
<td>Wider system – (places project system in context)</td>
<td>The Wider System has the final say on decision making. They understand the culture of Insurance Services and the impact the project has on the company. <em>(Identified CSFs – Organisational Culture)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>A clear steer is provided on the must hit deadline. All decisions are made from quality assured information. Objectives for the project are clearly set, with the selected package being based on proven technology from a supplier with a proven track record. Communication and quality plans are also set up. <em>(Identified CSFs – Clear realistic objectives, strong business case, good communication)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>Adequate budget is supplied along with the appointment of a programme office. They provide decisions on and solutions for any issues escalated to them. Through the appointment of Project Services, properly qualified and experienced employees are supplied. The need for the new technology is fully understood as is the need to adapt the systems and company to ways of working. <em>(Identified CSFs – Adequate budget, skilled staff, proven/familiar technology, sufficient/well allocated resources)</em></td>
</tr>
<tr>
<td>Makes known expectations</td>
<td>Guides from quality assured information based on schedule tracking and managed risks. There is little resistance to change to control due to all staff knowing the reasons behind the change and the need to move from a labour intensive manual system. <em>(Identified CSFs – Effective monitoring/control, Good Leadership, good communication, effective change management)</em></td>
</tr>
<tr>
<td>Communication</td>
<td>Project Services implemented a communication plan for the project. There is no evidence of there being issues</td>
</tr>
</tbody>
</table>
| Channels | with project communication – particularly as Project Services also quality assure and communicate progress around the project.  
**Identified CSFs – Good communication** |
| Supplies performance information | Performance Information is provided via Project Services. All information is quality assured against the various plans for the project. Performance information is based on milestones achieved, guesstimates and Project Services Traffic Light System. There is evidence of the approach working well on the project.  
All information is reported to the necessary areas, including the steering committee. Any issues have to be communicated with options for redress.  
**Identified CSFs – Effective monitoring/control, good communication** |
| Decision-making subsystem | Project Services used their knowledge and experience to assist in appointing Financial Systems. There is a good working relationship between the two, which is shown by Financial Systems accepting Project Services as quality assurers.  
**Identified CSFs – Skilled staff** |
| Subsystems that carry out transformations | Financial Systems brought with them their own very experienced Project Manager who’d had previous implementation experience of the software. They worked well in the open and honest environment, and also welcomed having their work quality assured.  
They worked from a high level, flexible business plan that was based on the software that was being delivered.  
**Identified CSFs – Skilled staff** |
| Performance monitoring subsystem | Progress was well monitored through being quality assured. All performance was measured by the achievement of milestones and guesstimates. This worked well on the project and became the standard approach. A Traffic Light system was used to show if the percentage achieved was what was expected.  
**Identified CSFs – Effective monitoring/control, detailed plan kept up to date** |
| Boundaries (including viewpoints) | The views of those within the project and Insurance Services were considered. Although the Project Champion was very good at keeping the project focussed as the schedule was very tight. There is evidence that the project team, line managers, users and organisation did have input into the project.  
**Identified CSFs – different viewpoints (appreciating)** |
| Project Champion | The Project Champion performed well in their role, and kept the project focussed. Distractions were dismissed unless a very good case was made for them. They understood the importance of bringing the right level of |
experience to the project in order to make it a success. Through their experience Project Services and Financial Systems were able to assist in decision making where Insurance Services wouldn’t have been able to do so on their own.

**(Identified CSFs – Project Sponsor/champion)**

| Change Agent | The need for change was accepted around Insurance Services. The Project was managed in an open and honest environment making change easier. The change is kept focused through the initial vision of the Project Champion. |
The Environment (Project Governance System)

REPLACEMENT SYSTEMS STEERING COMMITTEE/GROUP

- Provides honest performance information
- Wider System Boundary
- REPLACEMENT SYSTEMS PROJECT
  - Project Services
  - Financial Systems Project Manager and Project Team
  - Project Services Programme Manager, Quality Assurance and Performance Monitoring
- Sets objectives, communication and quality plans, manages risks, makes sure technology is proven
- Assists in managing budget, manages schedule, appoints package provider by experience and knowledge
- Sets success criteria and objectives in line with standards set for quality plan. Also expects open and honest communication
- Provides open and honest communication information – accumulated from all sources
- Supplies quality assured performance information to communication plan, also provides accumulated good and bad news
- Sets expectations for schedule, performance, makes final decisions on risks, sets expectations for completion date
- Supplies package solution
- Change requests
- New company, little experience, fresh culture
- Web: E
- New project, little experience, fresh culture
- Insurance Services
- User: E
- Line Managers
- Financial Systems
- Insure: E
- New company, little experience, fresh culture
- Financial Systems
- Line Managers
- Change requests
- New company, little experience, fresh culture

SUPPLIES

- Project Governance System
- Wider System Boundary
- REPLACEMENT SYSTEMS PROJECT
- Project Services
- Financial Systems Project Manager and Project Team
- Project Services Programme Manager, Quality Assurance and Performance Monitoring
- Provides open and honest communication information – accumulated from all sources
- Supplies quality assured performance information to communication plan, also provides accumulated good and bad news
- Sets expectations for schedule, performance, makes final decisions on risks, sets expectations for completion date
- Supplies package solution
- Change requests
- New company, little experience, fresh culture
- Insurance Services
- User: E
- Line Managers
- Financial Systems
- Insure: E
- New company, little experience, fresh culture
- Financial Systems
- Line Managers
- Change requests
- New company, little experience, fresh culture

Paul Taylor
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>The Project Champion kept the project focused, and although not part of the Steering Committee, was regularly kept up to date of progress by them. Clear information was also provided from the system by Project Services which also included the good and bad news about the project. There is evidence that the Project Champion was able to recognise issues with Project Politics and dismiss issues that cause problems. There is evidence that the system had the ability to influence the Project Champion where necessary. The reason why Project Services and Financial Systems were appointed was due to their experience, experience which the Project Champion recognised Insurance Services lacked. It was through Project Services past experiences and knowledge of package providers Financial Systems were appointed. <em>(Identified CSFs – Political Stability, Past Experience (Learning from))</em></td>
</tr>
<tr>
<td>Wider system – (places project system in context)</td>
<td>The Wider System understood the complexity of the project and the importance of it to Insurance Services. They allowed Project Services to govern the project, communicating both good and bad news to them. Where bad news was communicated, this could only be done with options for redress. Project Services through their role provided the communication plan, and also provided quality standards that included consideration for the values and beliefs of Insurance Services – e.g. by making sure Financial Systems treated them as an important client. <em>(Identified CSFs – Good communication, different viewpoints (appreciating), client involvement)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The Wider System set out high level guidance for objectives, performance, quality and communication and also made final decisions where necessary. Project Services transferred this into developing clearer objectives, producing communication and quality plans along with maintaining a flexible business plan reflecting the technology being implemented. They also managed the risks along with maintaining the schedule through their own quality assured tracking system. <em>(Identified CSFs – Good communication, detailed plan kept up to date, realistic objectives, strong business case, skilled staff)</em></td>
</tr>
<tr>
<td>Provides resources</td>
<td>The Wider System provided an adequate budget and</td>
</tr>
</tbody>
</table>
and legitimates area of operation | resources along with appropriate technology for the project. They also oversaw decisions and made sure skills and experience requirements were covered.

Project Services fully understood the underlying technology and were responsible for selecting Financial Systems – the consultant selected to implement the system.

*(Identified CSFs – Sufficient/well allocated resources, proven technology, adequate budget, skilled staff, good performance by suppliers/consultants).*

| Makes known expectations | The Wider System impressed the expectations for the schedule (including completion date), acceptable performance, along with making final decisions on risks.

Project Services interpreted these expectations and set success criteria and objectives in line with standards set in the quality plan. Communication within the project was expected to be open and honest which may have helped with resistance to change and managing consensus between project members.

*(Identified CSFs – Good communication, clear objectives, effective monitoring/control, risks managed)*

| Communication Channels | Project Services understood the complexity of the project and also due to the speed it was being run at, the need for good communication. They used their previous knowledge and experience to produce a communication plan. There is no or little evidence of communication issues within the project.

*(Identified CSFs – Good communication)*

| Supplies performance information | Performance information is provided by the Financial Systems Project Manager to the Programme Manager. This information is open and honest and contains both good and bad news.

All information is quality assured and checked against the schedule before being communicated elsewhere in the project. This is an accepted standard in the project.

People are kept up to date as part of the communication plan for the project. Where issues are communicated upwards, this can only happen with options for redress.

*(Identified CSFs – Good communication, effective monitoring/control)*

| Decision-making subsystem | Selected teams and members were very capable and experienced. All team members were adequately qualified and experience to be able to perform their jobs.

*(Identified CSFs – skilled staff, competent project manager, good leadership)*
| Subsystems that carry out transformations | The Financial Systems Project Manager was highly experienced with previous experience of implementing similar systems. There is no evidence of issues within the team or implementing the business plan. All work was quality assured by the Project Services Programme Manager. *(Identified CSFs – skilled/qualified team)* |
|性能监控子系统 | 所有性能均通过实现里程碑来衡量。虽然项目中使用了估计值，但它运行良好，并成为标准方法。交通灯被用来显示实现的百分比是否符合预期。这与项目运行的开放和诚实方法非常契合。财务系统也同意让项目服务部来质量保证性能，检查所声称的进度。 *(Identified CSFs – Detailed plan kept up to date, Competent Project Manager, effective monitoring/control)* |
| 界限（包括观点） | 有证据表明项目从多个角度考虑，特别是由于项目中发现的高水平经验。 *(Identified CSFs – Different viewpoints (appreciating))* |
| 项目总监 | 项目总监在保持项目专注和消除未好结果的干扰方面做得很好。这对项目来说至关重要，因为时间很短，需要一个系统来交付。 *(Identified CSFs – Project sponsor/champion)* |
| 变更代理人 | 变更的需要被接受，并且必须妥善管理，因为项目的复杂性质和必须在短时间内实施的时间表。新系统需要迅速采用，这得到了参与支持变更的高级利益相关者（包括项目总监和行经理）的要求确认。 |

| Change Agent | The need for change was accepted, and this had to be managed well due to the complex nature of the project and the short time scale it was to be implemented in. A new system needed to be rapidly adopted which was emphasised by the senior stakeholders involved in supporting the change – the Project Champion being the MD, and Line Managers signing off requirements. |
**Resources (Supplier System – System Selection)**

- **Wider System Boundary**
  - Consultation
  - Requirements and discussion to selection correct provider

**INSURANCE SERVICES MD**

- Provides adequate funding, appoints and provides project services with permission to manage project select experienced provider
- Using the experience of Project Services sets high level schedule, outlines deadline, expects open and honest working environment, keeps project focused dismissing distractions without a strong case
- Provides clear performance information – both good and bad news

**PACKAGE SELECTION SYSTEM**

- Requires Engineering Subsystem, Requirements Engineers and the Project Team carrying out requirements sweep and Tendering
- Performance-monitoring subsystem (including Package Selection Steering Committee)
- Provides open and honest performance information

**System Boundary**

- Sets objectives for Insurance Services including realistic requirements, to select proven technology, skills and experience, manages schedule
- Manages funds, provides necessary technology, implements communication and quality plans for Insurance Services, reiterates open and honest environment
- Feeds back information on requirements and provider tendering

**Senior Stakeholders**

- Values, beliefs
- Past experience, knowledge
- Minimal resistance to change

**Insurance Services**

- Financial Systems
- Users

**Project Services**

- Project Manager

**Project context, culture, motives**

- Consultation
- Not interviewed/no consultation

**Values, beliefs**

- Focus on quality assured information

**Resources (Supplier System – System Selection)**

- Uses requirements and discussion to selection correct provider
- Influences through the provision of quality assured information

**INSURANCE SERVICES MD**

- Provides open and honest performance information

**Wider System Boundary**

- Disturbs
- Influences through the provision of quality assured information

**Project context, culture, motives**

- Minimal resistance to change
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
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<tbody>
<tr>
<td>Environment</td>
<td>Insurance Services MD understood that they needed the required experience to select and implement a new system. They appointed Project Services to undertake the requirements and package selection stage of the project as they had the necessary experience to undertake this role. There wasn’t much need to persuade end-users to accept the change due to the need for a new system. The existing system was a labour intensive manual system. <em>(Identified CSFs – Past experience (learning from), environmental influences, organisational culture)</em></td>
</tr>
<tr>
<td>Wider system – (places project system in context)</td>
<td>The Wider System fully understood the need for the system. They appointed an experienced consultant in the form of Project Services. There is evidence to suggest they considered the values and beliefs of Insurance Services through understanding the need for change. <em>(Identified CSFs – Different viewpoints (appreciating), Organisation Culture)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>A flexible business plan was defined, along with high level but realistic objectives from a vision of what the replacement system should achieve. The schedule was realistic, but tight as a system had to be delivered. Project Services developed milestones and measures of performance through using their existing experience. They met their main requirement which was to select proven technology to meet the needs of Insurance Services. <em>(Identified CSFs – Clear realistic objectives, strong business case, detailed plan kept up to date)</em></td>
</tr>
<tr>
<td>Provides resources and legitimates area of operation</td>
<td>The Wider System provided adequate funding, appointing a consultant with the required skills and experience for the recruitment and selection phase of the project. They also provided Project Services with the permission to manage the selection phase of the project. Project Services selected a supplier to meet the needs of Insurance Services. There is evidence that processes changed to meet the package, as the selected solution was a complete solution that did not need to be configured. <em>(Identified CSFs – adequate budget, skilled staff, organisational adaptation)</em></td>
</tr>
<tr>
<td>Makes known expectations</td>
<td>The Wider System set a high level schedule with deadlines. They also used their position and authority to keep the project focussed.</td>
</tr>
<tr>
<td><strong>Communication Channels</strong></td>
<td>Project Services implements a communication and quality plan, making sure the project is run in the open and honest manner expected by the Project Champion. <em>(Identified CSFs – Effective monitoring/control, good leadership)</em></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Supplies performance information</strong></td>
<td>Project Services implemented a communication plan. There is no evidence of there being a problem with the plan. <em>(Identified CSFs – Good communication/feedback)</em></td>
</tr>
<tr>
<td><strong>Decision-making subsystem</strong></td>
<td>The Decision making system used its past experience and knowledge to select a provider who was capable of delivering a system to meet Insurance Services needs. Project Services selected a provider who they knew had a good track record, and also who they had a good working relationship with. They also wanted a provider that would treat Insurance Services as an Import Client. <em>(Identified CSFs – Skilled staff, Good leadership)</em></td>
</tr>
<tr>
<td><strong>Subsystems that carry out transformations</strong></td>
<td>Project Services provided the skills and resources to enable the requirements sweep to take place. Insurance Services made the necessary resource available to Project Services. Project Services brought with them the necessary experience to be able to select a provider to meet Insurance Services needs through the tendering process. <em>(Identified CSFs – Skilled staff, sound basis for project)</em></td>
</tr>
<tr>
<td><strong>Performance monitoring subsystem</strong></td>
<td>Performance Monitoring was carried out through Project Services experience, and also by the Package Selection Steering Committee. Insurance Services understood the complexity of the project, and therefore recruited Project Services who had the necessary skills and experience to guide them through the process. <em>(Identified CSFs – Competent Project Manager, effective monitoring/control)</em></td>
</tr>
<tr>
<td><strong>Boundaries (including viewpoints)</strong></td>
<td>The views of the end users were considered, although the requirements were signed off by their line managers. Whilst this did cause some resistance to change, this was only a small amount due to Insurance Services understanding the importance of the new system.</td>
</tr>
</tbody>
</table>
Insurance Services appointed Project Services to increase the viewpoints and experience on the project. *(Identified CSFs – Different viewpoints (appreciating))*

**Project Champion**
The Project Champion was responsible for recruiting Project Services and also keeping the project focused. They were able to use their authority to dismiss any distractions. *(Identified CSFs – Project sponsor/champion)*

**Change Agent**
The need for change was accepted particularly as the project had support from the MD who was the Project Champion. The Project was run in an open and honest way from the start making sure the whole organisation understood the need for the change.
Resources (Supplier System – System Implementation)

- INSURANCE SERVICES MD
  - Project Services Project Manager
    - Provides open and honest performance information
  - Wider System Boundary
    - Influences through the provision of quality assured information
- PACKAGE SELECTION SYSTEM
  - Project Services Project Manager
    - Provides adequate funding, appoints and provides project services with permission to manage project and appoint Financial Systems
    - Sets objectives for Insurance Services including realistic requirements manages risks
    - Managed funds, provides necessary technology, skills and experience, manages schedule, appoints Financial Systems
    - Implements communication and quality plans for Insurance Services, reiterates open and honest environment
    - Gathers information from multiple sources and quality assures against Quality Plan
    - Performance-monitoring subsystem (including Project Services Programme Manager)
      - Provides open and honest performance information
  - System Boundary
    - Package Implementation subsystem including the implementation project team carrying out transformations
- Values, beliefs
  - Past experience, knowledge
  - Minimal resistance to change
  - Project context, culture, motives
- Environment including the budget, existing system, risks and business plan
- Consultation
  - Keeps up to date with clear communications
  - Not interviewed/ no consultation
  - Helps requirements and discussion to selection correct provider
- System Boundary
- Key:
  - Task Link
  - Essential element to software system
  - Option link to software environment

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<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td><strong>Environment</strong></td>
<td>Project Services were brought in to fill the skills gaps that were required by Insurance Services in selecting and implementing a new system. They provided a clear communication plan which enabled the project to keep the environment up to date. Through their experience they enabled the appointment of an experienced and successful supplier, and also made sure the project was run in an open and honest way. This enabled the project to influence and persuade the users in accepting the change. <em>(Identified CSFs – Political stability, past experience (learning from), environmental influences)</em></td>
</tr>
<tr>
<td><strong>Wider system – (places project system in context)</strong></td>
<td>The Wider system understood the values and beliefs of Insurance Services through being the MD. They considered there wouldn’t be much resistance to change due to the culture being young and ‘fresh’ and understanding the need for the change. Communication on the project was open and honest and implemented through the plan that Project Services had developed. <em>(Identified CSFs – different viewpoints (appreciating), organisational culture, good communication/feedback)</em></td>
</tr>
<tr>
<td><strong>Formulates initial design/decides on transformations</strong></td>
<td>The business plan and objectives from the wider system were flexible and based on the vision of the MD. The experience of Project Services was used to help develop the milestones and measures of performance when resourcing the project. There is no evidence of the project being under resourced, suggesting that the project tracking and measures of performance were effective enough. <em>(Identified CSFs – clear realistic objectives, strong business case, skilled staff)</em></td>
</tr>
<tr>
<td><strong>Provides resources and legitimates area of operation</strong></td>
<td>Satisfactory resources were provided by the Wider System, including an adequate budget, and the appointment of Project Services to provide the required skills and experience to programme manage the project. The MD allowed Project Services the authority to appoint Financial Systems, a provider with the necessary skills and experience to implement the new system. Financial Systems provided an experienced project manager and resource to implement the system, along with providing the necessary skills to provide training for Insurance Services users and support staff.</td>
</tr>
</tbody>
</table>
| **Makes known expectations** | Insurance Services MD used the experience of Project Services to set a high level schedule outlining the deadlines and the expectation of an open and honest working environment. There is evidence of human issues being considered before technical, with the business being responsible for selecting the software, rather than the project being technology led. This also probably helped in gaining commitment from those impacted by the change.  
*Identified CSFs – Good leadership, effective monitoring/control, effective change management, different viewpoints)*  |
| **Communication Channels** | Communication channels were considered on the project with Project Services devising and implementing a communication plan along with quality standards. There is no evidence of communication being an issue on the project.  
*Identified CSFs – Good communication/feedback)*  |
| **Supplies performance information** | Performance information is open and honest and reflects the progress of the project from the point of view of milestones and guesstimates of work completed. Good news is communicated along with bad news throughout the project (bad news can only communicated with options for redress). This allows for the system and wider system to influence the environment where necessary through providing open, honest quality assured information. There is no evidence of resources being an issue on the project, as there is also no evidence of performance information being an issue.  
*Identified CSFs – Sufficient/well allocated resources, good communication/feedback, effective monitoring/control)*  |
| **Decision-making subsystem** | Project Services appointed Financial Systems as the package provider due to previous successes, working relationships and their knowledge and experience.  
*Identified CSFs – Skilled staff, good leadership)*  |
| **Subsystems that carry out transformations** | Financial Systems brought their experience and knowledge to the project. They provided the resource to implement the system along with a very experienced Project Manager who’d had previous implementation experience.  
*Identified CSFs – skilled staff)*  |
## Performance monitoring subsystem

Performance was monitored by Project Services, who quality assured the work of Financial Systems. There is no evidence of issues with performance monitoring, or though resources allocations on the project.  
*(Identified CSFs – detailed plan kept up to date, effective monitoring/control)*

## Boundaries (including viewpoints)

The project was managed in an open and honest way. The views of Insurance Services, Project Services and Financial Systems were considered through out the project. Insurance Services were made to feel they were an important client, and Project Services and Financial Systems had a good working relationship, which benefited from their previous experience of each other.  
*(Identified CSFs – Different viewpoints (appreciating), good communication/feedback)*

## Project Champion

The Project Champion was responsible for appointing Project Services, along with giving them the ability to use their knowledge and experience to appoint Financial Systems. This trust proved valuable to the success of the project.  
*(Identified CSFs – Project sponsor/champion)*

## Change Agent

The need for change was accepted and the necessary resources were made available by Insurance Services. This filtered down throughout the project with the appointment of Project Services and then Financial Systems. This enabled Insurance Services to successfully manage a complex change for the company by putting the right resources in place not only at the start, but also throughout the project.

### B.10 – Project A Synthesis – Recurring Themes using the project-specific FSM

**Communication** - A very strong point about the project was that good news was communicated along with bad. Where any information did happen to be bad, then options for redress were also provided.

The project was run in an open and honest way, with working relationships being very good. This in itself probably helped to reduce any chance of project politics occurring.

**Skills and Experience** - A key point about the project is the amount of experience. Project Services were recruited due to their knowledge of the Insurance System Provider market. They had a proven track record and a good base of knowledge and experience, which was demonstrated by their
recruitment of Financial Systems. Financial Systems had a proven track record with a lot of knowledge and experience. They provided their own highly experienced Project Manager who'd had previous implementation experience of the system being implemented. Having the right levels of experience also enabled those involved in the project to understand the expectations placed on them - particularly as Project Services had previously worked with Financial Systems

**Quality Assurance** - Project Services quality assured the project providing and implementing a Quality Plan. All of Financial Systems work was quality assured by Project Services who Programme Managed the Project. This was something that the Financial Systems Project Manager not only welcomed, but also requested.

**Change Management** - The need for change was fully understood by Insurance Services staff, and as such there was little resistance to change.

**Schedule and Budget** - Insurance Services provided an adequate budget for the project, and along with Project Services a realistic schedule was worked out for a project which was being run to a tight deadline.

**Senior Management Support** - The project benefited from the necessary Senior Management Support. This was mainly gained through the MD being the Project Champion and the main visionary for the project; they provided the necessary support keeping the project focussed. Any ‘distractions’ were dismissed/deferred unless a very good case was made for them.

The project had clear lines of authority, with contractors understanding the boundaries of their roles. In the end, final decision making was the responsibility of the Steering Committee.

**Requirements Management** - The requirements were realistic and well managed, and were worked from the businesses viewpoint.

Whilst line managers rather than users were used in the requirements sweep, human issues were still considered before technical issues, especially as a fully configured system was selected from a supplier with a proven track record.

**Business Plan** - The project was based on a clear, realistic but flexible business plan that was based around the software being selected

**Others** - The risks on the project were managed well although there wasn't much of a contingency budget for them. The project also benefited from clear criteria for success.
Appendix C – Project B Case Study – A Package Selection and Implementation Project for Tarka Insurance

C.1 – The Pre-analysis Case Study

Project B: Key –

Consultants (Managed Project) – T-BUS
Consultants (System Experts/Developers) - ORASQL
Insurance Company – Tarka Insurance
Parent Company – Land-Key Insurance Society
Package Provider – TFP

A Case Study of an IT System Implementation in Tarka Insurance, a small Insurance company

Introduction and Background

Project B is based around a package selection and implementation project undertaken by Tarka Insurance, a small insurance company that offers accidental insurance products direct to customers rather than via brokers. The project was part of Tarka’s 5 year plan to replace their present system. The idea was to enable rapid growth and the easier implementation of new products on the system, whilst still being able to maintain their present customer base. There was a business case in place, although this was put together after management had already decided they wanted the TFP system. The benefits stated were intangible leading to it being difficult to define them in monetary terms. The idea behind the project was to enable future potential business growth by implementing a system able to offer new products and be more flexible in the sales approach rather than deliver the growth itself.

The project was managed by T-BUS, a consultancy that already provided Tarka with their technical services, and was therefore already an integral part of Tarka’s IT support. T-BUS and Tarka chose an off-the-shelf solution from TFP, a policy administration system for general insurers. TFP have a global customer base of more than 50 insurance companies. The package was tailored and implemented by a separate firm of consultants, ORASQL, who were found through T-BUS.

Tarka’s existing system was an aging system with many work-a-rounds, although in many ways it did meet business needs so may not be fully considered a legacy system. The need to upgrade seemed obvious to those within the company – even if there was disagreement as to whether the system should be developed in-house, or be from an off-the-shelf solution.
Although the project started off well with high confidence and user support, problems started occurring reasonably early with first the announcement that Tarka’s MD was to move to another role within Land-Key Insurance, Tarka’s parent company. Next the original Project Champion, who was the main driving force for the replacement system project decided to leave Tarka for a more senior role outside of the company. This possibly reduced the clarity of the initial vision for the system, and was to eventually lead to a lot of resentment towards the original project champion, with many staff believing they’d forced Tarka along a path which wasn’t necessarily the best for the company. This along with strained relationships between T-BUS and both ORASQL and Tarka saw the project struggle to maintain any serious momentum in delivering a system that met the company’s needs.

As problems mounted up, including staff not being involved in trips to view the system at TFP, feelings between users that the project was being used by some to make a name for themselves and not for the benefit of Tarka, stalled implementation dates, unstable testing systems and holiday restrictions saw many within Tarka expecting, and in some cases wanting the project to fail. Eventually it seemed that Tarka was running out of time as budgetary issues became more prominent, and their parent company, Land-Key Insurance was expecting something to be delivered sooner rather than later.

Whilst the system was eventually delivered, although a lot later than expected, costing more than budgeted for, and probably with more work-arounds than the users were expecting, the general consensus within Tarka is that the project was a success as a system was delivered, but there was a lot to be learnt from the experience. As different user groups have their opinions over the system, there are still those who are bitter over their experiences from the project nine months after the system was finally implemented.

Accepting the Project was going ahead
The users thought the system implemented would be a full system without compromise, and without any workarounds. They were very accepting when the project started out, so much so they felt the system would solve all their problems - an example would be recruitment being put on hold as they felt the new system was going to be more efficient and make their jobs easier. But the users felt there wasn’t a lot of regard for them as the project progressed, particularly with the amount of changes taking place whilst training was in full flow. Whilst it has been accepted the trainers did a really good job, in the end what the users wanted was a system that worked, and then train them rather than being trained on an unstable system. At one point, training had to be cancelled through poor management of the training environment. Developers were found making uncontrolled changes to the environment whilst training was taking place. This resulted in a total rebuild of the training system. The many versions of the system being developed throughout training also made the users feel as if they were wasting their time by having to constantly relearn ways of using the system. Add to this the missed go live dates, and their acceptance of the system became less and less. The users also felt there was a divide between the project on one side of the building, and the users on the other.
The users knew that the old system needed to change, after all this was meant to be about process improvement. Through the TFP system some processes have improved, although a reasonable amount of users may argue that the system isn't as flexible as they were told it would be. From a management information point of view, it was expected that all figures would come from the same place - everything would come from the system. The old approach to management information had too many work-a-rounds, and the analysts struggled to get the figures to balance. The idea was the new system would solve these problems, but so far this hasn't been the case.

In the end, when the system was delivered, the users weren't that accepting of it. The original Project Champion had told them it was going to be 'brilliant and would solve all their problems'. Their expectations had been set, especially as they were losing faith with the present system. They felt it was out-dated and it had too many workarounds. They are now coming to terms with the TFP system as fixes steadily get implemented resolving some of their issues. People new to the system and the younger users have been more comfortable with TFP. The real problems have occurred with users who have been with Tarka for a longer amount of time, those who are still clinging to the idea of the old system. Whilst there were sessions to help these users accept the changes, they've been all but forgotten, particularly after the many missed implementation dates, and the generally poor implementation of the replacement system.

With any change, there is always some form of resistance. The training team worked at engaging the users through competitions and incentives to reduce the resistance. When questioned few users remember this taking place in order to encourage their acceptance of the change. Whilst training was designed to be fun, training also created a realisation in those who didn't want the change that it was taking place. For these people, heated discussions occurred in training sessions as they felt they were unable to learn the new system. One user suggested that 'the people around me are very scared of the new system as 50% of the workforce is too old'. Users also suggested they were too scared to show any negativity for fear of being told off.

Tarka's laid back culture also meant they didn't push the contractors enough. This allowed them to be bullied into changes by contractors that weren't necessarily right for the business, but did make it cheaper and easier for the contractors. It was also notable that the contractors weren't happy with the culture and approach of Tarka, deciding the pace of Tarka staff was slow and too comfortable. Contractors weren't sympathetic and as such avoided involving Tarka employees as much as possible to stop slowing them down when faced with tight deadlines. Whilst the users felt they weren't considered, the Project Team felt they considered them too much, and this was a main reason for the project not being dynamic enough. They thought too much about the users and not enough about delivering a capable system.

Management of Change was considered outside of the scope for the project. Possibly the main reason for this was due to T-BUS providing a 'grandiose quote' for change management in the first place. For this reason Tarka chose
not to accept T-BUS’s quote, with change management never really being properly addressed.

The Requirements
The users felt they communicated clearly what they wanted, but also felt this went in one ear of the business reps, and out the other. They felt the people chosen as business representatives for the requirements weren’t exactly the right people as they didn’t fully know all the areas of the business. A failing of the requirements analysis was that business reps who didn’t understand project management techniques and methodologies didn’t fully understand what the requirements were actually going to be used for. With more time given to the task, those with less experience could have had the process properly explained to them to enable them to fully understand the task at hand.

The proposed timescale for the project caused a lot of problems for the requirements. There wasn’t enough time to perform a proper requirements analysis as the project deadline wasn’t based on anything more than a throw away comment in June 2007 by the then Project Champion. The plan was to do the requirements at a high level first, and then flesh them out later. By the time the first payment was due, it looked like it was going to cost more than expected to improve the requirements, so parts of the process were missed out, such as validating the requirements. So the unnecessary high-level requirements were removed at the start, and then never revisited. Add to this the fact that there was no requirements management in place, or a development methodology it’s little wonder that users feel that the requirements are poor when they look back at them.

Not only did the poor requirements cause problems in development, but they also made testing difficult. With a lack of detail, Tarka testers found themselves using knowledge of the previous system to enable them to test. This caused issues between the testers and the developers as to who was right when bugs were found – again checking these against the high level requirements was of no help at all. The whole requirements process is regarded as not being managed well, with some requirements being ignored, and instances of users complaining that the analysts never spoke to them even though they worked in a key role. Whilst the requirements analysis was taking place, and to a certain extent development of the system, the old system was still being maintained so that normal business could carry on. It is not known by the users whether the requirements from maintaining the existing system were ever captured in the requirements analysis. Some of these changes would have a major impact on the TFP development, as for example they were to implement the requirements of a new major list-holder.

It is felt since the basic requirements were documented, the requirements themselves evolved, but these changes were never properly documented. Again it was felt the whole process was managed poorly. It is felt that at a high level the objectives were clear and realistic. A major problem with them was that due to their high level, they later proved to be more dubious when used to assess what was being delivered by T-BUS. They were also not revisited later in the project as things changed.
The planning, monitoring and control of the project

The planning, monitoring and control of the project was at best considered to be poor. From the original deadline, which it was announced would be missed very close to what would have been the go-live date, a considerable amount of work took place afterwards. The users questioned whether it was believed this and the other delivery dates that were missed were ever feasible, and started to not believe anything positive that was being said to them about the project. One particular area of the schedule that came under constant pressure was testing. As delivery deadlines approached the testers would be pressured to squeeze their tests to fit into the ever reducing time being made available to them in the plan. The constant re-writing of test plans became a demoralising aspect of the tester’s role.

Whilst it was accepted that there was a plan, it was also accepted by those working on the project that it wasn’t planned very well. It was felt two aspects were impacting on the plan, the ever failing relationship between Tarka and T-BUS, and the fact the contract was fixed price with penalties. So T-BUS faced being fined if they failed to deliver. By the end of the project, the project team paid no attention to the project plan, they simply got on with their work – as one member of the project said ‘the plan must be right, not reality’.

The users began to feel there was something wrong as more and more Senior Managers were being brought in by T-BUS, and at the same time Tarka began employing people to sit on the project board to take a more assertive stance and properly monitor the project. It was fully accepted by those working on the project that the schedule wasn’t realistic, although due to the politics surrounding Tarka and T-BUS no one would openly comment, even when planned work was reduced to unrealistic levels as unachievable deadlines approached. Many felt the fixed price contract was the main cause of the un-realistic plan, along with the fact the original planned delivery date was said to have come from a throw away comment from the original Project Champion.

When performance was communicated as part of the weekly project communication, team members felt there was a lot of spin added to what was being said. In many cases what team members had fed back would become far more positive when mentioned at project meetings. This made people think that if what they’d said had been changed, then everything else that was being said was probably not the truth as well. It was also clear within the project team that major defects were not being highlighted, and if they were they were being sold as change requests so as not to impact T-BUS’s contract. Many project team members felt T-BUS had their own agenda, which mainly seemed to be tailored to contractual politics, and making sure they didn’t lose out financially.

There were also issues with the project structure which impacted on the monitoring and control of the project. Whilst T-BUS was only controlling a small project, although large by Tarka’s standards, there were 11 work streams, in many cases only containing a few people. What really only needed to be a simple project was being made more complicated than
necessary. In the end project performance wasn’t clear, even to those working on the project. Outside of the project, the business felt they knew even less, which again was making them feel uneasy about the eventual implementation of TFP. When they did get updated they felt they couldn’t fully work out what was happening.

Many in the business felt that the T-BUS project manager was more concerned with himself than Tarka. Those on the project began to question the reasoning behind the weekly communication meeting. Whilst it started with a purpose, it began to lose its impact as the project progressed - particularly as it was becoming clear that what was being reported was different from the progress project team members were feeding back. Whilst people believed this may have been a ploy to keep things positive, they also felt things should have been realistic as it was plainly obvious the project was stuttering. This stopped people believing what was being said.

Tarka bought in their own ‘project management assurance’ resource to help understand the issues occurring within the project including the project management approach, and how things could be improved looking forward. The assessment was to be objective, and as such would not appoint blame but would look to support delivery of the replacement system. From Tarka’s point of view they felt the project had a strong governance framework, including a project board which included members from Land-Key, Tarka and T-BUS, and also an internal governance body which included the Tarka Board-level sponsor for the project. The main issues were that bad news wasn’t always communicated to the project board and the fact T-BUS hid anything they thought would impact their contract with Tarka. With T-BUS managing the project, and the contract being fixed price, essentially things became very political with strained relationships.

Management of the Project
The second Project Champion made decisions with the interest of Tarka at heart, whilst it seemed the Project Manager was just concerned with getting a system in as quickly as possible. It became apparent that T-BUS would refute defects and issues due to the light weight requirements. This enabled them to deliver the system even quicker without it costing them more through the fixed price contract. The business felt that the original Project Champion who decided the need for the new system realised that they had made a mistake. Therefore they left not only the project, but Tarka as they thought the project was going to fail – leaving before they got the blame. The replacement Project Champion was considered to have done a good job by the business, especially considering what they took on.

It was felt by the project team that the Project Manager made it more complicated by having so many work-streams on the project. Whilst they’d had experience of managing much larger projects, they seemingly couldn’t adjust their style to manage something far smaller. Coupled with this, it was also felt by the business that the Project Manager couldn't handle decisions and responsibilities well either, and that they also struggled with people skills. On more than one occasions project team members remarked how they’d
been asked to do something without consideration of time or skill levels, let alone their feelings. They felt that the Project Manager was using their power too much, and would only acknowledge them when they wanted something - otherwise they'd be walked straight past in the corridor without any acknowledgement.

People within the business felt it was clear that the replacement Project Champion and the Project Manager did not get on, although the Project Champion was good at hiding this fact. Members of Tarka have also remarked how they felt it would have been better to have used one of their own Project Managers rather than one from T-BUS, who undoubtedly had their own agenda which wasn't to the benefit of Tarka. Another point the users complained about, particularly once training first began, is that the system clearly wasn't the right system for Tarka to buy, particularly as it was then configured to Tarka's needs by not one, but two outsourced companies - T-BUS managing the project, and ORASQL configuring TFP.

Whilst the Project Manager did come across as being experienced, many of the users felt this was a façade, and that the Project Manager wasn't experienced at all. Whilst the Project Manager was experienced with much larger projects than Tarka's, many in the business felt the project was far bigger than anything they'd tried to manage before. Both project team members and users outside of the project felt there were few, if any Project Management methods, tools and techniques used within the project. One member of the project team said they'd heard the Project Manager say they wouldn't be using Prince2, even though this was a project standard for Tarka. Any plans that had been mentioned early on in the project seemed not to be adhered to, eventually disappearing without a trace. Later on a project dash board was introduced as a tool to help explain the position of the project, but feelings as to the ability of this were mixed within the business.

Tarka did have a business plan in place, which was their 5 year plan. The system replacement was part of this, and was a key factor in their want to enable rapid growth. At no point throughout the project was anything ever validated against this, even when Tarka's parent company, Land-Key chose to relocate Tarka's Managing Director to another part of the company, and also when the original Project Champion left. Whilst there was a risk and issues log for the project, it was felt the life cycle wasn't proactively managed, and more poorly, no tools were used to help manage them. They were simply kept in an excel spreadsheet. It did become apparent that towards the end of the project, T-BUS staff became more risk based in their approach as they tried to clear down all risks and issues associated with the project that may have impacted the contract.

The T-BUS Project Manager did not manage the issues and risks well throughout the project. This was most likely due to political reasons that they didn't want to admit failings that would impact their company's revenue stream. When relations reached a particularly heated point, it became obvious that Tarka were not being given the full picture and that the project was not being managed well. Tarka brought in a 'Project Management Assurance' role
to keep track of and challenge everything that the T-BUS Project Manager did. From this point risk management improved significantly - although it was suggest it felt like a bureaucratic exercise towards the end of the project.

Whilst there was a task at the start of the project to go through lessons learnt, it is not clear what detail this went into, and what was got out of it. It is clear from those involved within the business that T-BUS came in with their own ideas on how to manage projects, and that they didn't really want to understand the culture of the company they were dealing with. It is also clear that members of Tarka allowed T-BUS a lot more power than necessary as they felt they knew best, so left them to get on with managing the project – ‘after all they’re the experts’.

The project itself was very political. Whilst the contract between Tarka and T-BUS was fixed price, ORASQL managed to negotiate a Time and Materials contract with T-BUS. When the timescales slipped and the costs escalated the Project Manager became under pressure from T-BUS to reduce costs. T-BUS tried to get out of obligations set in their contract, trying to pass the blame and extra costs on to Tarka. At one stage Tarka’s project board were planning to remove T-BUS from their project management duties due to their lack of confidence in them.

Tarka had no previous experience of implementing an off-the-shelf system, and neither did T-BUS. They were led to believe that TFP was a package, when in fact it is a framework that required a lot of configuration. This led to Tarka not being able to challenge any of the estimates as they had no relevant previous experience. Interestingly, a point made from one of the work stream leaders is that Tarka forgot what they did well on past projects rather than trying to learn from previous mistakes.

From Tarka’s point of view they did have full support of a Project Champion within the project team who enabled rapid decision making without recourse to the Board unless approval was needed. Also, Director level sponsorship made it easier to manage the expectations of the Board when timescales and budgets slipped.

**People involved in the Project**

ORASQL came across as if they were implementation experts, although some Tarka staff felt they weren't as approachable as they should have been. They certainly had their own way of doing things, and at times it came over as if they knew best. It also seemed as if they were TFP rather than ORASQL. When T-BUS was added to the mix, it felt as if Tarka were powerless in any decisions that were being made. With T-BUS, it felt as if Tarka wasn't their only project, as key Project Team members would disappear and then suddenly reappear again. This made it feel as if Tarka were buying services for certain parts of the week. Those working on the project team felt that the ORASQL employees were 100% committed to getting the system delivered, although they were being hindered by project politics, and were banned from doing any overtime. This was due to the conflicts of T-BUS having a fixed price contract with Tarka, and Time and Material contract with ORASQL. It was also felt within the project team that the T-BUS commitment was...
questionable, and they were not that worried about getting what they were doing right.

The opinion of whether Tarka employees were committed to the project is very split within the company. There are those that felt too many key members left for jobs elsewhere within Land-Key. At the same time, those that stayed around stuck together to try and get the system delivered because it would be Tarka's system eventually. The problem of leaving the project was not only a Tarka employee issue, but also a T-BUS issue. Project Team members seemed able to leave the project without any procedure for making sure their work was complete or handed over adequately. This came down to the capability of the work-stream leader who was losing the member to make sure it was dealt with rather than being a project standard approach. T-BUS's approach of trying to use a transient workforce to enable them to achieve a fixed price contract saw a lot of knowledge disappear out the door regularly throughout the project.

There was a lack of consistency through the changes in Senior Stakeholder roles. As previously mentioned, with the changes to Tarka's Managing Director and Project Champion, two new people come in to take over what someone else had started. There were cases where a change in personnel wasn't a bad thing. The last testing team leader (a role which changed the most on the project) made a very positive impact to testing, and in many ways got this area back on track after some poor initial management.

It was also felt that actual implementation preparation didn't improve with all the extra chances gained through the missed implementation date. The business understood that there was a lot of politics surrounding the implementation date although it didn't make it any easier for them to prepare for something which they weren't sure was actually going to be implemented. Also, choosing Christmas Week as the implementation date was not a popular choice, with many people around the business being asked to cancel holiday plans and to be in work not only for the implementation date, but also Christmas Week. Many members of staff had already missed out on holiday through previous planned implementation dates being cancelled, including Easter.

One thing that those involved in the implementation agree on is that there weren't enough experts and qualified staff involved in the project. Those that had the knowledge were too stretched to assist other project team members, and also share that knowledge. Tarka's testers felt they had little support throughout the project and on the final implementation of the system. In the end rather than get the right people into the right positions, it was felt the project got the best they could into positions.

There were issues with people going off the project with stress and illness. This caused problems for the implementation, as people were put into situations on implementation day that they felt they weren't qualified to do, let alone having experience of. In particular they found themselves dealing with people who were having difficulties and breaking down under the pressure. In
the end, the user’s attitude became ‘if it comes in, it comes in’. Tarka employees enthusiasm waned as the project went on. It became apparent they didn’t fully know what was happening. They felt better communication and being able to tell them when it was actually going to be delivered would have made them a lot happier. It was clear that the project lacked proper management and control.

As Tarka didn’t have staff skilled in developing the TFP system, they relied on knowledge transfer to enable them to become self-sufficient by the end of the project. As the project missed deadlines, knowledge share and mentoring by the experts stopped happening due to the mounting pressure on them to get work done. As the project progressed it also became clear that some of the T-BUS staff also didn’t have sufficient experience to do the job they’d been allocated. A major issue with developing a TFP system is that it is a niche skill set with few providers supplying capable resources. As the project progressed, and the fact a functional spec was never properly agreed, a lot of change requests emerged which pushed the already small group of appropriately skilled people beyond their limits.

The budget for the project wasn’t adequate, although this could be put down to a lack of experience for the type of project Tarka and T-BUS were undertaking. There was also no contingency built into the budget, so whenever more money was needed, however small, the Tarka Board had to be approached. There was no change budget or contingency within the project. When timescales and budget got tight and defects were raised, the Project Manager tried very hard to have the defects defined as changes so that he didn’t have to deliver them within his project scope. This made it very difficult to manage changes and defects as every one became a battle between T-BUS and Tarka.

As part of the contract between Tarka and T-BUS, T-BUS was responsible for ensuring that sufficient resource was allocated to the project from themselves and their partners. Along with this, Tarka dedicated a large number of its own resources to various aspects of the project. There were many issues with T-BUS’s resource allocation, for example, testing was over resourced at the start of the project, and then lacked resource when it was needed.

TFP is regarded as being a well-proven tool in the insurance industry. Whilst there are TFP implementations operating within the UK, Tarka was TFP’s first UK customer to use their UK country layer. Tarka were led to believe it was going to be a case of pulling together pre-existing functionality into a coherent whole. In reality it was developed from scratch, and Tarka suffered from time and financial consequences of the delay in delivery and of the errors that it had within it. Added to this, Tarka were extremely dependent on T-BUS to deliver the project. T-BUS was using ORASQL, specialist subcontractors to develop TFP. Unfortunately relations between T-BUS and ORASQL were often fraught. On a number of occasions Tarka had to resort to the contract to determine whether what their suppliers were in fact delivering what they expected. In the case of TFP their contract was not strong enough and they had no recourse to TFP when they delivered the UK country layer late.
Communication
There were some positives from the project communication wise, the Project Champion and Tarka's business work-stream leader worked hard to keep the end users as up to date as they could. Communication struggled with getting clear messages out to the business about implementation dates. In some cases users were shocked when implementation dates were cancelled. More interestingly, whilst it is felt by both project team members and user's that there was no communication plan on the project; Tarka had recently gone through a business change project with one of the deliverables being a communication strategy. This was to help 'improve the strength and power of messages and keep staff informed'.

The project itself had reasonable communication within each of the work-streams, but tended not to communicate well between these work-streams. The reasons for this were not fully known e.g. was it work-stream leaders not communicating to each other and the Project Manager, or again simply the result of having no plan in place.

At the other end of the scale, some said there was too much communication, for example too many people attending meetings that they didn't need to go to, too many emails, news letters and even 'coffee and chat' meetings. This ended up with people 'cherry picking' the information, leading to the risk important detail could be missed. A key factor may well have been that a lot of attempts were made to get the message over, but no one ever asked why something didn't work or even considered that to get it right for everyone is difficult. A good mix of styles needed to be available to people allowing them to pull the information they required from what's available, rather than have it pushed at them all at once.

In the end, whilst Tarka have a communication strategy in place, the actual approach used by people on the project was poor, having no guidelines, tracking or quality management of their project information. In one example, a member of the project team managed to accidentally copy a directory with the main project information contained within, resulting in multiple versions of the same documents being used by the project. No one actually knew which version was the correct one.

The users felt that the Managing Director didn't like communicating bad news. It wasn't that they wanted to be misleading; they simply wanted to emphasise the positives. This led to the users feeling surprised when the deadlines were missed as they felt there was nothing wrong until just before the system was meant to be delivered. This annoyed some Tarka employees as they'd been denied holiday due to the importance of the project, only to see the system not being implemented at that date. Within the project team it was felt there were a few instances where bad news was glossed over to keep staff motivated rather than informed. For example, there were certain aspects of the dry run weeks that project team members felt weren't being communicated as they didn't go as expected. Project Team members from the business work-streams were also told that they should not communicate bad news back to the users, and that anything they did say should be said 'with a smile on their face'. One team member suggested they’d been ‘told off’ early
on in the project for passing on bad news, so made sure they never said anything negative again for the rest of the project.

Some project team members felt that there weren’t enough Tarka only meetings, where team members could be a bit more open about what was going on. Having mixed meetings with Tarka, T-BUS and ORASQL meant people hid their true feelings, and therefore didn’t communicate when things were going awry. Its felt this prevented issues from getting resolved soon enough. In the end, a common thought of both the project team and users was that they’d have appreciated more honesty, for example so they knew when something wasn’t working, or an implementation date was going to be missed. The Project Champion made sure they sat close to the Project Manager to make sure they knew what was going on. Due to the highly politicised nature of the project, Tarka’s Senior Stakeholders felt they were unable to show their hand for fear that they may provide T-BUS with the opportunity to exploit positions and blame Tarka for the delays.

**Implementing the Project**

From the users point of view they suggest they have learnt through a lot of trial and error, as although they felt training was well delivered, they blame unstable and constantly changing versions of the system hindered their experiences. Staff have adapted to the system, and have applied workarounds to enable them to do their jobs properly, even though it was suggested the new system would contain no workarounds. Another issue the users mention is they didn’t understand why a system was brought that was designed for insurance such as motor, which bears no resemblance to Tarka’s insurance model.

Both Tarka and T-BUS significantly underestimated the amount of effort required to configure the system. Whilst there is a lot of functionality included with the TFP package, such as adjusting clients Date of Birth, or updating a Name, processes such as sales are left up to the client to configure to their business needs. The users felt it was expected they would adapt to the new system, although a lot more customisation has crept in than expected. There are still areas which the users find confusing and overly complicated, such as finding information from accounting. For the development and support of the system, there has been no real training investment and on the job learning and knowledge share hasn’t been as effective as expected.

The users acknowledge that the trainers had a difficult job. They spent a lot of time working out how things worked themselves so they could pass the knowledge on to the users. This was made even more difficult with the constant updates and changes to the way the system worked. For example the business process package was introduced only days before go live, so some users weren’t fully trained in this area. The trainers also found themselves trying to motivate and keep users on board, which was made very difficult by the missed go live dates. This created problems with motivation, as people were getting annoyed not only with the changes to the way the system would work, but also not knowing when they’d use what they’d learnt.
The trainers had never undertaken such a massive training task and as such weren't experienced with systems training. One benefit that did come out of the stalled delivery dates is that it enabled the trainers to learn more about the system. The trainers also found that whilst they were looking at the system, they were also testing the system. They never really got to work on a stable release. As they wrote their training plans, they were also finding errors within the system and were able to raise them as defects - in some cases this happened whilst training took place, much to the annoyance of the users.

**Overall view of the project**

One thing that people from the project team and business users agreed on was that they didn't think CSFs were used as part of the project. It was felt the measures of success and failure were quite simple and would have been things like ‘enabling the users to use the system from day one’, or as one user put it, ‘the amount of Critical Defects left outstanding’ when the project finished - in that how much T-BUS would get paid. In the end it was felt that T-BUS were just desperate to get the system delivered and get out of Tarka, leaving someone else to pick up the pieces.

As the system was delivered, the users and project team felt there was a certain element of success in the project. Most people said that it didn't deliver to schedule, scope or budget, but did feel there was more to it than that. The users felt that if the system was measured against what they expected, then it would be regarded a failure, particularly as there are still work-a-rounds in place. The objective of replacing the system was met, although probably not as close as it should have been to everyone's expectations. The project was considered a badly managed, badly executed success by chance. There were no major failures or catastrophes, although there are a lot of manual work-a-rounds. When it did go live, the users could process business. One user called it a success as ‘we've managed to change a motor insurance product into a system we can do business on. If we were buying a good general insurance system and ended up with this, then it'd be a failure’.

Tarka didn't define any CSF's for the project and this is something that isn't enforced through their project management guidelines. With hindsight Tarka believe they were very naïve in not noticing the issues earlier, such as the conflict of interest the T-BUS project manager was facing. There is the possibility that T-BUS were under pressure from their own organisation to put a positive spin on things rather than revealing to Tarka the real state of the project. It wasn't until quite late in the project that Tarka realised how wrong things were going that they brought in their project management assurance role.

Tarka now realise that they should have engaged someone with TFP implementation experience. Both Tarka and T-BUS believed that the TFP system was just a package, and therefore attempted the project as such, with package implementation experience. Not realising that TFP was in fact a framework that needed configuring meant that many of the planning and scheduling assumptions were incorrect. Matters were made worse with TFP not being as honest as they should with the development of their UK Country
layer. Tarka also admit they didn’t spend enough time fleshing out their business requirements possibly due to their incorrect assumptions made about the TFP package. When things started to go wrong the requirements only caused more issues through their ambiguous nature - as T-BUS and Tarka could not agree whether something was a defect or a change.

### Table C.1 – CSFs associated with Project B

<table>
<thead>
<tr>
<th>CSF</th>
<th>Used in Project</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Realistic Objectives</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Senior Management Support</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Strong business case/ Sound basis for project</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Effective monitoring/control</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Realistic Schedule</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Project reviews (the monitoring and control against objectives)</td>
<td>No</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Skilled/suitably qualified staff</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Competent Project Manager</td>
<td>No</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Communication and Feedback</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Political Stability</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Past Experience</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Organisation culture and structure</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Adequate Budget</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Sufficient and well allocated resources</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Training Provision</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Proven/Familiar Technology</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
<tr>
<td>Good Leadership</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Good performance by suppliers/contractors/consultants</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Risks are addressed, assessed and managed</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>User Involvement</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Appreciating the different viewpoints of stakeholders</td>
<td>Yes</td>
<td>Very Important</td>
</tr>
<tr>
<td>Project sponsor/champion</td>
<td>No</td>
<td>Very Important</td>
</tr>
<tr>
<td>Effective change management</td>
<td>Yes</td>
<td>Quite Important</td>
</tr>
</tbody>
</table>

### CSFs associated with Project C

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C.2 – The Pre-analysis Rich Picture
C.3 – The Pre-analysis Spray Diagrams

Background to the Project
Accepting the Project was going ahead

- Reduced System Capability
- Not always right for business
- Felt users involved too much
- Financially

- Too many missed dates
- System
- Not as flexible as suggested
- Didn’t solve all problems
- Reduced Acceptance
- Needed upgrading
- Slow

- Not forceful
- Disliked Tarka Culture
- Disliked by older users
- Too many system changes
- Unstable system
- Training Cancelled
- Further resistance
- Resistance to change

- Resistance to change
- Engaged users
- Further training sessions
- Incentives

- Split opinions
- Slowly being fixed
- Plenty of work-arounds
- More efficient
- Recruitments Stopped
- Easier Job
- No work-arounds
- No compromises
- More efficient

- T-BUS quote too expensive
- Management of Change
- Outside Project scope
- Needed upgrading
- Re-learning same thing

- Process Improvement
- Some not improved
- Some improved

- Not forceful
- Disliked Tarka Culture
- Disliked by older users
- Too many system changes
- Unstable system
- Training Cancelled
- Further resistance
- Resistance to change

- Resistance to change
- Engaged users
- Further training sessions
- Incentives

- Resistance to change
- Engaged users
- Further training sessions
- Incentives
The Requirements

- Not enough time
- The Requirements Management
- Communication what wanted
- Business Reps didn’t listen
- Requirements not being picked up
- Never Validated
- Not well managed
- Changes not being picked up
- Existing System
- Flesh out later
- High Level only
- Never Evolved
- Parts of process missed out
- Key users missed out
- Proper analysis not done
- Cost too much to improve
- Could’t assess delivered project
- Dubious later
- Project Deadline too soon
- Not enough detail for testing
- Used previous system knowledge to test
- Defects – fixing and testing
- Who was right
- Caused Problems in Testing
- Caused Problems in Development
- Never Evolved
- Clear at start
- Flesh out later
- Parts of process missed out
- Never Validated
- Key users missed out
- Business Reps didn’t listen
- Requirements not being picked up
- Deadlines too soon
- Needed more time to understand process
- Didn’t understand point of Requirements in Project
- Not the right people chosen
- Felt communicated what wanted
- Business Reps didn’t listen
- Chosen not the right people
- Didn’t understand point of Requirements in Project
- Need more time to understand process
- High Level only
- Never Evolved
- Parts of process missed out
- Key users missed out
- Proper analysis not done
- Cost too much to improve
- Could’t assess delivered project
- Dubious later
- Project Deadline too soon
- Not enough detail for testing
- Used previous system knowledge to test
- Defects – fixing and testing
- Who was right
- Caused Problems in Testing
- Caused Problems in Development
- Never Evolved
- Clear at start
- Flesh out later
- Parts of process missed out
- Never Validated
- Key users missed out
- Business Reps didn’t listen
- Requirements not being picked up
- Deadlines too soon
- Needed more time to understand process
- Didn’t understand point of Requirements in Project
- Not the right people chosen
- Felt communicated what wanted
- Business Reps didn’t listen
- Chosen not the right people
- Didn’t understand point of Requirements in Project
- Need more time to understand process
Management of the Project

Paul Taylor

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Communication

- Too many workstreams
- Never questioned why not working
- Over attending meetings
- Communication good within them
- Good dates
- Poor communication across streams
- Workstreams
- Bad news not communicated
- Enthusiasm for positives
- User feedback
- Tacked on complexity
- Implementation
- Too much
-实施了的坏消息未传达
- Results
- Team members told not to communicate bad news
- Surprised users when things went wrong
- Positively biased until cancellation
- Annoyed those who didn’t have cancelled holiday
- Newsletters
- Emails
- Cherry picked information
- Missed detail
- Needed more Tarka only meetings
- Implement dates
- Users shocked at cancellations
- Positive vibes till cancellation
- Over attending meetings
- Never questioned why not working
- Over attending meetings
- Communication good within them
- Communication Plan
- Project and Users felt wasn’t one
- Tarka had communication strategy in place
- Told off if did
- Emphasising positives
- Not applied to project
- Bad news not communicated
- Business change deliverable
- Strength and power of message
- Meant to provide
- Keep staff informed
Implementing the Project

- Users Experience
  - Adapted to new system
  - More work-arounds than expected
  - Still don't understand why system bought
  - Learnt a lot from Trial and Error

- Training
  - Well delivered
  - Difficult job for trainers
  - Found it hard to re-motivate the users
  - Missed go-live dates – demotivated users

- Development and Support
  - Tarka and T-BUS underestimated required effort
  - Having more customisation than expected
  - More confusing and complicated areas

- Accounting information
  - More work-arounds than expected

- Sales Processes
  - Client name and address changes
  - More customisation than expected

- Sales
  - No real training investment
  - Not been effective enough

- Knowledge to stretched to provide

- No real training investment

- Knowledge to stretched to provide

- New functionality introduced days before implementation

- Re-learning what already learnt

- Stalled deliveries

- Trainers not experienced

- On the job learning
  - Made easier by stalled deliveries
  - Found it hard to re-motivate the users

- Difficult job for trainers

- Training

- Unstable system
  - Constantly changing versions

- Developers
  - New functionality introduced days before implementation

- Trainers ended up testing system in training

- No real training investment

- Knowledge to stretched to provide

- On the job learning

- Made easier by stalled deliveries

- Found it hard to re-motivate the users

- Difficult job for trainers

- Training
Overview of the Project

No major catastrophes

When live, could process business

Tarka Naive in not noticing issues earlier

Badly managed, badly executed success

Should have engaged someone with TFP experience

T-FP not honest about development of UK layer

Work-arounds

Regarded a failure

T-BUS conflict of interest

T-BUS to make profit

Deliver system to Tarka

A system was delivered

Certain element of success

Although, if against expectations

Critical Defects left outstanding

Enable users to use system from day one

Critical Success Factors

Measures of success more simple

Not used

Overall view of the project

T-BUS

Desperate to leave Tarka

Get system delivered

Leave someone else to pick up pieces

Didn't deliver to Tarka

Scope

Budget

Schedule

Didn't deliver to Tarka

Get system delivered

Leave someone else to pick up pieces

Didn't deliver to Tarka

Get system delivered

Leave someone else to pick up pieces

A system was delivered

Certain element of success

Although, if against expectations

Critical Defects left outstanding

Enable users to use system from day one

Critical Success Factors

Measures of success more simple

Not used
C.4 – Failure and Systems Identification

See Appendix D for Failure and Systems Identification. Failures have been identified from Project B, the Tarka Project – a project considered in many ways a failure. The identified failures and then selected systems from the Tarka Project will be used as a route to comparison between Project A and Project B.

Project A is based around a package selection and implementation project undertaken by Insurance Services, a relatively new Insurance company. The project was intended to take place over a short time period, with 75% of the solution implemented within 12 months from the start. The intention was to implement 80% of the required solution as a first phase, with the rest of the functionality deferred to later phases. But time ran out, so additional functionality was also deferred. The project itself was managed by Project Services, a consultancy that chose an off-the-shelf package solution from Financial Systems, a provider with a proven track record within the insurance industry – some fifteen years insurance industry experience with a global customer base. Insurance Services were a new company operating through manual systems which held their risk portfolio. The reason for the implementation was to allow Insurance Services to launch products that could be sold and administered by brokers without referring to underwriters.

The identified failures and systems will be used to test the validity of the selected FSMs as frameworks for investigating factors critical to success in implemented IT projects.
C.5 – Project B System Maps

Clear and Realistic Objectives – Requirements Engineering System
Performance Monitoring – Project Monitoring and Control System
Paul Taylor

Decision Making – Project Management System
Paul Taylor
C.6 – Project B Influence Diagrams

Clear and Realistic Objectives (Requirements Engineering System)
Performance Monitoring (Project Monitoring and Control System)
Decision Making (Project Management System)
The Environment (Project Governance System)
C.7 – Project B – Comparison – The FSM

**Clear and Realistic Objectives (Requirements Engineering System)**
(NB – CSFs highlighted in red are because the project failed to acknowledge them)

<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>There is the possibility that the wider system and system did not consider the environmental influences adequately. There is clear evidence that both T-BUS and Tarka selected a different sort of system to what they thought they were getting and also that both did not have the experience or knowledge required to implement the selected system. There is evidence that Tarka did not establish strong Project Governance for the project from the outset. This is possibly caused by a trusting approach in that it was felt T-BUS knew what they were doing. The Environment did not fully understand the complexity of the situation until much later in the project. It was agreed early on that the requirements could be done at a high level, and that they could be bulked out later on (this did not happen for cost and time reasons). The environment did try to influence the project from an early stage with Land-Key Insurance establishing themselves as part of the Project Board, although it is not clear how much support and influence they provided throughout the project. Whilst the project started off well, politics and contractual disagreements soon crippled the project with senior stakeholders placing value on key information and not releasing it to political adversaries in case it denied them advantage. Tarka’s culture was open to the change, although as it stood they were still over powered by a replacement system being sold as the saviour to all their problems. <em>(Identified CSFs - Organisational adaptations/culture, Environmental Influences, Past Experience (learning from))</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The wider system didn’t entirely make transformations clear to the system. At this stage there wasn’t a firm business case, with initial ideas and plans being formulated without one. Risks and complexities about the type of system being selected certainly weren’t understood, either by Tarka or T-BUS. The implementation approach was to be ‘big bang’ with no</td>
</tr>
</tbody>
</table>
| Provides resources and legitimates area of operation | Tarka provided the budget and where necessary their own resources. This included people deemed to have adequate business knowledge to be part of the requirements trawl, and also to be part of the package selection team. Tarka also supplied all of the technology to undertake this stage of the project.

T-BUS supplied the requirements engineers along with claimed experience of package selection providers. There is no evidence of the requirements engineers having the necessary skills or qualifications to undertake their role.

At this stage the project seemed adequately funded and resourced. No real tensions were found between Tarka and T-BUS, although the performance of T-BUS may even be questionable at this stage with the ambiguous nature of the requirements provided, plus their lack of use later in the project.

There is possibly split blame for the fact a system was selected that wasn’t quite matching the needs of Tarka or the vision they had set out with. Neither Tarka or T-BUS was experienced enough – although Tarka may have felt T-BUS were better skilled than they suggested.

(Identified CSFs - Adequate Budget, Sufficient/well allocated resources, Good performance by suppliers/contractors)

| Makes known expectations | The original schedule was based on a deadline set by the original Project Champion. This overly constrained the project as it was a throw away comment without much thought. The requirements were left at a high level as it was felt there wasn’t enough time to do them properly – so in effect the scope was reduced.

The management of change was considered outside of scope for the project. One of the main reasons for this was T-BUS providing a ‘grandiose quote’ for change management in the first place. Tarka did try to engage users with their vision, but this only seemed to set the scene that the replacement system was going to solve all problems and have no work-a-rounds.

Identified CSFs - Skilled/suitably qualified/sufficient staff/team, Good communication/Feedback |
There was a risk and issues log, but it was felt the lifecycle wasn’t proactively managed with no tools to manage them – just stored in an Excel spreadsheet.

Whilst there could have been a strong and sound business case for the project, the objectives for it were not clear, and with the restrictive schedule probably not realistic either.

**Identified CSFs - Clear realistic objectives, Strong business case/sound basis for project**

<table>
<thead>
<tr>
<th>Supplies performance information</th>
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</table>
| There is no real evidence of a performance monitoring subsystem. All information is fed back to the T-BUS project manager who communicates to other project members and the project board.

**Identified CSFs - Effective Monitoring/control, Planned close down/review/acceptance of possible failure**

<table>
<thead>
<tr>
<th>Decision-making subsystem</th>
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| The decision making team is not consistent even at this early stage of the project. Different members of T-BUS appeared and disappeared, particularly in key roles.

The Project Manager did remain constant, although Tarka’s Managing Director and Project Champion were replaced as they both left Tarka.

It is not clear if all decisions were being made with the knowledge of the decision making subsystem. There is also evidence that those involved in the requirements phase of the project did not fully understand project management techniques and methodologies along with not understanding the theory behind a requirements analysis.

It did seem that at this early stage of the project there was senior management support, and that the Project Manager was competent enough. But there was no requirements management in place. High level requirements were already being removed and requirements validation didn’t take place in order to make sure the deadline of an already unrealistic schedule could be met.

There is no real evidence of any one flagging issues even though it was apparent to all on the project. The experience of the Project Manager could be held into question, but it is not clear if they’d already started playing a political game to make sure it looked as if they were meeting contractual obligations, rather than pushing for a more realistic approach to the implementation.

**Identified CSFs - Support from senior management, Competent project manager, Realistic schedule**

<table>
<thead>
<tr>
<th>Subsystems that carry out</th>
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<tbody>
<tr>
<td>There is no evidence that the people supplied by T-BUS to assist in the provider selection process were skilled and experienced enough. There is evidence that with hindsight...</td>
</tr>
<tr>
<td>Topic</td>
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<tr>
<td>Transformations</td>
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<tr>
<td>Performance monitoring subsystem</td>
</tr>
<tr>
<td>Boundaries</td>
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<tr>
<td>Others</td>
</tr>
</tbody>
</table>
more problems later on when the system didn’t live up to expectations. It should also be noted proper change management didn’t occur on the project due to T-BUS over quoting Tarka.

(Identified CSFs - User/client involvement, Different viewpoints (appreciating), Project sponsor/champion, Effective change management)
Performance Monitoring (Project Monitoring and Control System)

- Objectives are not clearly set, not quality or communication plans, sets up weekly meetings
- Resource allocation is not necessarily at right time or with the right skills and experience. Provides funds, although not sure about required technology
- Struggles to make expectations known due to lack of experience. May have hidden agenda
- Provides own version of performance to avoid contract penalties
- Provides only positive performance information
- Attempts to set out requirements but are too ambiguous, does not refer to business plan, schedule demands are unrealistic, unable to understand quality standards of COTS framework, too consumed with contract politics
- Attempts to influence about performance to avoid contract penalties
- Supplies own version of performance information that is not necessarily a representation of what is happening
- Is unable to clearly make expectations known as does not have necessary experience of COTS frameworks and has set expectations to more developed COTS
- Provides own version of performance to avoid contract penalties
- Project Assurance
  - Only for latter stages of project
- T-BUS Project Manager, Assistant Project Manager, Implementation Manager and Configuration Manager
  - Provides own version of performance information to avoid contract penalties

Wider System Boundary

Disturbs

PROJECT MANAGEMENT SUBSYSTEM

Package Implementation Subsystem

Project Governance Subsystem

Future Releases

Environment

Post Implementation Fixes

T-BUS \ TARKA INSURANCE

Only for latter stages of project

TFP

Land-Key Insurance

End of Document
The influences of the environment were split between Tarka and T-BUS throughout the project. Tarka tried to be honest, particularly when asking for increases in budget and understood the importance of delivering on the investment made by Land-Key. T-BUS on the other hand was trying to make sure that they didn’t default on the contract and incur penalties.

T-BUS did try to influence the Environment that things were going better than they actually were on the project. This in many ways led to political instability on the project as both Tarka and T-BUS kept their cards close to their chest when making decisions.

There is evidence of the Environment being at fault for some of the failures on the project. Firstly Land-Key did not take as much interest in the project as may be they should have done. They seemed happy to pressure those involved without fully understanding the complexities of the situation. Along with this TFP also provided performance information re-assurances that weren’t true. Their development and delivery of the UK Country Layer was behind schedule, and also included some key defects. Unfortunately for Tarka due to inadequacies in their contract there were no options for redress.

There is little evidence of management capability within the Environment, Land-Key very much kept their distance from the project, only really putting pressure on in the latter stages when deadlines were missed. TFP showed poor management by not being able to estimate and alter their system adequately.

(Identified CSFs - Political Stability, Environmental Influences, Past Experience (learning from))

The wider system was unable to set clear objectives to the system due to ambiguous nature of the requirements. The business plan wasn’t referred to and the schedule was unrealistic. The complexity of the system being implemented wasn’t understood and they eventually became too consumed with contractual politics rather than getting a system implemented.

The T-BUS manager’s central to the implementation of the system did not work from any clear objectives, probably not helped by the wider system failing in the same way. They did not adhere to any quality standards, have any clear performance measures, or adopt the communication plan.

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<table>
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<tr>
<th>Aspect of the FSM</th>
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created as part of the project set up. Whilst they did perform weekly meetings for the project team, the information fed back was questionable, particularly as it didn’t always represent what was sent to the Project Manager in the first place.

Neither Tarka nor T-BUS at first made it clear that problems had to be resolved as both were adopting a political stance due to the contract. If Tarka flagged the issues then they would have to pay more money under the contract. If T-BUS flagged the issues, then they’d incur penalties under the contract. These battles generally went on until the last minute with both sides playing their hand close to their chest. *(Identified CSFs - Good communication/Feedback)*

| Provides resources and legitimates area of operation | Tarka and T-BUS provided the main resources, along with the T-BUS selecting TFP specialists ORASQL. There is no evidence of qualifications relating to specific jobs for T-BUS or ORASQL. Tarka employees are generally Prince2 or ITIL qualified. Many of the teams manned by non-T-BUS staff lost confidence in T-BUS senior management, particularly the project manager. It was felt that they weren’t 100% committed to the project, and that decisions weren’t being made in Tarka’s favour. There is also evidence of poor management of resources throughout the project, with areas being too heavily staffed at points when they weren’t needed, and then requiring resource when the budget could no longer stretch to it. The project would have been adequately funded if Tarka had of been implementing the system they thought they were. The full complexity of the system wasn’t understood mainly due to the lack of experience by Tarka and T-BUS in procuring systems. As the project progressed relationships became very strained with T-BUS on one side and Tarka and ORASQL on the other. Most of the disputes were contract based and were difficult to resolve due to the poor requirements that were never revisited as agreed. Tarka in the end had to appoint their own Project Assurance resource to challenge decisions made by T-BUS. In the end T-BUS struggled to provide the right resource at the right time, and more specifically with the necessary skills and experience. There were not only fallings out between Tarka and T-BUS, but also between T-BUS and resources they recruited – these again resulted in contractual disputes. *(Identified CSFs - Adequate Budget (although for COTS),...*
| Makes known expectations | The original schedule was based on an impossible deadline which was agreed to by T-BUS. As deadlines were missed and changed to later dates, the scope of the project was reduced along with the inclusion of user work-a-rounds. Whilst it was said there was never going to be a second phase to the project, work carried on well beyond the warranty period to rectify ‘features’ in the system.

There is a lot of evidence to suggest that there were many attempts to gain staff commitment and overcome resistance to change. Possibly the most notable was the spin placed on project progress by the T-BUS Project Manager. As the project progressed the lack of experience they had for managing this type of project became apparent. Firstly they struggled to adjust their style making the project over complicated (the Project Manager was used to managing larger projects). Secondly they didn’t understand the technology they were managing and had interpreted the project as if it were implementing a less complicated system rather than a framework which needed a lot of configuring. With these weaknesses in mind they added a lot of spin to progress information in updates to make the project look more positive than it actually was. Some members of the project team commented that it was as if they had a hidden agenda.

There is strong evidence of performance monitoring taking place, although there is evidence of team members commenting that updates they’d provided were not the same as what was being said at weekly communication meetings. |
| Supplies performance information | Performance information was told to be kept positive. There is evidence of project members communicating bad news and being ‘told off’ for doing so. There is also evidence of the Project Manager adding spin to progress reports to make the project look better than it actually was, and also to meet contractual obligations.

Whilst information was communicated to the Project Governance subsystem through regular meetings, it wasn’t challenged as Tarka felt T-BUS were experienced enough to manage the project. Once it became clear that all was not what it seemed, Tarka recruited a Project Assurance resource to question everything the Project Manager did.

There was a clear steer on the project to keep things positive. A cultural aspect of Tarka is to try not to communicate bad news upwards, and also to try not to pass
bad news onto staff. No one would call the project a failure, and there was at one stage a stubborn stance from senior stakeholders that it was a success. *(Identified CSFs - Effective Monitoring/control)*

| Decision-making subsystem | There was a lack of consistency in the decision making teams, not only from T-BUS but also from Tarka. T-BUS seemed to try to manage the project using a transient workforce, only bringing in skills as it was felt they were needed – this only served to make Tarka employees feel as if they weren’t their most important client. Also work stream leaders were changed by T-BUS consistently throughout the project with no real handover taking place.

Tarka suffered from their Managing Director leaving for another role within Land-Key, and also with the original Project Champion leaving – Tarka employees felt this was due to them realising they’d made a mistake and wanted to get out before being found out. Tarka also suffered from staff in key roles leaving for other positions within Land Key and in some cases else where.

Whilst it was felt the Project Manager was experienced, it was felt they made the project far too complicated and didn’t understand the system that had been selected. There is no real evidence of a strong detailed plan, and what plan existed, there is no evidence of it being kept up to date. The schedule certainly wasn’t realistic, with both Tarka and T-BUS seeing who would break first as impossible deadlines approached and more money would be needed or fines would be incurred.

There is also no evidence of project management tools being used within the project, backed up by evidence that the Project Manager said they would not be using Prince2 – the Tarka project standard. Some thing which Tarka did not enforce.

The experience of Tarka and T-BUS can be held into question. Whilst Tarka brought T-BUS in to help them select a system and implement it, T-BUS managed to get through their tendering process suggesting they had the necessary experience to undertake the job. T-BUS obviously hadn’t got the experience, and led a project to select a framework rather than an off the shelf solution as Tarka required. Due to their lack of experience Tarka weren’t able to question T-BUS until it was too late, and like the contract between Tarka and TFP, the contract between Tarka and T-BUS also had its weaknesses. In the end it was probably down to Tarka to fully check the track record of T-BUS and validate their references. |
| **Subsystem that carry out transformations** | The majority of transformations were carried out by either T-BUS staff, or ORASQL staff – the TFP experts recruited through T-BUS. This situation put Tarka at a disadvantage, as most of the work took place without their knowledge or understanding. There is evidence of decisions being made with TFP and ORASQL that didn’t involve Tarka. Tarka did try in these situations to check against the requirements if the work was what they’d requested, but unfortunately the requirements weren’t robust enough for this.

There is mixed evidence about the capabilities of the subsystems. ORASQL were definitely capable of performing their role, unfortunately they had a Time and Materials contract with T-BUS, which began to eat into T-BUS’s budget due to negotiating a fixed price contract with Tarka. There was also the constraint placed on them with the schedule – placing a deadline on them which was impossible to meet with the amount of work needed to configure the system. T-BUS had also supplied resources that were not capable of doing the job asked of them – a major example would be the Management Information aspects of the system.

The system changed constantly, particularly due to the ambiguous nature of the requirements. This caused many problems, especially in training where a consistent system was never available, and also in testing, where testers and developers had different interpretations of the requirements. Testing also became one of the areas on the plan to be constantly squeezed in attempts to meet deadlines – this again added to the frailties of the system.

In the end the employees provided weren’t skilled enough to undertake the roles expected of them – Tarka couldn’t supply staff with TFP knowledge, and T-BUS struggled to find staff with TFP skill sets through it being a niche skill. As the budget ran out, T-BUS also reduced the amount of staff allocated to roles to keep costs down – in contrast to over-staffing at the start of the project. |
| **Performance monitoring subsystem** | There is evidence of performance monitoring taking place on the project, but this was mainly done by the Project Manager with them providing their own version of performance in order to avoid contractual penalties. As such, at the beginning of the project Tarka’s Programme Office trusted T-BUS as they felt they were experienced enough. Later in the project Tarka hired a Project Assurance resource who questioned everything T-BUS did. |

*Identified CSFs - Good leadership, Correct choice/past experience of project management methodology/tools*  

*(Identified CSFs - Skilled staff/team)*
Financial information was monitored to the extent that the project kept exceeding its budget due to a lack of understanding of the system being implemented. Both T-BUS and Tarka felt they had selected a COTS system, and had budgeted for this. Unfortunately they’d selected a framework, and the budget along with the scheduled didn’t cater for the required configuration.

There were staffing difficulties towards the end of the project when T-BUS started to try to reduce costs. When questioned about this they argued that the project plan said they could reduce resource at that point – even though the plan was flawed and the deadline it was based on was not going to be met.

The project did undertake testing, although on a number of occasions the scope was reduced in an attempt to hit the required deadline. There is evidence that the testing function was over resourced at the start of the project, and then under resourced at the end. Luckily the Testing Work-stream leader was changed in the latter stages of the project, with the replacement turning testing around and making the most of a bad situation.

*Identified CSFs - Effective monitoring/control, Planned close down/review/acceptance of possible failure*

### Boundaries

The project was made too complex with far too many work-streams. The Project Manager managed the project as if it was a lot larger than it actually was. This failing meant it was far too complicated to monitor the performance effectively, and all the different work streams found it difficult to communicate with each other.

The project was probably adequately resourced head count wise, although it seems this was never the case at the most important of stages, with the plan updates due to the changed deadlines never acknowledging these resource changes.

### Others

The user/client involvement could be regarded as poor with many of the users feeling left out from the project, particularly when deadlines were missed. The balance was never correctly found with evidence of users either being bombarded with information or complaining of not knowing enough.

There is also evidence of user viewpoints not being taken into account adequately – this led to further bitterness down the line increasing resistance to change.

*Identified CSFs - User/client involvement, Different viewpoints (appreciating)*
**Decision Making (Project Management System)**

- **LAND-KEY INSURANCE PROJECT**
  - **STAKEHOLDERS**
    - **Decision-making subsystem**
      - TARKA over powered by T-BUS and ORASQL
      - Lies about performance information
    - **Wider System Boundary**
      - System Boundary
      - TARKA PROJECT BOARD
        - Makes decisions over powering Tarka. Decisions are not necessarily best for business needs
        - Throws resources at situation believing more resource will bring back to plan – cannot maintain approach due to budget constraints
        - Expectations are mixed and not representation of project. Hidden agendas and project politics dominate
      - Project Governance subsystem – battles with project politics and conflicts of interest. Does not fully perform Governance role as believed was in good hands
      - Lies about performance information
    - **Environment**
      - Business Plan
      - Business Insurance
      - Land-Key Insurance
      - T-BUS
      - Tarka Insurance
    - **Project Assurance**
      - Only for latter stages of project
  - **Attempts to influence by providing differences of opinion on how project is performing**
    - Provides a budget based on a configured package not a framework. Not fully aware of technology being used. Does not provide staff
    - Sets out requirements based on a different system to an impossible deadline. Pressures to get results
    - Expectations are based around a different system. Demands results based on investment, unhappy with delays
    - Passes on unrealistic information marred by project politics

- **Environment**
  - Land-Key Insurance
  - Business Plan
  - T-BUS
  - Tarka Insurance
  - Business Plan
  - Project Assurance
  - Only for latter stages of project

**Notes:**
- Attempts to influence by providing differences of opinion on how project is performing.
### Environment

There is evidence the system and wider system did have some influence over the environment. The system informed the wider system of project delays and budgetary issues, with the wider system informing the environment. The environment considered the return on investment for the project and the cost of the delays.

T-BUS probably had some environmental influence; from their part they also provided Land-Key and Tarka with their IT support. Beyond this, their reputation was at stake as this was their first attempt at leading a project within the Land-Key group.

There is some evidence to suggest that there was pressure from T-BUS on the Project Manager to keep things positive and also towards the end of the project keep the costs down and make sure they didn’t incur penalties.

There isn’t much evidence to suggest the environment understood the complexity of the situation when making decisions relating to the project. There also isn’t much evidence of the managerial capability of the environment. *(Identified CSFs - Political Stability, Past Experience (learning from), Environmental Influences)*

### Formulates initial design/decides on transformations

The wider system set out their requirements, but these were based on a COTS and not framework, making an already impossible deadline even more impossible. The wider system also added a lot of pressure to get results.

Decisions within the project were strongly influenced by T-BUS and ORASQL, in many cases overpowering Tarka to the extent they had to refer to requirements to understand if they were getting what they’d asked for.

There is no real evidence of clear measures of performance, and whilst there was a communication plan, there is no evidence this was ever implemented and used. Decisions seem to be enforced, and are not necessarily the best for Tarka.

Rather than make problems clear, T-BUS seemingly hid them holding T-BUS only meetings without any representation from Tarka.

Relationships became strained to the point where working relationships fully broke down.
<table>
<thead>
<tr>
<th>Identified CSFs - Skilled/suitably qualified/sufficient staff/team, Good communication/Feedback</th>
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<tr>
<td>Provides resources and legitimates area of operation</td>
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<tr>
<td>Makes known expectations</td>
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delivered sooner rather than later.
T-BUS’s expectations also changed, the environment put pressure on them to keep costs down and deliver the system as soon as possible. They were not experienced enough to assist Tarka in finding the type of system they required.

Throughout the project there is evidence of trying to gain the commitment of Tarka staff. Communications were kept positive, prize draws and competitions were attempted, but as deadlines were missed Tarka staff became less believing blaming the original Project Champion for making a poor decision.

Staff training was as good as could be expected under the circumstances. Whilst the trainers weren’t experienced enough, they did a very good job with a poor system that kept changing. Training was probably started too early due to the impossible deadline set on the project – this impacted user perceptions as there was never a stable system and they had to constantly re-learn modules.

As project politics dominated, so did hidden agendas. Performance monitoring, which was always weak, became non existent with T-BUS trying to make sure that any defect raised was a change request to make sure it didn’t impact their contract (referring back to poor requirements helped this). T-BUS then reduced the amount of defects by throwing as much resource as they had available at the situation.  

(Identified CSFs - Clear realistic objectives)

| Supplies performance information | The performance information provided by the Project Manager wasn’t necessarily a representation of the project. It generally had a positive spin on it, with meetings seemingly happening between T-BUS staff without ORASQL and Tarka staff. Tarka eventually hired a Project Assurance Resource to keep an eye on and question the Project Manager about everything. This nearly resulted in Tarka removing the Project Manager from their duties.  

The main influence was from the Project Manager to all other systems. There is evidence that the performance information fed back to the Project Manager from teams wasn’t generally the same as what was communicated to the rest of the project – particularly upwards. Again Tarka employed a Project Assurance resource to verify this.  

(Identified CSFs - Effective Monitoring/control) |
| Decision-making subsystem | There was not a consistent decision making team in charge. Tarka lost their Managing Director and Project |
Champion early on in the project. T-BUS also suffered from changes to senior stakeholders throughout the project. T-BUS did manage to keep the same Project Manager for the duration of the project. It is not clear if the decisions they made were fully in agreement with Tarka’s senior stakeholders or if Tarka were always aware of them.

The experience of the T-BUS Project Manager can be held into question. Whilst there is evidence that they managed more complex projects, one of the issues is they managed what was a more simplistic project in a complicated way, with eleven work streams on what could be considered a small project. What the Project Manager didn’t have experience of was selecting and implementing frameworks with them leading the team that selected a framework instead of a COTS package.

There is evidence to suggest that a possible mistake made by Tarka was not Programme Managing or governing the project more, particularly from an earlier stage – rather than bringing in the Project Assurance resource towards the end.

(Identified CSFs - Support from senior management, Competent project manager)

| Subsystems that carry out transformations | The majority of the transformations were carried out by either T-BUS or ORASQL employees. There is a lot of evidence to suggest a large proportion of the T-BUS employees were not experienced enough to undertake their roles – again this fact was hidden by the Project Manager communicating far more positive information back than was actually occurring.

ORASQL were experienced at implementing TFP systems, they were unfortunately hindered by T-BUS and the contract negotiated. Through cost cutting measures they were reduced in numbers on more than one occasion in the project.

Tarka staff were not experienced enough to implement the TFP system, and were included on the project as part of a knowledge share exercise. This also impacted the schedule increasing communication channels and also the amount of work expected from the ORASQL employees.

The work streams on the project were not effective enough, but again the expectations for budget and schedule were to implement a COTS system and not a framework – this probably made the project impossible under the constraints. |
| Performance monitoring subsystem | There was a form of performance monitoring on the project, but this wasn’t effective enough. Whilst the Project Manager did communicate information to the Programme Office (Project Governance), the Project Manager was also responsible for communicating this information around the project including the project board.

A Project Assurance resource was appointed to question performance later in the project, but the project would have benefited from this a lot earlier. In the end the area battled with project politics and conflicts of interest, with a decision to remove the Project Manager from their duties very close to being realised.

Financial Information was monitored to the extent it was known when more budget requests were required.

There were staffing difficulties on the Project, and this again was mainly the responsibility of the T-BUS Project Manager. From being over resourced at the start of the project, to under due to budget constraints at the end, there is a lot of evidence to suggest project resource was never well managed.

The system was tested, but by the time of the actual delivery date, the project had missed so many deadlines it was being delivered no matter what testing found. Testing was an area that saw its time scales reduced to make sure the project could hit its intended deadline.

(Identified CSFs - Effective monitoring/control, Planned close down/review/acceptance of possible failure)

| Boundaries | There is evidence to suggest that the project was over resourced at the start and under resourced at the end. Further evidence would suggest, that if managed properly and with less complexity (e.g. too many work streams) the project could have been a success, although this may have been subject to a more realistic deadline being agreed.

(Identified CSFs - Project size/level of complexity/number if people involved/duration)

| Others | There is evidence to suggest that the right user wasn’t always in the right position in the project, and also |
| knowledge was lost possibly due to a poor Project Manager alienating skill sets on the project. This could have impacted the necessary viewpoints across the project, especially as there is evidence to suggest not all of the viewpoints were considered.  
The changing of the MD and Project Champion early in the project will have impacted the overall vision, and as such many of the users blame the Project Champion for selecting a motor insurance system which didn’t really suit Tarka.  
There is evidence to suggest change management wasn’t effective, and was impacted by a ‘grandiose quote’ made by T-BUS which was never revisited.  
(Identified CSFs - User/client involvement, Different viewpoints (appreciating), Project sponsor/champion, Effective change management) |
The Environment (Project Governance System)

- REPLACEMENT SYSTEM SENIOR STAKEHOLDERS
  - Project Management subsystem
    - Unsure of performance information providing
  - Set quality standards, plans, guidelines and requirements based on an off the shelf solution not a framework
  - Identifies technology incorrectly, provides budget, staff and other resources based on this misconception
  - System Boundary
    - Performance information is supplied, but is hindered by project politics
  - Set objectives, plan, schedule, performance criteria do not match system being delivered
  - Sets up weekly meetings
  - Doesn’t provide resources capable of delivering system to timescale. Doesn’t have necessary experience
  - Doesn’t use any project management tools or methods, schedule isn’t managed properly along with risks or communication.
  - Overpowers giving impression more experienced and knows what doing
  - Package Selection and Implementation subsystems
    - Unsere of performance information providing
  - Project Governance subsystem allows more freedom as believes Project Manager is more than capable

- Tarka Customers
- Products
- Tarka Business Change
- Environment
- Post Implementation Fixes
- Tarka Staff
- T-FP
- Tarka Business
- Tarka
- Insurance
- Land-Key
- Insurance
- Tarka Users
- Business Plan
- Future Releases
- Tarka
- Users
- Post Implementation fixes
- Tarka Staff
- Tarka Insurance
- Tarka Business Change
- Tarka
- Customers
- Products
- Environment
- Tarka
- Staff
- Tarka Business
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- Future Releases
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| Environment      | There is evidence to suggest that the system and wider system didn’t consider the environmental influences adequately, particularly when the budget, schedule and in some respects skills provided were for a COTS and not framework.  

The system and wider system did try to influence the environment – particularly by recruiting Project Assurance resource when things really weren’t going as expected. There is also evidence of the system and wider system trying to convince users that the system being delivered would still meet their expectations – even though it was behind schedule and it wasn’t as robust as expected in training.  

There is some evidence of the environment being at fault. This mainly focuses around TFP and not meeting the expectations set to deliver a fully functioning UK Layer by a certain deadline. Unfortunately their contract with Tarka meant they didn’t incur any fines for late delivery.  

Whilst there is little evidence of the environment understanding the complexity of the situation, there is evidence of people feeling the wrong system was selected, particularly as the system supplied by TFP is motor insurance based, and Tarka are a general insurance company. *(Identified CSFs - Political Stability, Environmental Influences)* |

| Formulates initial design/decides on transformations | The wider system tried to set quality standards, plans and guidelines but the requirements are based on a COTS and not a framework solution. The system set objectives, schedule and performance criteria to the subsystems again based on a COTS and not a framework solution. They also set up weekly progress meetings.  

There was an ‘Implementation Readiness Criteria’ document for the project which detailed all the areas of the implementation and whether it was agreed they could be delivered. This also included a number of work-a-rounds for areas not fully functioning at implementation.  

There was a communication plan, but this didn’t seem to be adhered to, particularly as there is evidence of project members suggesting there wasn’t a communication plan at all. |
There isn’t much evidence of clear measures of performance, and how performance was measured against plan, or how this was governed. Whilst there were progress meetings, from the first missed delivery date the system wasn’t delivered for another 9 months – and this was with a much reduced scope. The decision to not deliver at this first date was made only days before expected delivery. Whilst this decision may have been hindered by project politics, questions would need to be asked about Tarka’s project governance as to why this wasn’t flagged by T-BUS earlier. Due to project politics neither Tarka nor T-BUS would make it clear that there were problems and where the problems were. This is mainly due to contractual penalties and who would foot the bill if the system wasn’t delivered. *(Identified CSFs - Skilled/suitably qualified/sufficient staff/team, Good communication/Feedback, Risks addressed/assessed/managed)*

| Provides resources and legitimates area of operation | Whilst Tarka provided the budget and the necessary technology, T-BUS was to supply the skilled resource in order to implement the system. There is evidence to suggest that T-BUS weren’t able to totally fulfil this obligation putting people without the necessary experience into positions throughout the project. Whilst T-BUS did manage to appoint ORASQL who had the necessary TFP experience, there were contract issues between T-BUS and ORASQL which meant resource wasn’t always available when it was required. There is no evidence as to how this was governed within the project. There is evidence of resources being stretched as the project became more critical and T-BUS tried to reduce costs. This coupled with the evidence that members of the team didn’t appreciate the way the Project Manager used them suggests resources were not being managed well. This only added to the existing tensions found within the project. The project should have been adequately funded, but the Project Manager made the situation more complicated than necessary, particularly with the projects overly complicated structure. Coupled with this, the system selected was not what was expected, and the framework provided cost a lot more than expected to configure. *(Identified CSFs - Adequate Budget, Sufficient/well allocated resources, Good performance by suppliers/contractors/consultants)* |
| Makes known expectations | The original schedule was set out to a deadline which was said to be from a throw away comment by the original
Project Champion. As such the expectations were set too high with the system selected as being beyond the capability of the budget and staff provided. The expectations were lowered to just ‘clearing the bar’ in order to get a system delivered.

There is evidence of no project management tools and methods being used (apart from microsoft project), as well as the schedule and risk management not being managed properly. There was a risks and issues log, but its felt it wasn’t managed pro-actively and no tools were used to help manage it – they were simply logged in an excel spreadsheet. There is evidence of post production support as the contract agreed to a 3 month warranty period which included fixing defects found in the system, and also putting right agreed work-a-rounds implemented.

**(Identified CSFs - Clear realistic objectives, Risks addressed/assessed/managed)**

<table>
<thead>
<tr>
<th>Supplies performance information</th>
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<tbody>
<tr>
<td>There is evidence that the performance information supplied was questionable and due to the amount of work that took place after missed delivery dates it is understandable that some project members believed the project wasn’t being monitored at all.</td>
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<tr>
<td>There are suggestions that communication within work streams was adequate, it failed between streams and also outside of the project. The Project Manager held weekly catch up meetings, although the validity of these was questioned by project team members, along with the validity of the information communicated. There is evidence of what team members communicated to the Project Manager was not what they communicated to the project.</td>
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<tr>
<td>Whilst it is felt performance information and monitoring was weak, T-BUS was always quick to know when money was running out. This was one of the contractual issues surrounded in politics. T-BUS would argue defects were change requests in order to not default on their contract, with Tarka arguing the opposite. Unfortunately referring back to the ambiguous high level requirements was of no help to the arguments, and served only to fuel them further.</td>
</tr>
<tr>
<td>T-BUS gave the impression they were more experienced than they were, this may have placated many of the performance monitoring issues experienced in the project – although as it became apparent the project was under performing, Tarka employed their own Project Assurance resource to question everything T-BUS did.</td>
</tr>
<tr>
<td><em>(Identified CSFs - Effective Monitoring/control)</em></td>
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<table>
<thead>
<tr>
<th>Decision-making</th>
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<tbody>
<tr>
<td>The decision making team for Project Governance was</td>
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Paul Taylor
consistent through out the project (bar the original MD and Project Champion changing in project selection). There is possible evidence that Project Governance at first gave T-BUS far too much trust due to T-BUS giving the impression of greater experience. As this became more apparent Tarka appointed a Project Assurance resource to question all decisions made.

As the project fell apart there is evidence to suggest that not all decisions were made with the knowledge of the decision making subsystem, the main reason being project politics. Both Tarka and T-BUS played their cards close to their chests not wanting to allow the other to gain any sort of advantage. There is also evidence of many T-BUS meetings taking place without any Tarka presence. These were regarded as being under handed by Tarka.

There is evidence to suggest that not all the necessary decisions were made in relation to the implementation of the system. Some project members commented that due to all the missed delivery dates, the project should have had more than enough time and chances to practice the implementation.

The experience of the Project Manager can be held into question. Whilst there is evidence they were very experienced and had managed much larger projects, it also became clear they’d not managed this type of project. Their experience became so questionable that at one stage Tarka considered removing them from their duties.

*(Identified CSFs - Competent project manager, Good leadership)*

Subsystems that carry out transformations | In the main, the transformations were carried out by T-BUS and ORASQL staff. There is evidence to suggest that work and decisions were made without Tarka’s knowledge, and that Tarka would resort to checking work delivered against the requirements. Unfortunately due to the poor condition of the requirements this became impossible to verify.

Whilst the ORASQL employees where more than capable of performing the work required, poor contract management and requirements hindered their progress. Progress was also impacted by being surrounded by staff that weren’t experienced enough for the project and the constraints of an impossible delivery date and crushing project politics.

There is evidence that testing wasn’t adequate for the project and suffered from changes in management, poor requirements and also being one of the first areas whose schedule was impacted in order to try to meet a tight delivery date.
| Performance monitoring subsystem | Whilst project performance was regularly communicated to the Programme Office, there is evidence to suggest the Project Manager was allowed more freedom than they should have been. It was at first believed the Project Manager was more capable than their eventual performance suggests. Later on Tarka employed their own Project Assurance resource to question all decisions on the project. At one stage the Project Manager was nearly removed from their duties.  
There is evidence of some financial monitoring, at least to the level of requesting budget increases.  
Decisions to extend schedules were verified, but they were also used as a political tool against the contract in order to see who would pay for it e.g. Tarka through an increased budget, or T-BUS through contractual penalties.  
There were staffing difficulties due to the niche skill set associated with TFP. There were also issues due to the project being overstaffed at the start, and then understaffed when it became clear costs needed to be cut. Again there is no evidence of this being governed or questioned early in the project.  |
| Boundaries | The Project was made far more complicated than it should have been; the governance was left too open due to the apparent experience of T-BUS and their Project Manager. This changed later in the project once it was realised by how much the project was under performing, and Tarka felt it was necessary to appoint a Project Assurance resource. |
| Others | The new Project Champion moved their desk to make sure they sat closer to the Project Manager and watch their every move. As the project progressed, the Project Champion performed well in their role. There is evidence from within the project suggesting people were impressed at how well they took to their role and didn’t show how much they didn’t get on with the Project Manager. |
**Resources (Supplier System)**

- **T-BUS / TARKA INSURANCE**
  - Sets out plan and schedule based on a COTS and not a configured framework
  - Doesn’t supply the necessary budget, technology, skills and experience required to develop selected framework
  - Sets expectations about different type of system. Plans and delivery dates become unachievable, although project politics mean still try to meet them
  - Supplies own version of performance information that is not necessarily a representation of what is happening. Causes problems with allocating resources

- **T-BUS / TARKA INSURANCE SENIOR STAKEHOLDERS**
  - Schedule tracking, measures of performance, communication plans do not match required resources and allocations
  - Expectations are known at start, become mixed as the project progresses causing confusion

- **Project Management subsystem**
  - Resources are provided at the wrong time, with over allocation early on in plan. Does not supply correct skills and experience

- **Package Implementation subsystem**

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**Attempts to influence by suggesting project is performing better than actually is**

**Land-Key Insurance**

**Tarka Staff**

**Wider System Boundary**

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**Environment**

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<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
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<tbody>
<tr>
<td>Environment</td>
<td>There is evidence that the system and wider system did not consider the environmental influences adequately. Both Tarka and T-BUS selected a system that wasn’t what they expected it to be. A requirement was for the system to be a COTS package, where as a framework was selected that required a lot of configuration. The TFP system was selected before the business case was in place. This reflected poorly on T-BUS as they were hired as the experts to assist Tarka in selecting the system. There is evidence of the environment also being at fault with TFP not being open about their inability to configure their own system, and also through delivering the UK country layer later than expected. Tarka had no recourse to TFP as their contract was not strong enough. TFP did not fully understand the complexity of the situation, with the country layer being delivered with some notable bugs that required fixing, suggesting the implementation hadn’t been adequately tested. The environment in TFP seemed more than capable of influencing both T-BUS and Tarka into thinking the system was more adaptable with less configuration than it actually was, with no regard for it being beyond the projects capability. There is also evidence that both Land-Key and Tarka Programme Office didn’t fully understand the complexity of the situation until it became too late to avoid the initial issues that led to the implementation dates being missed. Tarka later employed a Project Assurance resource to rectify this. <strong>(Identified CSFs - Environmental Influences, Past Experience (learning from))</strong></td>
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| Formulates initial design/decides on transformations | The wider system set out guidance for the plan and schedule based on a COTS and not a configured framework. This was also based on an impossible deadline meaning the project was constrained to a deadline that couldn’t be met. The system did not manage to implement adequate measures of performance, communication plans or schedule tracking – particularly with the missed deadlines, where the ‘going to be’ missed implementation dates were only announced days before. There is no evidence of the wider system or system saying that problems were occurring and how they could be resolved. T-BUS would operate as if problems were not |

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occurring in order to make sure they didn’t default on their contract and incur penalties. 

*(Identified CSFs - Good communication/Feedback, Risks addressed/assessed/managed)*

| Provides resources and legitimates area of operation | If a COTS package had been selected, then there is evidence to suggest that the necessary budget, technology, skills and experience to develop the system would have been supplied. As it stood Tarka had provided the budget for a COTS package along with the necessary technology to implement it. T-BUS had provided the headcount and probably the necessary experience to implement a COTS package. Neither Tarka nor T-BUS was capable of implementing a Framework with the resources they’d made available.

T-BUS over resourced the project to begin with. This had a major impact on the budget seeing the project under resourced later on as cost cutting measures were implemented.

ORASQL were appointed by T-BUS as the skilled resource to configure and implement the TFP system. As a niche skill, TFP is difficult to acquire and also costly. With the cost cutting measures towards the end of the project, T-BUS removed a lot of the TFP knowledge at a point where it was probably needed the most. There is evidence of contractual disputes between T-BUS and ORASQL, with T-BUS agreeing a Time and Materials contract with ORASQL, but a fixed price between Tarka and themselves. This resulted in the working hours of ORASQL being restricted as part of cost cutting measures.

The project suffered from contractual politics between not only T-BUS and Tarka, where T-BUS tried to manipulate situations to make sure they didn’t incur any penalties, but also between T-BUS and ORASQL as previously mentioned. The tensions hindered the project progress and working relationships.  

*(Identified CSFs - Adequate Budget, Sufficient/well allocated resources, Good performance by suppliers/contractors/consultants)*

| Makes known expectations | The wider system sets expectations for a less complicated system. Even when plans and delivery dates become unachievable, project politics meant they still tried to meet them. This approach causes confusion not only within the project, but also with Tarka Users – they thought a delivery would never take place with so many missed delivery dates, especially when communications suggested they’d still take place right up to the very last minute. In many
cases Users were annoyed by this with many not being allowed to book holidays due to the planned implementation.

There is a lot of evidence of trying to gain staff commitment to the change from competitions, being plied with free coffee and cake to applying themes to training sessions to try and involve users more. The Users were accepting of the system at first, but with the missed implementations they soon lost interest with evidence of some thinking it would never be delivered.

T-BUS was contracted to Tarka to provide post implementation support for a 3 month warranty period. Within this period it was also agreed that some of the deferred functionality would be implemented. One project member commented that the most important factor of success for T-BUS was the amount of critical defects they’d fixed before leaving.

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<tr>
<th>Supplies performance information</th>
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<td>There is evidence that the performance information supplied by the systems that carry out transformations is not necessarily the version that the Project Manager communicated around the project. This version of information caused problems with allocating resources on the project. Updates would suggest that work had been completed that actually hadn’t, with resources disappearing off the project earlier than expected. This eventually resulted in Tarka employing a Project Assurance resource to question such decisions once it became apparent that contractual obligations were not being met. At one stage the situation was so dire that Tarka considered removing the Project Manager from their duties. <em>(Identified CSFs - Effective Monitoring/control)</em></td>
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<tr>
<th>Decision-making subsystem</th>
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<td>The Project Manager was in the same position through out the project, although as previously mentioned they were nearly removed. There was a lack of consistency in other areas, particularly the testing team which saw at least three different work stream leaders, the data migration team which changed work stream leaders and also saw resource come and go through out the project without adequate handovers. Also T-BUS’s senior stakeholders changed throughout the project. Tarka lost their original MD through internal changes and their Project Champion to a position outside of the company. This did impact the initial vision of the project, although many of the users felt the Project Champion left because they realised they’d made a mistake and didn’t want to get found out. The new</td>
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Project Champion was regarded as doing a good job. There is evidence that the Project Manager made decisions without the knowledge of Tarka in order to cover up any issues that may impact on the contract. T-BUS staff held meetings that didn’t involve any Tarka staff. Tarka regarded this as hiding detail that would essentially impact on T-BUS’s contractual obligations.

Whilst it is known the Project Manager was experienced, many of the users felt he was not experienced enough to manage such a project, and also made it far more complicated than was necessary. It was certainly felt that the Project Manager was not experienced at selecting and implementing Insurance frameworks. *(Identified CSFs - Competent project manager, Good leadership)*

**Subsystems that carry out transformations**

T-BUS supplied the resource to carry out the transformations, and also appointed ORASQL as the TFP experts on the project. There is evidence that many of the Tarka staff on the project felt ORASQL thought they were so experienced with TFP systems, that they came across as if they were TFP themselves.

Whilst it is felt that T-BUS didn’t have the experience to select and implement such a system, it was felt ORASQL did. One of the main issues was there wasn’t enough TFP knowledge on the project, and with knowledge share being one of the contractual obligations, TFP over stretched their ORASQL resource to a point where they could not fulfil their contractual obligations. If a more realistic deadline and a budget that matched the selected system had been chosen from the start, then this wouldn’t have been an issue.

Due to project politics, deadline constraints and lack of knowledge and experience there is evidence that the system was neither adequately configured nor tested. Testing in particular was an area that suffered from schedule and resource reductions. *(Identified CSFs - Skilled staff/team)*

**Performance monitoring subsystem**

There is no evidence of a performance monitoring subsystem. Performance information was communicated directly to the Project Manager. Potentially, another version of performance information would be communicated around the project by the Project Manager – this didn’t always represent the actual performance of the project. There is evidence this caused problems with resource allocation, as resources were allocated to the position the schedule suggested the project was at, not its
actual position e.g. critical resources being removed at the wrong time, making the project even more critical. This impacted on development, testing and implementation resource and normally resulted in the more experienced and expensive people being removed first. *(Identified CSFs - Effective monitoring/control)*

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<thead>
<tr>
<th>Boundaries</th>
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<tr>
<td>Resources were poorly managed on the project, not only by their allocation, but also by the actual way they were treated. A point mentioned on a couple of occasions was that implementation dates were always at points when people would have liked holidays (e.g. Easter, Christmas) because of the long weekends for the implementation. This resulted in holiday restrictions over missed implementation dates, which made the restrictions unnecessary – and in many cases too late to change holiday plans. The final date selected was Christmas which again had the same restrictions placed upon it. It was noted by members of the Project Team, that although many staff were forced in through the period, there were a number of Senior Stakeholders on the project missing throughout the implementation period – this was not well received.</td>
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<tr>
<th>Others</th>
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<tr>
<td>Many of the users felt they weren’t involved enough in the project, whilst there were Project Team members who felt users were involved too much which complicated the situation. At first the project did try to involve all the view points, but as it progressed, and cost cutting took over then users stopped being involved. The replacement Project Champion tried to involve people where they could, but their time became more consumed with making sure the Project Manager was doing their job and that things were being done within the boundaries of the contract. They did try to invite users into the project to talk to people to find out more – but sometimes this didn’t work as people didn’t always know what was happening project wide, just their own work stream due to the poor communication. According to the users change management wasn’t effective, although this may have been due to the stumbling nature of the project. There is evidence of a number of attempts by Tarka to help users with the change, but these seemingly have been forgotten by the users. The actual change management programme didn’t occur due to the ‘grandiose quote’ provided by T-BUS which Tarka didn’t want to pay. From this point it did seem that</td>
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the necessity of a proper programme was forgotten.

(Identified CSFs - User/client involvement, Different viewpoints (appreciating), Project sponsor/champion, Effective change management)

C.8 – Project B – Synthesis – Recurring Themes using the FSM

Performance Measures - Performance monitoring on the project was poor. Performance information was not adequately quality assured and suffered from the Project Manager adding their spin to information making the project look as if it was performing better than it was. There were no clear measures of performance which made it easier to manipulate communications, as it was difficult to check what was being fed back.

The project also suffered from not having a devoted performance monitoring sub system. Information was communicated directly from work streams to the Project Manager, which also didn't help with quality assurance and governance of the project. Coupled with this, the project structure was far too complicated for the project, which meant it was easier to hide the actual performance of the project.

Communication - Whilst the project did have a communication plan, there wasn't one implemented. There were many attempts at different types of communication, but when they failed, no one ever questioned why, they just tried something different.

Communication within work streams was reasonable, between work streams it was poor, and again any information was generally fed through the Project Manager which received their spin altering the impact of the message.

Contract - The Project suffered from many issues relating to contracts. T-BUS was selected as being the experienced consultants who would manage the project. Unfortunately they didn't have the required skills and experience to understand the complexity of the project. As the performance of the project suffered so did the political stability of the Project. Tarka didn't have the experience to challenge T-BUS seeing the project consumed with politics, particularly with T-BUS trying to manipulate performance information to avoid contractual fines.

T-BUS had also negotiated a Time and Materials contract with ORASQL the main TFP experts. This caused more issues, due to the contract between T-BUS and Tarka being fixed price. In order to keep costs down, T-BUS restricted the amount of ORASQL resource on the project, particularly at times when things became more critical.
There were also issues with the contract between Tarka and TFP the system suppliers. Whilst TFP delivered a country layer that was full of bugs and after its deadline, the contract was not strong enough and they had no recourse to TFP after the country layer was finally delivered.

In the end the project became very unstable, with Tarka and T-BUS having differing motives - Tarka wanting a system delivered, and T-BUS wanting to keep costs down. Relations became so strained that at one stage Tarka even considered removing the Project Manager from their duties, particularly when it was felt T-BUS weren't 100% committed to the project.

**Requirements** - The projects requirements were poor. The produced requirements were ambiguous and caused problems throughout development and testing, as well as when being used to check what work had actually been done against the contract. A number of users felt their views had not been considered, and as such the complexity of the system was not fully understood.

In the end the wrong system was selected, Tarka and T-BUS thought that they had selected a COTS package but what was selected was a framework that required a lot of configuration. This impacted not only the projects schedule, but also the budget, especially when it came to recruiting the necessary skilled resource for the project.

**Skills and Experience** - Whilst there was skilled resource on the project, there wasn’t enough, and it certainly lacked the necessary skilled resource.

The Project Manager although considered experienced, wasn't experienced in managing framework implementations, and particularly in small companies. Even though T-BUS gave the impression they were skilled enough to implement the system, there is no evidence to suggest that they had a proven track record, and therefore necessary skills and experience to select and then implement a system for Tarka.

Due to agreeing a Time and Materials contract with ORASQL, the skilled TFP resource, when things began to fall apart, T-BUS restricted the use of ORASQL to keep costs down.

Tarka found that they didn't have the necessary skills and experience to be able to question T-BUS and ORASQL about work that had been done, particularly when basing it against the ambiguous requirements. After all this is why they had recruited T-BUS in the first place.

**Decision Making** - Decisions were made without the knowledge of Tarka, something which was made easier for T-BUS due to the lack of project governance. Contractors on the project were given too much trust and power, particularly as they were believed to be more skilled and experienced than they actually were.

**Project Assurance** - None of the performance information was quality assured. The project did not have a quality plan, and was not adequately
governed. Whilst the Project Manager did communicate performance information, this was difficult to verify due to the poor level of the requirements that were provided.

**Schedule** - The initial project deadline was impossible to meet, and as such, the schedule produced to meet this was also unrealistic.

The produced project plan was not detailed enough, and it was questionable how up to date this actually was. The monitoring and control of the plan was poor, certainly wasn't quality assured, and in the end with the poor requirements had nothing detailed to measure work done against.

When things started to go wrong, the first area to be impacted was testing. At one stage testers were told to de-scope the majority of their tests in order for the system to meet the delivery date.

Through suffering high levels of project politics, the Project Manager always suggested that the implementation was going ahead. It was a battle of wills between Tarka and T-BUS, as who ever gave in paid for the change in delivery date.

**Inadequate Budget** - The budget for the project was considered to be adequate, although this was for a COTS package and not the selected framework. Tarka had planned for a package that required a lot less configuration and skilled resource, and as such this increased the demands on the budget.

**Change Management** - Change management on the project was considered outside of scope. T-BUS as part of their tendering had provided a 'grandiose' quote which was never revisited.

At first the users were open to the change, and as such the system was sold as being able to solve all their problems. As things started to go wrong and delivery dates were missed, acceptance of the change reduced.

**Complex Project Structure** - The structure of the project was far too complex for its size. The Project could only be considered small, but the project manager had implemented eleven work-streams. With no communication plan and many work-streams, performance monitoring and communication within the project became impossible.

**Business Plan** - The business plan was written retrospectively. The selection of the system occurred before a plan was even in place.

**Knowledge Share** - Knowledge share was poor on the project with key resource selected to provide Tarka development staff with enough knowledge to support the system on go live. This was never adequately developed into the plan and had an adverse impact on the projects critical path.

Tarka provided good training under the circumstances for their own staff, particularly as Tarka’s trainers were learning the system as it was being
developed. They also had to produce training documentation without the benefit of good requirements.

**Key decision makers** - An issue on the project was the lack of consistency in key decision makers. Early in the project Tarka's Managing Director and the Project Champion left Tarka taking the initial vision for the project with them.

Within the project work streams the Project Manager shuffled around the work stream leaders. This was sometimes due to key staff leaving, and sometimes without real reason. This created a lack of consistency within the work streams, and again impacted on project performance through getting work stream leaders back up to speed.

**Others** - As the project began to fail, Land Key became more focussed on getting a return on their investment. This forced Tarka to change their objective to just 'clearing the bar' in order to deliver something rather than a quality system. At the same time as this, T-BUS became more concerned with cost cutting as they were struggling to implement the system at a profit. This saw much of the experienced resource restricted on the project in order to keep costs down.

Risks within the project were not proactively managed and as such there were no real procedures in place to manage them.

Whilst T-BUS was recruited as being experienced, TFP were still able to influence them that the system selected was more flexible than it actually was.
C.9 - Project B – Comparison – The project-specific FSM

Clear and Realistic Objectives (Requirements Engineering System)

- No requirements gathering methodology suggested, measures of performance not clear, not sure of system being selected, arranges weekly communication meetings.
- Provides budget thought to be adequate, appoints T-BUS Project Manager, agrees to T-BUS resources undertaking requirements.
- Expectations are not fully clear as thought selecting COTS not Framework as system, possibly not all right users involved, schedule too tight to perform proper requirements sweep, risks not managed correctly (no life cycle).
- Supplies performance information that requirements are high level, but being revised later.
- Unrealistic deadline restricts requirements quality, objective not fully clear, business reps don’t fully understand project management expectations.
- Reports that requirements high level, deadlines are tight.
- Supplies overly positive information about project so far.
- Not sure about system selection.

PROJECT GOVERNANCE SYSTEM

- Environment including 5 year plan, potential package providers and new products.
- Supplies information with spin.
- Influences by providing promises with the agreement will be kept later.
- Disturbs.

PACKAGE SELECTION SUBSYSTEM

- T-BUS/Tarka Business Reps.
- Sets high level objectives, weekly meetings, emails, news letters, no real risk assessment, work not fully tracked.
- Provides funds, selects business reps (although not by business knowledge).
- Unrealistic deadline restricts requirements quality, objective not fully clear, business reps don’t fully understand project management expectations.
- Reports that requirements high level, deadlines are tight.
- Supplies overly positive information about project so far.
- Not sure about system selection.

T-BUS Requirements Engineers carrying out high level requirements sweep along with selected Tarka Business Reps.

- Environment attempts to influence requirements process, unable to make impact.

Tarka Users involved in requirements process.

- Tarka Users.
- Tarka.
- Tarka Business Reps.
- T-BUS.
- Land key.
- Environment includes 5 year plan, potential package providers and new products.
- Supplies information with spin.
- Influences by providing promises with the agreement will be kept later.
- Disturbs.

Wider System Boundary

Politcal Pressure

- Group policies.
- Changing requirements.
- Relax culture, No COTS experience, lack of project context, objectives and motives unclear.

Environmental Pressure

- Environment including 5 year plan, potential package providers and new products.
- Supplies information with spin.
- Influences by providing promises with the agreement will be kept later.
- Disturbs.

Clear and Realistic Objectives (Requirements Engineering System)
<table>
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<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
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| Environment       | There is evidence that the Environment managed to disturb the wider system and system with TFP ending up being the selected system. Both Tarka and T-BUS thought they were selecting a COTS package and not a framework.  
There is no evidence of learning from past experience, and there is little evidence of Tarka’s programme office governing the requirements and selection process.  
Tarka appointed T-BUS to assist in the package selection and implementation. There is evidence to suggest that T-BUS weren’t experienced enough to manage such a project through not understanding the technology they were selecting.  
*(Identified CSFs – *Environmental Influences, Past experience (learning from))* |
| Wider system – (places project system in context) | The Wider System failed to understand the context of the project and fully consider the effects of resistance to change. An example would be the seemingly large amount of money spent throughout the tendering process for trips to view potential providers, and post selection further trips for ‘selected individuals’ for system demonstrations. There was limited consideration for Tarka’s culture; staff had to accept change was going to happen.  
*(Identified CSFs – *Organisational culture, effective change management)* |
| Formulates initial design/decides on transformations | No real requirements gathering methodologies were used, nor were there any clear measures of performance or criteria for success. The business plan wasn’t produced until after the system had been selected.  
The requirements gathering suffered from an unrealistic schedule being in place, with them being left at a high level never to be revisited.  
There was a communication plan devised, although this was never implemented. Team members could be overloaded with communications at a variety of levels meaning important information could be lost – there is also evidence of T-BUS staff never picking up emails, a dominant form of communication within Tarka.  
There is evidence that whilst there was a risk log, this was not managed proactively and didn’t follow any sort of life cycle. |
<table>
<thead>
<tr>
<th>Identified CSFs – detailed plan kept up to date, clear realistic objectives, strong business case, skilled staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides resources and legitimates area of operation</td>
</tr>
<tr>
<td>The Wider System provided a budget which was thought to be adequate, and was involved in the appointment of T-BUS. There is agreement that T-BUS would provide skilled resource to undertake the requirements sweep, but due to the poor standard of the requirements, there is no evidence of the resource being skilled enough.</td>
</tr>
<tr>
<td>Tarka provided the necessary technology to undertake the requirements sweep and system selection, along with what they felt was the right users for the requirements sweep. There is evidence to suggest these weren’t always the right people, not being the ones with all the knowledge. Also a number of these left the company before the project was complete, taking the knowledge with them.</td>
</tr>
<tr>
<td>There is evidence that the users would adapt to the new system, but this didn’t end up being the case, the system has been customised to adapt to the older ways of working which in some ways has made the system disjointed, confusing and over complicated.</td>
</tr>
<tr>
<td>(Identified CSFs – Adequate budget, skilled team, sufficient resources (to do work), good performance by contractors)</td>
</tr>
<tr>
<td>Makes known expectations</td>
</tr>
<tr>
<td>The Wider System failed to adequately control the project, allowing T-BUS more freedom than necessary due to believing they were the experienced members of the project.</td>
</tr>
<tr>
<td>At the requirements stage there is little evidence of relationships being strained within the project. There is evidence to suggest that human issues were considered before technical issues, although this has been cited as one of the failings within the project by trying to cater for the users too much.</td>
</tr>
<tr>
<td>At the requirements and tendering stage there was little resistance to change. The users had already made up their mind that a new system was required, so had bought into the concept.</td>
</tr>
<tr>
<td>(Identified CSFs – Effective monitoring/control)</td>
</tr>
<tr>
<td>Communication Channels</td>
</tr>
<tr>
<td>Whilst there is evidence of a communication plan, there is no evidence of one being implemented. Even at this early stage of the project there were communication issues. There is evidence of attempts at many different types of communication, but there is no evidence of anyone questioning why each approach failed.</td>
</tr>
<tr>
<td>(Identified CSFs – Good communication/feedback)</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Supplies performance information</td>
</tr>
<tr>
<td>Decision-making subsystem</td>
</tr>
<tr>
<td>Subsystems that carry out transformations</td>
</tr>
<tr>
<td>Performance monitoring subsystem</td>
</tr>
</tbody>
</table>

(Identified CSFs – Good leadership)

(Identified CSFs – Strong business case, skilled staff)

(Identified CSFs – detailed plan kept up to date, realistic schedule, effective monitoring/control)
| **Boundaries (including viewpoints)** | There is a failure to fully consider the view of end-users. There is no evidence to suggest that those being interviewed were the ones with the required knowledge of the business/system. There is evidence that some viewpoints were overlooked, with some users not even being questioned, whilst others who were, didn’t see evidence of their view being taken into account. This in particular is notable in some of the more complex areas of the system.  
*(Identified CSFs – Different viewpoints (appreciating), project complexity)* |
| **Project Champion** | The original Project Champion has been held responsible for the impossible dead line. Many of the users have suggested that they left the company as they realised they’d made a mistake and didn’t want to be held responsible for it.  
*(Identified CSFs – Project sponsor/champion – original)* |
| **Change Agent** | There is acceptance of the change taking place at the requirements and package selection stage. The system is sold to the users by the original Project Champion as being the answer to all their problems.  
The complexity of the change isn’t understood, with many of those involved in the package selection feeling that they’d selected a fully functioning package that just needed implementing.  
There is evidence to suggest that T-BUS didn’t consider or understand the cultural dynamics of Tarka which may have hindered user opinions as it became more apparent change was taking place.  
Whilst the Project Champion did challenge the status quo to create a vision of change, this in some of the users created a sense of crisis with some going off sick. |
Performance Monitoring (Project Monitoring and Control System)

Paul Taylor
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment</strong></td>
<td>There is evidence that Tarka didn’t use their past experience of projects in order to take control. Tarka believed that because they’d not attempted a project of this nature before, then there is nothing they could have brought with them to manage this project. There is evidence of the Decision Making subsystem trying to influence the environment through giving false information about the projects progress and also claim that defects where in fact change requests and would require more money to fix/implement. This was made easier due to the poor standard of the requirements. <em>(Identified CSFs – Environmental influences, past experience (learning from))</em></td>
</tr>
<tr>
<td><strong>Wider system</strong> – (places project system in context)</td>
<td>There is evidence to suggest that the wider system did not fully consider the values and beliefs found within Tarka by staff feeling they weren’t being kept as informed as they should be. This only increased resistance to change, particularly when holidays were restricted around delivery dates that were never going to be met (this occurred on a number of occasions). <em>(Identified CSFs – different viewpoints(appreciating), organisational culture, good communication)</em></td>
</tr>
<tr>
<td><strong>Formulates initial design/decides on transformations</strong></td>
<td>The Wider System failed to implement a communication plan even though there is evidence of one existing. They also didn’t use any tools or methods to help formulate a plan. Set objectives are unclear, risks aren’t managed adequately, and the plan is changed to suit own needs. Does not use an established tracking system. <em>(Identified CSFs – detailed plan kept up to date, clear realistic objectives, risks managed, good communication/feedback)</em></td>
</tr>
<tr>
<td><strong>Provides resources and legitimates area of operation</strong></td>
<td>There is evidence that the technology provided wasn’t always up to the required standard, including purchased tools not being understood or configured throughout the project. What was believed to be a fully experienced Project Manager was appointed. It was felt the budget provided would have been adequate for the system Tarka thought they were selecting, but it wasn’t for a framework. There is evidence to suggest that not all of the staff allocated to the project were experienced enough for their roles. Whilst T-BUS appointed ORASQL as the TFP experts, as the project progressed it was difficult to</td>
</tr>
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</table>
recruit enough skilled resource, plus the constraints restricted the amount of resource that could be hired.

There is evidence to suggest that the new system struggled to be configured to the way of the old system. Along with this, there is also evidence of users struggling to adapt to parts of the new system suggesting they’re overly complicated.

Adequate training for people brought on to the project was also not provided – especially with many new people being trained on TFP’s existing motor insurance system which only added to the confusion.

T-BUS also tried to use a transient workforce later in the project in order to cut costs. This resulted with lost knowledge as project members left without adequate handovers.

*(Identified CSFs – sufficient/well allocated resource, proven/familiar technology, adequate budget, skill staff/team, training provision, good performance by suppliers/contractors)*

<table>
<thead>
<tr>
<th>Makes known expectations</th>
<th>There is evidence to suggest that the wider system didn’t fully have control of the project, although Tarka did eventually appoint a Project Assurance resource to question everything done by the Project Manager.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>It became clear that consensus could not be achieved on the project, with the contract and delivery dates becoming major issues.</td>
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<tr>
<td></td>
<td>There is evidence to suggest that the users felt human issues weren’t considered enough, whilst IT felt technology issues weren’t considered enough.</td>
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<tr>
<td></td>
<td>The expectations and objectives on the project became very unclear with politics taking over. An overly complicated project structure hindered project communications.</td>
</tr>
<tr>
<td></td>
<td><em>(Identified CSFs – Good leadership, different viewpoints (appreciating), good communication, Competent project manager, clear realistic objectives, strong business case)</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication Channels</th>
<th>The overly complicated project structure caused many communication issues. An example would be controlling environments, with developers updating restricted environments, including in one instance the training environment whilst training was taking place.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Whilst there is evidence of a communication plan, there is no evidence of this ever being implemented and</td>
</tr>
</tbody>
</table>
followed. Communication on the project was regarded as being poor by many users.
(Identified CSFs – *Project complexity, good communication/feedback*)

### Supplies performance information
There is evidence to suggest that performance information was fed directly from the systems that carry out transformations to the Project Manager. This did result in the version communicated not necessarily being the one later communicated around the project.

Later in the project Tarka employed their own Project Assurance resource to question all decisions by the Project Manager. At one stage it was felt the Project Manager should be removed from all duties.
(Identified CSFs – *Good communication/feedback, effective monitoring/control*)

### Decision-making subsystem
There is evidence to suggest that resources assigned by the decision making sub system weren’t skilled or experienced enough to undertake their job. In some cases the cheaper option was taken, rather than the skilled option.
(Identified CSFs – *Skilled staff, competent project manager*)

### Subsystems that carry out transformations
The skilled resource on the project became the bottle necks, with the less skilled not being able to meet work loads with out their help. Where Tarka staff fell into the less skilled category, this gave T-BUS even more ammunition to say Tarka was at fault with the contract.

T-BUS was also meant to organise knowledge share for Tarka staff. This became an issue with the plan, again taking skilled resource away from their role to provide knowledge share and training.
(Identified CSFs – *Skilled/suitably qualified/sufficient staff/team*)

### Performance monitoring subsystem
There is no evidence of a performance monitoring subsystem. Progress was communicated straight to the Project Manager meaning misleading information was missed, as was the actual state of project work streams. The perceived inaccuracies in performance information led to Tarka eventually appointed their own Project Assurance resource to tackle this issue and monitor the Project Manager. The Project Champion also moved to sit as close to the Project Manager to watch their every move.
(Identified CSFs – *Detailed plan kept up to date, competent project manager, realistic schedule, effective monitoring/control*)

### Boundaries
The over positive information at first influenced the
Paul Taylor

| (including viewpoints) | users to accept the system. Whilst the information was still being communicated the first of the delivery dates was missed. As more critical dates were missed users started to disbelieve viewpoints and opinions they were told, feeling the system would never be delivered.

As the project progressed, consideration of viewpoints stopped, with the focus being to get a system delivered. The contractual politics between Tarka and T-BUS, and T-BUS and ORASQL continued to get worse.

*(Identified CSFs – different viewpoints (appreciating), effective monitoring/control, good communication)* |

| Project Champion | The new Project Champion was considered to be good at their role on the project, particularly in hiding what was obviously a fraught relationship with the Project Manager.

*(Identified CSFs – Project sponsor/champion)* |

| Change Agent | Originally the need for change was accepted by the users through the positive messages fed back to them by business reps and senior stakeholders.

There is evidence to suggest that bad information was stopped on the project, with only good being allowed to be communicated. This caused problems later in the project as users felt they’d been lied to.

Losing the original Project Champion and MD may have changed the vision for Tarka meaning specific change initiatives didn’t take place. It became apparent the users saw the change as falling into crisis, even after the Project Assurance resource was appointed. By this stage, for some users it was too late. |
**Decision Making (Project Management System)**

**PROJECT BOARD**

- T-BUS Project Manager, T-BUS Assistant Project Manager, T-BUS Implementation Manager
- Wider System Boundary
- Mixed information – depends on source
- Supplies performance information to suit own needs. Not necessarily what was originally fed back
- Tries to influence to avoid defaulting on contract
-松泛文化，难解项目背景，混杂动机，无过往经验
- Provides adequate budget for COTS installation, appoints project manager, although thinks of removing. Provides project team, although not adequate skills and experience
- Resource management is poor - impacting budget, schedule is unrealistic, provides cheap but unskilled and inexperienced staff
- Provides performance information to suit own needs applied as becomes more time
- Over positive information
- Private – none Tarka meetings
- Mixed information - depends on source
- Conflicting messages from T-BUS and Tarka
- Package Selection and Implementation Sub Systems that carry out transformations
- Decision Making by Senior Stakeholders

**REPLACEMENT SYSTEM PROJECT**

- Objectives unclear, weekly communications lose impetus, no real risk assessments, plan is poor
- Resource management and project team, although not adequate skills and experience
- Expectations are unclear, schedule is unclear, no real success criteria made explicit, not all right users involved, risks not managed correctly.
- Conflicting messages from T-BUS and Tarka
- Progress from many workstreams fed back

**Environment including 5 year plan**

- Group Policies
- Tarka
- Tarka Users
- Mixed information – depends on source
- Delays

**Tarka Business Re却**

- Tries to make positive where possible
- Makes decision for own benefit
- Supplies performance information to suit own needs
- Over positive information
- Private – none Tarka meetings
- Mixed information – depends on source
- Tends to influence to avoid defaulting on contract
- Supplies performance information to suit own needs. Not necessarily what was originally fed back

**Transport System**

- Plan along with objectives are unclear. No methods, tools and techniques used. Measures of performance unclear.
- Weekly communications, but no communication plan used. No experience of framework installations
- Expectations are unclear, targets are constantly missed questioning accuracy of performance measures, no quality standards
- Progress from many workstreams fed back
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Decisions were based on a different type of system. Tarka and T-BUS thought they’d selected a COTS package, but instead had selected a complex framework. Neither Tarka nor T-BUS had the necessary experience to implement such a system – although a work stream leader brought into the project late on commented ‘Tarka forgot what they did well on past projects rather than trying to learn from previous mistakes’. The mixed motives in the environment made decision making on the project difficult, with Tarka requiring a system, T-BUS trying to make a profit and some members of the project team trying to make a name for them selves. T-BUS tried to influence the environment by providing information with a positive spin in order to avoid defaulting on the contract. By the end of the project relationships between Tarka and T-BUS were very strained. <em>(Identified CSFs – Political stability, past experience (learning from), environmental influences)</em></td>
</tr>
<tr>
<td>Wider system – (places project system in context)</td>
<td>The wider system failed to consider the complexity of the project. They did consider methods to avoid resistance to change as it became apparent the users were becoming more despondent as communications seemed false and the project kept missing deadlines. Communication was poor on the project, with evidence to suggest that many felt there wasn’t a communication plan. Whilst there were many attempts at different types of communication, no one ever questioned why these weren’t working. <em>(Identified CSFs – Organisational culture, good communication/feedback, effective change management)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>Objectives and requirements were unclear and ambiguous. This caused issues with contractual obligations, with Tarka unable to match work done with expected work in the requirements. Performance measures were unclear, possibly made worst by a lack of framework implementation experience at project board and management level. Whist there was a communication plan; there is no</td>
</tr>
</tbody>
</table>
evidence of this being implemented. Weekly communications lost impetus as people began to lack belief in what was being said, plus the plan was poor and there was no real risk assessment. *(Identified CSFs – Skilled staff, good performance by suppliers/contractors, familiar technology)*

| Provides resources and legitimates area of operation | Whilst it was believed resources were adequate, this belief was based on a different system type. A Project Manager was appointed who was believed to have the necessary experience; along with this a project team was provided also believed to have the necessary experience.

There were issues with trying to adapt the system to old ways of working, with the framework being too complex. Some members of IT believe this was one of the reasons for failure, as they let the users have too much of a say.

There was a failure by the Project Manager to supply necessary training for Tarka staff as agreed as part of the contract. There is also evidence to suggest that the cheaper option was taken when providing the necessary resources for the systems that carry out transformations. *(Identified CSFs – sufficient/well allocated resources, familiar technology, adequate budget, skill staff, good performance by suppliers/contractors)* |

| Makes known expectations | Project expectations are unclear along with the schedule and the criteria for success. It is clear that consensus was impossible to achieve between Tarka and T-BUS and also T-BUS and ORASQL. As the project progressed and it became more apparent it wasn’t performing as expected, technological issues were considered before human issues. The eventual system delivered contained a lot more work-a-rounds than was anticipated by the users. This also resulted in training taking place many times for the same area as more and more work-a-rounds were introduced.

The expectations set by the Project Manager were unclear, with evidence of poor measures of performance, no standards of quality and poor morale within work streams. *(Identified CSFs – Good leadership, effective monitoring/control, good communication, competent project manager, clear realistic objectives)* |
<table>
<thead>
<tr>
<th>Subsystem</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Channels</td>
<td>The project was far more complicated than it should have been with too many work streams, and no plan for how these work streams would manage communication between each other. This impacted on decision making as there is evidence to suggest that the work streams were not sure what each other were doing – particularly when the Project Manager changed the information sent out. <em>(Identified CSFs – Good communication/feedback, project complexity)</em></td>
</tr>
<tr>
<td>Supplies performance information</td>
<td>Performance information was provided directly back to the Project Manager from each of the work streams. There is evidence to suggest that when the Project Manager passed this information on it became misleading and not what was communicated to them. The performance information ended up suiting the needs of T-BUS, making sure they didn’t default on contractual obligations. There is no evidence to suggest that the system informed the wider system that the project should be abandoned as the fear of defeat was defaulting on the contract and losing money. <em>(Identified CSFs – Good communication/feedback, effective monitoring/control)</em></td>
</tr>
<tr>
<td>Decision-making subsystem</td>
<td>The decision making sub system failed to allocated teams correctly, early on providing too much resource, and then later on providing as cheap resource as possible – and as little as could be got away with at that point in time. Whilst there is evidence of training taking place within the development and support teams, in many cases this was inadequate. There is also evidence of knowledge leaving the project with no real handover. <em>(Identified CSFs – skilled staff, competent project manager, good leadership, realistic schedule)</em></td>
</tr>
<tr>
<td>Subsystems that carry out transformations</td>
<td>Teams were poorly directed, and at times had no idea of what was happening on other work streams. There wasn’t enough skills and experience to implement the type of system selected, with poor management of resources meaning that a lot of skills disappeared off the project at crucial times because the project plan did not represent the actual state of the project. There is no evidence to suggest that the project was ever bench marked against the business plan, particularly as the business plan was devised retrospectively once the system had been selected,</td>
</tr>
</tbody>
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and then never really referred back to later in the project.  
*Identified CSFs – strong business case, skill staff*

| **Performance monitoring subsystem** | There is no evidence of a performance monitoring subsystem in the project. Decisions were based on information communicated directly back to the Project Manager from the many work streams. There is evidence to suggest that many felt the information the Project Manager communicated around the project was misleading and was changed to suit their needs.  
*Identified CSFs – detailed plan kept up to date, competent project manager, realistic schedule, effective monitoring/control, planned close down* |
| **Boundaries (including viewpoints)** | The views of the end users were considered at the start, but as the project progressed and things started not to go to plan, then more and more work-a-rounds were introduced, and decisions were based on getting the system in rather than what impact the changes in scope would have on the users. View points became considered less and less and politics over powered the project with T-BUS and Tarka battling over the contract.  
*Identified CSFs – Different viewpoints (appreciating), good communication, effective monitoring/control* |
| **Project Champion** | The Project Champion made decisions they hoped would be for the benefit of Tarka, keeping a close eye on the T-BUS Project Manager. There is evidence to suggest the users feel they did a good job, particularly as it was felt they were pushed in to the role due to the previous Project Champion leaving.  
*Identified CSFs – Project sponsor/champion* |
| **Change Agent** | Whilst at the start of the project change was generally accepted in Tarka, as things began to fall apart, so did the confidence the users had in the implementation of the new system.  
Later in the project Tarka appointed a Project Assurance resource. They questioned everything the T-BUS Project Manager did and also tried to improved communication of project progress. |
The Environment (Project Governance System)

- **PROJECT BOARD**
  - Project Management subsystem
  - Wider System Boundary
  - System Boundary

- REPLACEMENT SYSTEM PROJECT
  - Plan is not clear and visible to project team at high level only, risks are not managed, objectives are not clear, communicates information weekly – prone to spin
  - Manages budget poorly. Allocates equipment and technology, doesn’t supply appropriate skills and experience
  - Success criteria and objective unclear, no quality standards, unsure of plan accuracy

- **Project Management subsystem**
  - Probes plans and design based on COTS and not framework, no methods or tools used, performance not explicitly measured, initially trusts providers as believe experienced
  - Provides budget and Appoints Project Manager/Providers based on COTS package. Agrees contracts and provides technology
  - Schedule and success criteria not clear, based on different system. Risk is not managed well, has no experience of project type, trusts providers
  - Reports to and provides performance information to. Progress communicated not necessarily what is communicated up chain

- **Package Selection and Implementation subsystems**
  - Carrying out transformations
  - Project Manager provides manipulated version of performance
  - Project Assurance provided later in projects life

- Users unsure about project progress, don’t believe deadlines

- Environment including existing policy admin system, 5 year plan, potential new products and TFP
  - Pressure to be positive
  - Keeps Tarka out of meetings
  - Supplies performance information – less spin applied as deadlines missed

- Disturbs by putting pressure on to complete project and deliver system
  - Attempts to influence through high level requirements being too weak to evaluate contract against

- Over positive information

- Land-key
  - Tarka
  - T-BUS
  - Tarka Users
  - Tarka Business Reps

- Relaxed culture, unsure project context, mixed motives, no past experience
  - Supplies own resources, although no past experience
  - Start positive, become despondent as project goes on

- Tarka
  - Users uncertain about project progress, don’t believe deadlines
  - Applies pressure for delivery results
  - Supplies own resources, although no past experience, dependent as project goes on

- Package Selection and Implementation subsystems carrying out transformations
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
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</thead>
<tbody>
<tr>
<td>Environment</td>
<td>As it became clear the project wasn't performing to plan, Land-Key placed more and more pressure on Tarka to deliver. One of the big issues within the project was the lack of experience and understanding for COTS packages, and the fact the project selection phase had come back with a framework which required far more configuration than expected – particularly when considering costs and time. Early in the project, with no one really governing the Project Manager, it was easy to manipulate performance information. As the first deadline approached it became apparent that it wasn't going to be hit, but neither Tarka nor T-BUS wanted to admit to this because of the contractual cost to either party. <em>(Identified CSFs – Political stability, past experience (learning from))</em></td>
</tr>
<tr>
<td>Wider system – (places project system in context)</td>
<td>The wider system didn't really understand the context of the project, firstly giving T-BUS too much trust as it was believed they were experienced and capable, and secondly because they hadn't the experience of COTS packages and frameworks to be able to question decisions being made. Possibly one of the main issues was T-BUS not fully understanding the structure, policy and culture of Tarka, and Tarka not making sure T-BUS understood this. T-BUS was given too much power without the understanding. <em>(Identified CSFs – Different viewpoints (appreciating), organisational culture, good communication)</em></td>
</tr>
<tr>
<td>Formulates initial design/decides on transformations</td>
<td>The business plan in place was based on a COTS package and not a framework. Tarka did not enforce own approaches and methods onto project. There is no evidence of performance being adequately measured with too much trust being given to the providers as they're believed to be more experienced than they are. Risks are not managed and objectives are not clear. Information is communicated weekly, but its accuracy is questionable. Tarka eventually appoint a Project Assurance Resource to question everything the Project Manager does and</td>
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also to put in place approaches to measuring performance and communication. *(Identified CSFs – Good communication/feedback, detailed plan kept up to date, skilled staff, risks managed)*

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<thead>
<tr>
<th>Provides resources and legitimates area of operation</th>
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<tbody>
<tr>
<td>The Wider System provides resources including what was thought to be an adequate budget, the required technology, appointing a Project Manager and making available staff with the necessary skill sets. Unfortunately a lot of this was based on a COTS solution and not a framework. Until the Project Manager was Project Assured they managed the budget poorly, particularly with resourcing the project at the start. They also do not supply the appropriate skills and experience, or if they do, there is not enough allocated to the project. <em>(Identified CSFs – sufficient/well allocated resources, familiar technology, adequate budget, skilled staff, good performance by contractors/consultants)</em></td>
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</tbody>
</table>

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<tr>
<th>Makes known expectations</th>
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</thead>
<tbody>
<tr>
<td>The schedule, which was always unfeasible, was never questioned either by T-BUS or Tarka. There were no success criteria in place, and even if there were, they’d most likely be based on a different solution type. Risks were not managed well, with the provider not being questioned at the earlier stages of the project due to Tarka not having the experience to refer to. As with Tarka, the T-BUS Project Manager did not implement a quality plan, and with a lack of governance many were unsure of the plans accuracy. <em>(Identified CSFs – Effective monitoring/control, good communication, competent project manager, risks managed)</em></td>
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<thead>
<tr>
<th>Communication Channels</th>
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<tbody>
<tr>
<td>The approach to the project was never questioned, for example 11 work streams for what was generally a small project. This meant communication channels were very complicated to manage with valuable information being lost between channels. Each channel had its own communication approach due to a plan not being implemented, again with information lost through a lack of consistency. <em>(Identified CSFs – good communication/feedback, project complexity)</em></td>
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<table>
<thead>
<tr>
<th>Supplies performance information</th>
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</thead>
<tbody>
<tr>
<td>Performance information was communicated directly to the Project Manager. It wasn’t until later in the project that the Project Assurance resource stepped in to monitor and question the information between the subsystems that carry out transformations and the...</td>
</tr>
<tr>
<td>Subsystem</td>
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<td>Decision-making subsystem</td>
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<tr>
<td>Boundaries (including viewpoints)</td>
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<tr>
<td>Project Champion</td>
</tr>
<tr>
<td>Change Agent</td>
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</tbody>
</table>
appointed a Project Assurance resource to enable the system to be delivered, plus monitor and question the Project Manager.

At one stage the Project Manager was nearly removed from their duties as it was felt this would be the only way Tarka would get to deliver the system.
Resources (Supplier System)

- T-BUS PROJECT MANAGER
- PROJECT BOARD
- REPLACEMENT PROJECT SYSTEM

- Didn't openly manage risks, track work or set clear objectives. Sets weekly meetings which lose impetus as project progresses.
- Didn't have experience to manage budget or resources for selected system. Resources over-allocated at start, under at end.
- Package Selection and Package Implementation subsystems that carry out transformations.
- Users unsure about project progress, don't believe deadlines.
- Performance information possibly not fair reflection of project — bad news omitted due to contract obligations.
- Reports to project board.
- Package Assurance provided later in project life.
- Performance information - less spin applied as deadlines missed, especially when requested more budget.
- Pressure for replacement reps as existing ones leave.
- replaces those leaving.
- Resource over-allocation at start.
- Supplies performance information — less spin applied as deadlines missed, especially when requested more budget.
- Pressure to provide experience needed.
- Pressure to deliver within budget.
- Relaxed culture, unsure project context, mixed motives, no past experience.
- Users unsure about project progress, don't believe deadlines.
- No realism about selected system, no real methods, tools or techniques used, measures of performance not clear, vision possibly lost through changes in MD and Project Champion.
- Communication Plan created but not followed.
- Initial schedule is poor based on throw away comment (unachievable deadline), no real success criteria to measure against (wrong system selected), didn't follow own governance procedures.
- Users unsure about project progress, don't believe deadlines.
<table>
<thead>
<tr>
<th>Aspect of the FSM</th>
<th>Comment</th>
</tr>
</thead>
</table>
| **Environment** | There was major pressure from Land-Key for the project to be delivered within budget.  
T-BUS was also putting pressure on the Project Manager to keep costs down, and therefore they supplied resources as cheaply as possible – in some cases even if what they supplied didn’t have the necessary skills.  
T-BUS tried to influence the environment by suggesting that Tarka were to blame for all the issues on the project, therefore not paying any contractual penalties, with Tarka footing the bill for the extra cost.  
*(Identified CSFs – Political stability, environmental influences, past experience (learning from))* |
| **Wider system – (places project system in context)** | Questions could be asked as to how well the context of the project was understood when business resource was allocated to the project. There is evidence to suggest that some of the resource did not have the necessary knowledge or skills to be involved in the project.  
*(Identified CSFs – user/client involvements, different viewpoints (appreciating))* |
| **Formulates initial design/decides on transformations** | The schedule produced wasn’t realistic, and there is no evidence of any real measures of performance. Resource allocation was based on the plan, which was based on a COTS solution and not a framework. In order to have met an already unrealistic plan, more resources would have needed to be allocated to the project for a framework than COTS.  
It could also be suggested that the original vision of the project may have been lost when the MD and Project Champion left.  
There is no evidence to suggest that the Project Manager managed risks effectively or monitored actual work against plan. Their control of resources on the project was poor, particularly the earlier stages of the project which was over resourced. For example, there were more testers at the start of the project than the end when testing took place.  
*(Identified CSFs – clear/realistic objectives, detailed plan kept up to date, skilled staff)* |
| **Provides resources and legitimates area of operation** | It was believed that satisfactory resources were supplied for the project, if it had been a COTS solution. Tarka were able to supply the necessary technology for the project, although the benefit of some of the tools was |
questionable, particularly as some weren’t even properly configured throughout the project’s life.

The employees provided were not experienced in framework development. There is evidence to suggest that the Project Manager did not manage resources well over the duration of the project, being very wasteful at the start, and then trying to cut costs by reducing the amount of costly resources allocated to the project.

There is also evidence to suggest that the Project Manager believed they could simply allocate more people to the project to speed things up – this only served to slow things down, as did the attempts at running a transient workforce by bringing in and removing key staff as and when they were needed. This again slowed the project down, particularly as sometimes whoever left may not be the person returning – this impacted on project knowledge and communication.

*(Identified CSFs – Sufficient/well allocated resources, proven/familiar technology, skilled staff, good performance by suppliers/contractors, adequate budget)*

<table>
<thead>
<tr>
<th>Makes known expectations</th>
<th>No matter how many staff had been allocated to the project, the initial deadline was unachievable, even if Tarka had tried to implement the COTS package they thought they’d selected, and not a framework. There seemed to be no real way of measuring performance on the project which suggests there was no real way of knowing if resources were adequately allocated or not. <em>(Identified CSFs – Good leadership, effective monitoring/control, good communication, competent project manager, strong business case)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Channels</td>
<td>Communication on the project was poor due to its complex structure. One of the impacts of this was the disappearance of key staff without anyone actually knowing they were going. This meant that vital knowledge could be lost far too easily. <em>(Identified CSFs – Good communication/feedback)</em></td>
</tr>
<tr>
<td>Supplies performance information</td>
<td>Performance information from the work streams was communicated directly to the Project Manager. Later in the Project, Tarka appointed a Project Assurance resource to question the information and how it was used – particularly as there is evidence to suggest that the information communicated to the Project Manager was not always what was communicated back around the project. <em>(Identified CSFs – Good communication/feedback, effective monitoring/control, planned close)</em></td>
</tr>
</tbody>
</table>
### Decision-making subsystem

The Project Manager failed to assign teams adequately, over resourcing them at the start of the project, and under towards the end to cut costs.

The approach taken to knowledge share was poor, and impacted on the project schedule due to this having to be undertaken by the more skilled ORASQL staff on the project.

*(Identified CSFs – skilled staff, competent project manager, detailed plan kept up to date, good leadership, realistic schedule)*

### Subsystems that carry out transformations

There were attempts by the Project Manager to mix skilled resource with unskilled resource on the project. One of the points of this was to keep costs down; the other was for knowledge share for the Tarka development staff. Eventually, where Tarka staff was concerned, they were put into positions that the Project Manager tried to use against Tarka when considering their obligations on the contract and trying to get out of fines. This only added to the contractual politics which had been prominent for a lot of the project.

*(Identified CSFs – skilled staff)*

### Performance monitoring subsystem

There is no real evidence of a Performance Monitoring subsystem. Information was communicated directly to the Project Manager meaning Tarka did not identify misleading information until it was too late and it was apparent dead lines would be missed. Due to this there was no questioning of resource allocations on the project until Tarka appointed the Project Assurance resource. Up until this point, T-BUS’s management of resources was questionable.

*(Identified CSFs – detailed plan kept up to date, competent project manager, realistic schedule, effective monitoring/control)*

### Boundaries (including viewpoints)

The resourcing of the project was not questioned by Tarka until it became apparent that milestones were not being met, and key resources were being removed. In order to question this, Tarka appointed a Project Assurance resource to monitor and question everything the Project Manager did. This didn’t happen early enough in the project.

*(Identified CSFs – Effective monitoring/control, good communication/feedback, planned close down/review/acceptance of possible failure)*

### Project Champion

The Project Champion changed early on in the project. Many of the users believe this was due to the original Project Champion feeling that they made a mistake in selecting the system and left so they weren’t found out.
Paul Taylor

<table>
<thead>
<tr>
<th>(Identified CSFs – Project sponsor/champion)</th>
</tr>
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<tbody>
<tr>
<td>Change Agent</td>
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</tbody>
</table>

C.10 – Project B Synthesis – Recurring Themes using the project-specific FSM

**Inadequate Budget** - The budget for the project was considered inadequate, although there is feeling that the budget would have been adequate if a COTS package had been selected rather than a framework. There was also an opinion within the project that a lot of money was wasted within the tendering process and early in the project with trips abroad to visit TFP.

**Decision Makers** - There was some inconsistency with decision makers within the project. The project initially suffered the loss of Tarka's Managing Director and also the Project Champion. Whilst there was some animosity towards the original Project Champion due to many users feeling they were to blame for selecting the wrong system, leaving the project meant their vision left with them.

The Project Manager shuffled work stream leaders around the project and also replaced work stream leaders unnecessarily. This created a lack of consistency with the project's decision makers.

**Business and Quality Plans** - The project did not benefit from a Quality Plan being implemented, or from the project performance being quality assured. There were no factors for success used within the project, and the business plan was created after the system was selected.

**Requirements** - The complexity of the system wasn't understood. It was believed that a COTS package had been selected and not a framework. Being a framework the system needed a lot more configuration than was expected, and therefore surpassed budgetary expectations, required far more skilled resources and also took longer than expected to develop. The complexity of
the system also resulted in it being difficult to adapt. This resulted in what the users have described as a disjointed, complicated and confusing system.

The poor quality of the requirements allowed T-BUS to change defects into change requests without Tarka being able to challenge them. The reasoning behind this was that defects would cost T-BUS more; whereas change requests would cost Tarka more.

There is evidence to suggest that T-BUS did not understand the technology selected even though they were selected as the skilled resource. Throughout the project they struggled to supply the necessary skilled resources to enable the system to be properly configured.

The requirements were considered to be of a poor quality and ambiguous. There is no evidence to suggest that T-BUS were able to provide skilled requirements engineering resource, plus due to the unrealistic delivery date, there wasn’t enough time to develop quality requirements. No methodologies or tools were used within the requirements sweep along with this the requirements were never quality assured. It was agreed that the requirements would be revisited later in the project. Due to cost and schedule constraints this didn’t occur.

Many users believe the wrong system has been selected, not only because it is a framework and not a COTS package, but also because the system implemented is a motor insurance system and not a general insurance system - the main business of Tarka. Again this is another reason why the users believe the system is over complicated and confusing.

Skills and Experience - The project lacked the necessary skills and experience to configure and implement the system. T-BUS was hired as the skilled resource, but there is no evidence to suggest they ever had the necessary skills, or that they had a proven track record in selecting and implementing frameworks or COTS packages. Whilst T-BUS selected ORASQL as the skilled resource on the project, due to the Time and Materials contract agreed between the two, ORASQL’s use was restricted as T-BUS tried to keep costs down.

T-BUS were believed to be more experienced than they actually were, and on many occasions they supplied unskilled, cheap resource to the project as they hadn’t realised how expensive the TFP skill sets were through it being a niche skill. Their experience could also be questioned from them never challenging the impossible deadline.

Another technique to lower costs by T-BUS was to use a transient workforce. Unfortunately they never implemented a method to transfer knowledge as staff left the project. When new staff entered the project they impacted the plan through more skilled resource having to bring them up to speed.

Communication - Whilst the project did have a communication plan, there is no evidence of this ever being implemented. Communication on the project was considered poor particularly with the over complicated project structure.
Bad news was generally not communicated on the project; this was partly through the Project Manager hiding poor performance that could impact their contract with Tarka and also due to Tarka stopping bad news being communicated to the users. The users felt they had been lied to when the system wasn’t delivered as expected. This increased resistance to change, particularly when it was felt restrictions on holidays could have been removed a lot earlier.

The staff felt at times they were overloaded with communications, and then at other times they didn’t know what was happening. Many approaches to communication were tried, but when they didn’t work no one questioned why, they just tried another approach.

**Project Governance** - The project was not adequately governed and as such T-BUS was given too much freedom. This is demonstrated by no one questioning the poor resource management and the spin placed on the performance information.

Whilst the project was meant to have adequate development technology, the tools and methods used were not adequately configured, and also weren’t fully understood by those using them on the project.

Tarka could also be responsible for not using their previous project experience when governing the project. Whilst it could be said they didn’t have the necessary experience of implementing a framework, they had experience of managing projects and also working with contractors on projects. These skills were not used.

Eventually Tarka employed a Project Assurance resource to help question everything the Project Manager did and also assure the project performance.

**Knowledge share** - Development training was poor on the project with those selected to provide the knowledge share also crucial to the configuration of the framework. Knowledge share impacted the critical path, and at times wasn’t of the required standard to enable Tarka development staff to support the system after go-live.

**Politics** - The project became consumed with politics relating to the contract and the delivery date. Motives became mixed on the project, particularly with T-BUS trying to keep costs down and trip Tarka up into paying for as much as possible, and Tarka wanting to get a system implemented to meet business needs.

As relationships became strained it was realised by Tarka that T-BUS had been given too much freedom. In order to challenge this they recruited their own Project Assurance resource to question everything the Project Manager did.

T-BUS placed Tarka staff in positions that would cause delays on the project. This was used as ammunition to challenge the delays on the project and be
able to charge Tarka rather than incur fines. T-BUS was under pressure to keep costs down due to their fixed price contract negotiated with Tarka.

Beyond keeping costs down T-BUS set their main objective as avoiding contractual penalties and trying to blame Tarka for as much as possible.

**Change Management** - Tarka staff accepted change early on as they believed TFP was going to be the system to solve all their problems - the silver bullet. As the project began to face difficulties technical issues were considered before human with more work-a-rounds being introduced and less and less viewpoints being considered.

As things started to go wrong acceptance of the change diminished with many users believing the system would never be delivered. Another impact of the change was the amount of people lost through sickness and stress as communications became mixed, bad news was stopped and expectations were unclear.

Within the project, IT believed the users had too much say over the system. In total contrast the users believed that IT had too much say and didn't consider them enough, especially with the amount of work-a-rounds implemented with the system in order to get it to meet its delivery date.

The project did not adequately consider change management, particularly as T-BUS had originally provided a ‘grandiose’ quote and the area was never revisited by Tarka. As such the users lost belief in the system and the change became less and less accepted as the project showed signs of failure.

**Project Structure** - The project structure was far too complicated for the size of project. There were eleven work streams in place, sometimes with only a couple of people in a work stream. This impacted communication between work streams with information being lost, and with performance information passing through the Project Manager, who added their own spin to make things sound more positive. It also became apparent that knowledge was lost when staff disappeared off work streams without other work streams knowing.

**Performance Information** - The performance information provided by the Project Manager was inaccurate and had been adjusted to make the project look as if it was performing a lot better than it actually was. The schedule wasn't adequately monitored, and there is no evidence of measures of performance being used.

The project did not have a performance monitoring system with all performance information being fed through the project manager who added their spin to make things sound more positive.

The monitoring and control of the project could only be regarded as poor. No governance or quality assurance took place until Tarka hired their own project assurance resource later in the project. This happened when Tarka realised things weren't as they were led to believe.
**Resources** - Resource Management was poor on the project. It was over resourced at the start, and then as things went wrong and costs mounted; it became under resourced at the end.

There is also evidence to suggest that the Project Manager tried to allocate more resource to areas when the project fell behind. This only served to slow the schedule as new members were bought up to speed.

As a cost measure the Project Manager tried to operate a transient workforce. Unfortunately they didn't implement any approach to handing over the knowledge as resource left the project.

The resource was also managed through an unrealistic plan which didn't reflect the actual state of the project. This did result in resources disappearing at crucial times within the project simply because it represented what the plan said but not what the project required.

**Project Manager** - The Project Manager lacked the necessary experience to implement the system. Whilst they were regarded as being experienced, and experienced at managing much larger projects, there is no evidence to suggest they were experienced at delivering frameworks.

At the start of the project the Project Manager was given too much trust and certainly wasn't governed adequately by Tarka. Later in the project Tarka hired a Project Assurance Resource to challenge everything the Project Manager did. At one stage in the project the Project Manager was nearly removed of all their duties due to the poor performance of the project.

**Tools and Methods** - There was a lack of tools and methods used on the project. The requirements suffered from a lack of skilled resource along with no requirements engineering methods being used.

There were no methods used within the management of the project with the Project Manager saying they would not be using Prince2, Tarka's project standard.

The tools used in the development weren't adequately understood by those using them on the project, and at the start of the project were not configured for use.

**Land Key** - Land Key put pressure on Tarka to deliver a system. This in itself, along with the poor performance of T-BUS saw Tarka change their approach to 'clearing the bar' in order to simply get the system implemented. The final planned delivery date saw the approach that a system would be delivered no matter what.

**Schedule** - The schedule used was unrealistic, and as such was based on an unrealistic deadline which T-BUS as the experienced resource never questioned.
A number of deadlines were missed on the project, not only by T-BUS but also by TFP. This can not only be blamed on the wrong system being selected and the complexity not being fully understood, but also through no one challenging the impossible deadlines to create a realistic and possible plan.

**Risk Management** - The risks on the project were not proactively managed and there were no methods or approaches used other than keeping the risks and issues log in an excel spreadsheet.

**User Training** - User training on the project was adequate. It was managed in house by Tarka with Tarka’s own trainers learning the system as they went along.
Appendix D – Identification of significant failures and systems identification

Appendix D highlights failures that have been identified from Project B, the Tarka Project – a project containing more significant failures than project A. The identified failures and then selected systems from the Tarka Project will be used as a route to comparison between Project A and Project B in order to test the validity of the selected FSMs as frameworks for investigating factors critical to success in implemented IT projects.

D.1 - Identification of Significant Failures – Project B as compared to Project A

Identified Failures for Comparison

1. Clear and Realistic Objectives – Requirements Engineering System

Reason for consideration

Both Project A and Project B had high level objectives/requirements. Whilst this didn’t seem a problem for Project A, for Project B the high level nature later proved to be more dubious when used to assess what was being delivered against the contract.

Reasons why considered significant enough to justify further analysis

Whilst it was initially considered that the objectives and requirements for Project B were clear and realistic, they seem to be a consistent theme of failure throughout the projects life, from system selection right the way through to issues in User Acceptance Testing.

Project A had fewer issues with their objectives and requirements, and as such delivered a system that met their requirements with minimal issues throughout the project-life cycle. Whilst both projects began with a similar approach of high level objectives and requirements, further analysis may discover why the journeys differed right up to and including the final outcome.

Those in the situations, who would and would not have agreed that it was a failure

Within Project B there is disagreement between Senior Stakeholders and Users as to the clarity and realism of the objectives and requirements. This was particularly the case when considering the final system delivered and how close the Users feel it is to their needs. For Project A, there isn’t the same level of issues, although there was slight resistance from Users not being directly asked about requirements.
2. Performance Monitoring – Project Monitoring and Control System

Reason for consideration

There is a clear contrast between the Performance Monitoring found in the two projects, particularly as Project A employed a number of approaches to make sure performance was to an acceptable standard, something which is lacking in Project B’s approach.

Reasons why considered significant enough to justify further analysis

Project B’s performance monitoring was at best considered poor to the point where Users no longer believed what they were being told, particularly after multiple missed go live dates. There are also instances of concern from Project Team members that what they fed back to the Project Manager was not being reflected in project communications, and therefore the project schedule.

In contrast Project A’s monitoring worked well with the performance being quality assured against the plan, with all claimed progress being checked. Possibly a key point was that those involved in the project were keen to work in an ‘honest and open’ environment.

Further analysis may discover the key reasons as to the marked contrast in Performance Monitoring.

Those in the situations, who would and would not have agreed that it was a failure

In the case of Project B, the Project Manager has stated that performance monitoring was effective, this is in direct contrast to many members of the project team, including developers, testers and business representatives. For Project A, there is a clear agreement on the project that the performance was monitored well, and as such was quality assured throughout the project.

3. Decision Making – Project Management System

Reason for consideration

There are many failings in the decision making process found within Project B, including conflict found through differences of opinion of senior members of the project. This is in direct contrast to Project A, where there is a clear meeting of minds found between those within the project.
Reasons why considered significant enough to justify further analysis

Project B has a track record of poor decisions being made from the start of the project, including not understanding the complexity involved in configuring the purchased package, poorly negotiated contracts and conflict occurring within the main Project Board. Project A was clearly more focused in their approach of delivering a system to meet business needs, and as such decision making was more purposeful.

Those in the situations, who would and would not have agreed that it was a failure

It would be hard to find anyone in Project B who would not suggest that decision making was a problem. There is a lot of evidence to suggest that decision making was poor from the beginning which is why decision making justifiably requires more analysis. Project A differs significantly from Project B, where all involved in Project A would agree that decision making was well judged throughout the project.

4. The Environment – Project Governance System

Reason for consideration

Those involved in both projects felt that past experience was an important factor when considering project success. Whilst this is the case, there is a clear difference in the projects when considering the use of past experience.

Reasons why considered significant enough to justify further analysis

A key to the success of Project A may well be the use of past experience, particularly in selecting the right supplier and also through putting the right people in the right positions. Coupled with this, the company’s culture was fresh and up for a challenge. Within Project B, it was acknowledged that previous experience is important, but all of this was discounted as they suggested they’d never done a project like this before.

Those in the situations, who would and would not have agreed that it was a failure

Many within Project B felt there was no way of learning from previous experience when the project was nothing like anything they’d experienced before. A few members of the project team had a different view, one in particular being a work stream leader who commented that Tarka forgot what they did well on past projects rather than trying to learn from previous mistakes.

Within Project A there seems to be a clear agreement that past experience was important, as they’d bought in the experience from else where to support what was essentially a young company.
5. Resources – Supplier System

There are mixed feelings within Project B as to the adequacy of resources provided on the project. In direct contrast, Project A made sure it had sufficient resource in place to be a success.

Reason for consideration

Project A had sufficient resource, had made sure the technology being implemented was reliable, had an adequate budget and made sure the staff were properly qualified and experienced to do the job. Throughout Project B, resource experience and qualifications was not adequate, essentially because the system being implemented required a niche skill set that was expensive and scarce. The technology may have been reliable; but it was more a problem of finding resource to configure it. Further analysis here would hopefully discover how Project B managed to find them selves in such a situation that would clearly impact the project if not managed well.

Those in the situations, who would and would not have agreed that it was a failure

For Project B, the Project Manager may well consider the project to have been adequately resourced. Whilst Tarka employees would disagree with this, claiming there was not enough TFP knowledge to support them throughout the whole implementation. There is no evidence of disagreement over resource levels within Project A.

D.2 – Systems Selection

System selection has been approached by using the failings found within Project B as the guide to selection. The same systems will be reproduced for Project A to compare and contrast the two projects.

System selection (at a Middle level)

- **System Name** – Project Governance System
  - **Assumed Owner(s)** – Tarka, T-BUS
  - **Purpose** – A system to control the project by providing a framework for decisions to be made through
  - **Perceived Issue/further analysis reason** –
    - Whilst there was a project governance policy in place, it is not clear how this was used within the Tarka Project
    - It is not clear who was actually accountable and responsible for the Tarka Project
    - It is questionable as to whether the framework was logical and robust
System selection (at a High level)

- **System Name** – Project Monitoring and Control System
  - **Assumed Owner(s)** – Tarka, T-BUS
  - **Purpose** – A system to monitor and control the progress of the project.
  - **Perceived Issue/further analysis reason** –
    - There didn’t seem to be a clear understanding of the projects progress
    - Appropriate corrective actions were not taken throughout the project.
    - Performance deviated from plan consistently throughout the project

System selection (at a Middle level)

- **System Name** – Project Management System
  - **Assumed Owner(s)** – T-BUS
  - **Purpose** – A system to manage the successful completion of a system replacement project.
  - **Perceived Issue/further analysis reason** –
    - Resources were not planned, organised or managed well throughout the project
    - Project goals and objectives were not clear.
    - Whilst there was a defined beginning to the project, there was not a defined end, with lack of clarity as to all the project deliverables that made up the system

System selection (at a Middle level)

- **System Name** – Requirements Engineering System
  - **Assumed Owner(s)** – Tarka, T-BUS
  - **Purpose** – A system to determine the requirements to meet the conditions to provide Tarka with a replacement system
  - **Perceived Issue/further analysis reason** –
    - The requirements were not fully documented
    - The requirements were not measurable or testable.
    - The requirements were not defined to a level of detail sufficient for system design or contractual assessment
System selection (at a Low level)

- **System Name** – Resources – Supplier System
  - **Assumed Owner(s)** – Tarka, T-BUS, ORASQL
  - **Purpose** – A system to provide the resources to carry out the Tarka Project.
  - **Perceived Issue/further analysis reason** –
    - The skill level of the people provided to the project constrained the project
    - Whilst the budget was considered adequate for a system replacement project, budget requests were made throughout the project.
    - Resource availability and scheduling were poor on the project; with necessary resources being available at the wrong point in the project e.g. over resourced testing at the start. Under resourced testing at the end.
Appendix E – Interview Script

I want to thank you for taking the time to meet with me today. I would like to talk to you about your experiences on the Nova Project in order to help with my Open University dissertation. Specifically I am looking to explore areas relating to factors critical to the success of IT projects.

The interview should take less than an hour. I will be taking notes during the session and may ask you to repeat answers to make sure I have interpreted them correctly.

All responses will be kept confidential. This means your interview responses will only be used within my research, and as such will only be shared with the Open University in a form that will ensure that any information included does not identify you as a respondent. Remember you do not have to talk about anything you don't want to, and you may end the interview at any time. There are also no correct or incorrect answers, it is your opinion I am after.

Do you have any questions about what I have just explained?

Are you willing to participate in this interview?

__________________   __________________  
Interviewee                   Date

Project Source
Firstly thinking about the viewpoints that were gathered at the start of the Nova project

What departments or stakeholder viewpoints were considered? How much did motives differ between stakeholders in the management of this project?

Acceptance of project
Now I'd like you to think about the opinions of the end users of the project.

In what ways were the views/effects on the end users considered?

How accepting were the end-users of the system change? Why was that? Were the benefits of the project communicated to staff?

Was there any resistance to change? If so, what incentives were given to avoid this? Was it managed well?

How much were the values, beliefs and culture of Avon considered through the project?
How much support did Senior Stakeholders from outside Avon give to the project?

**Requirements**
*Thinking about the requirements and objectives of the projects*

How well developed do you consider that the requirements and objectives of the project were? Were they in any way thought to be ambiguous?

How much did the requirements change throughout the project? If so, how was this managed?

**Planning, scheduling monitoring and control**
*Moving on to the planning and scheduling of the project*

In your opinion, how well was the project planned, monitored and controlled? Why do you say that?

How realistic do you think the schedule was? Did the project finish on its original planned closure date? (if no, why do you think that was?)

*Moving on to think about how the project was monitored*

How was performance monitored and measured? How clear was the performance information provided? (Was it misleading in any way?) How clear do you think the measures of performance were formulated and then used throughout the project?

How were performance information and its progress reported? Were there any key factors used to guide performance monitoring and project progress?

**Project management**
*Now I’d like you to think specifically about the project management function*

How did the project manager and project champion perform in their roles? How did they handle decision making/their responsibilities?

How experienced was the Project Manager? How well do you think they monitored and controlled the project?

Were there any specific project management methods, tools or techniques used in managing the project? (if yes, how well were these used?) Was there a business plan? If yes, was it well implemented?

How were the project risks and issues managed?
When managing the project, how much were past project experiences taken into consideration? (e.g. Managing uncertainty, project politics, considering the interests of everyone)

**Team/people resource**

*Thinking about the others stakeholders in the project*

What was the level of commitment from those involved?

How often did people in senior stakeholder roles change? (if a lot, why do you think this is, and what effect do you think it had on the project?)

How well did the project team carry out the implementation of the TIA system? Were teams/members assigned well to roles?

Were satisfactory resources provided? (e.g. people and tools testing/programming/training)? Was the technology provided reliable? Was the budget adequate? Was properly qualified and experienced staff used on the project?

What was the balance of consideration between human issues and technical issues? (e.g. which were considered more important people or technology?)

**Communication**

*Thinking about the effectiveness of the communication within the duration of the project*

How effective do you think the communication and feedback was managed throughout the project? Are you aware of any communication plan implemented for this project?

What project difficulties, as well as project successes, were communicated throughout the project? (Was there any fear about communicating any bad news?)

**Implementation**

*Thinking back to when the system was implemented*

How easily understood was the underlying technology by both users, and also to developers? How well did staff adapt to the way the system worked? How well did the system fit with the way staff work? (e.g. new users finding it easier than old)

How much do you think the training was adequately delivered? Did the training meet the users needs? How well were training needs thought out?
Success/failure
The last area I'd like to focus on is your thoughts on the overall success of the project, and how those thoughts were reached

Firstly, what factors were used in the management of the project to ensure successful completion of the project?

How clear was this to all those involved in the project?
Finally, in your opinion do you consider the project overall to be a success or a failure? Why do you say that?

Closing Comments

Is there anything more you would like to add?

I will be transcribing my notes immediately after this interview has finished. From this point I will be analysing the information and using it as part of my study into investigating critical success factors that have been accepted for the management of an IT project. I will be submitting the results as part of my final dissertation project in March 2011. If at any point you wish to review the information you have provided I will be happy to provide you with a copy of my notes.

Thank you for your time.
Appendix F – Methodology for comparison of Systems using the FSMs

Appendix F details the approach for the comparison of the modelled systems in the format of the FSM’s and the FSM it is self (a model of a robust system which is capable of purposeful activity without failure) to reveal discrepancies or comments about the considered situations. (Fortune and Peters, 2005, Chapter 7)

Methodology

For Fortune and White’s (2006) Framing Formal System Model the following components will be considered –

- Goals and objectives – Clear realistic objectives, Strong business case/sound basis for project
- Performance monitoring – Effective monitoring/control, planned close down/review/acceptance of possible failure
- Decision-maker(s) – Support from senior management, competent project manager, strong/detailed plan kept up to date, realistic schedule, good leadership, correct choice/past experience of project management methodology/tools
- Transformations – Skilled/suitably qualified/sufficient staff/team
- Communication – Good communication/feedback
- Environment – Political stability, environmental influences, past experience (learning from), organisational adaptation/culture/structure
- Boundaries – Project size/level of complexity/number of people involved/duration
- Resources – Adequate budget, sufficient/well allocated resources, training provision, proven/familiar technology, good performance by suppliers/contractors/consultants
- Continuity Risks addressed/assessed/managed
- Other factors – User/client involvement, different viewpoints (appreciating), project sponsor/champion, effective change management

For White and Fortune’s (2008) project-specific Formal System Model the following components will be considered –

- Environment distorts - Failure to: manage uncertainty; learn from past experience; recognise political influence; take account of the effect of inflation; consider national interests
- Wider system boundary - Failure to: consider effect/views of end-users
- Wider system (places project system in context) - Failure to: consider context; consider values, beliefs, culture which “surrounds” project; appreciate motives of organisation in which project is placed; consider effect of resistance to change; consider effect of established communication paths; consider effect of company structure, policy, culture and incentives
• Formulates initial design of - Failure to: identify requirements/develop unambiguous objectives; produce business plan; produce realistic schedule; establish tracking systems; formulate clear measures of performance; develop communication plan
• Provides resources and legitimates area of operation - Failure to: supply satisfactory resources; provide adequate/sophisticated technology; provide reliable technology; provide adequate budget; employ/use properly qualified/experienced staff
• Legitimates area of operation - Failure to: adapt new systems to old ways of working; understand underlying technology Makes known expectations - Failure to: control project; gain commitment of those involved; make clear that consensus is impossible to achieve; ensure human issues considered before technical issues; communicate benefits of project to staff
• Arrows linking systems/subsystems and feeding back to wider system/subsystems and feeding back to wider system/environment (communication channels) - Failure to: provide effective channels of communication; acknowledge projects do not follow liner route to completion; acknowledge project characterised by complexity
• System boundary - Failure to: consider project from different viewpoints – at least from organisation, project team, and end-users; trust opinions provided by wider system
• Decision-making subsystem - Failure to: assign teams; decide on training needs
• Decides on transformations - Failure to: direct teams
• Provide performance information - Failure to: provide adequate training; define underlying technology
• Performance monitoring subsystem - Failure to: measure/monitor progress; identify misleading information; identify groupthink; monitor state of components
• Reports to - Failure to: inform on state of components; report misleading information; report on progress
• Supplies performance information from system to wider system - Failure to: report on progress; inform organisation that project should be abandoned if problems insurmountable without fear of admitting defeat
• Attempts to influence environment - Failure to: influence end-users; persuade end-users to accept change