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BENEFITS REALIZATION IN IS/IT PROJECTS: A CASE STUDY

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Abstract

In this paper we have explored the extent of adoption of benefits-driven approaches to IT investments through an in-depth case covering three projects within one organisation. We have found the framework of benefits competences and practices put forward by Ashurst et al. (2008) was valuable for analysing the case and developing priorities for improvement. The paper also makes a contribution by exploring the relationship between recent work on benefits-driven approaches to IT with earlier work on project success factors.

Keywords: Project Success Factors, Benefits Management, Benefits Realisation Competence, Benefits Practices

1.0 Introduction

IT is pervasive, and many organizations are investing heavily in IT for growth and competitive advantage (Alshawi et al, 2003). However, recent research (Standish Group International, 2001; The Royal Academy of Engineering 2004; Taylor, 2000) shows that 70 - 85% of IT projects fail to meet their objectives. This places increased pressure on IT managers to justify rising IT expenditures, and to find reliable ways to ensure that the business benefits from IT investments are actually realized.

Benefits are only realized through IT use, and as such, benefits need to be managed throughout the entire project lifecycle. Benefits Management is defined as: "*The process of organizing and managing such that the potential benefits arising from the use of IS/IT are actually realized*," (Ward et al, 2007). Benefits Management (BM) literature highlights the process for benefits identification and realisation, but there is little literature on the organisational capabilities necessary to manage benefits for IT projects. Research by Johnston and Carrico (1988) found that internal capabilities were critical to successfully utilize IT strategically. Specific BM capabilities would be

key to implementing a successful BM process, and identifying and realizing opportunities to improve performance.

Ashurst et al. (2008) have identified a benefits realization competence framework which identifies four distinct competences – Benefits Planning, Benefits Delivery, Benefits Review and Benefits Exploitation, each associated with numerous distinct practices, which should enhance benefits realization within organizations. This framework was developed through research in various types of IT projects across various organizational types and industries.

The objectives of the research were to:

- Explore the value of the framework of practices put forward by Ashurst et al. (2008) as a way to assess current benefits realization competences and identify areas for improvement.

- Explore the relationship of recent work on benefits realization with wider perspectives on project success factors and organisational learning, and consider any implications for the development of benefits realization competences within an organisation.

The case study organisation has a high reliance on information systems (IS), and IT projects are constantly being undertaken. Management and users alike are of the view that the systems implemented do not deliver on the benefits identified. For this research, case analysis was performed to identify the challenges the company is facing in this area. The organisation was used as a single case within which a selection of completed IS projects were used as embedded cases. Three projects, which vary in organisational use, length of time to implement, project management approach and perceived level of success and benefits realisation were selected.

The remainder of the paper is organised as follows: firstly we present a brief review of relevant literature, specifically putting previous work on project success factors, and organisational learning in the context of benefits realization. Then we describe the research methods adopted for the case study. Findings are presented in two stages: we discuss key factors relating to the three projects; and then explore the implications for the benefits realization competences of the organisation. Finally we discuss implications for practice and research.

2.0 Literature Review

For years there has been academic debate on whether IT can provide business value. Carr (2003) states that IT's strategic potential declines as it becomes accessible and affordable to all, and is becoming more of a commodity essential to business, with little impact on sustainable competitive advantage. His position is based on resource based theory, which states that for a firm resource to hold the potential of sustained competitive advantage it must be valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991) According to Carr, IT's high replicability greatly reduces any advantage a company can gain from IT use over its competitor. His assumption is that the technology resource alone confers the advantage. Brown and Hagel (2003) also subscribe to resource based theory, and agree that IT by itself does not confer strategic differentiation; however they argue that the differentiation lies in the new practices (capabilities) IT enables, which can lead to sustainable competitive advantage. Tiernan and Peppard (2004) support this view, stating "*value from IT emerges only through how it is used within the organization, both operationally and strategically*. "

Numerous definitions exist for resources, competences and capabilities. The ones used for the purpose of this research are those identified by Ray and Ramakrishnan (2006). Their definitions are as follows: "*Resources are defined as the tangible and intangible assets of a firm which can be drawn upon by the firm when required to achieve its objective(s). Competence is defined as a combination of firm-specific resources towards achieving specific organizational objective(s). Capability is defined as a complex combination of an appropriate set of competences towards achieving specific organizational objective(s). "*

Johnston and Carrico (1988) suggest, based on research in a wide cross section of industries and involving both business and IS managers, that successful IT projects depend on "*developing a set of internal capabilities that extends beyond the IS function"*. The IT Business Value Model (Melville et al, 2004) highlights this graphically, depicting that the interrelations between IT resources and organizational resources produce business processes which impact on business process performance, which subsequently impacts on organizational performance. Empirical research by

Peppard et al (2000) also supports the view that information competences are organization-wide, as those necessary to deliver value are "*likely to transcend functional boundaries"*, having elements in both the business and IS functions; they are organizational capabilities, not solely IS capabilities. Similarly, Ward and Peppard (2002) suggest that IS competencies do not reside solely within the IS function but must be organisation wide for greater success.

IT itself delivers little value; the benefits expected from any IT implementation are unlikely to emerge automatically. Benefits sought must first be identified, and ownership and responsibility for the realization of each benefit must then be assigned. As Mieritz (2008) states, "*IT can help the business estimate potential benefit, but the business managers are responsible for benefit realization*." Jurison (1996) agrees, stating "*IT benefits depend to a large degree not on the size of the investment, but on management effectiveness in converting the investment into business results."* Changes in ways of working must also be identified. Plans must then be put into place to ensure realisation of these benefits. Jurison (1996) agrees that IT benefits must be identified, measured and managed in a systematic way if true competitive edge is to be gained through the use of IT.

According to Ward and Peppard (2002), BM is one of the IS competencies which make up the organizational IS capability. While definitions are given for each competency within the model, Ward and Peppard say little about the activities which underlie these competencies, and would aid in the development of a BM capability within an organization. Ashurst et al. (2008) have identified a benefits realization competence framework which identifies four distinct competences – Benefits Planning, Benefits Delivery, Benefits Review and Benefits Exploitation, each associated with numerous distinct practices, which should enhance benefits realization within organizations. This framework was developed through research in various types of IT projects across various organizational types and industries. Although the Ashurst et al. (2008) framework draws on a wide range of previous literature, the links with previous work on project success factors is not explicit and we now start to explore those links.

2.1 Project Success Factors

Extensive research has been carried out to explore the factors contributing to project success, with only limited agreement among the different authors. Fortune and White (2006) reviewed 63 publications, which drew on a variety of data sources, encompassing theoretical as well as empirical studies of successful and unsuccessful projects. Their research identified the three most cited factors as (i) senior management support; (ii) clearly defined realistic objectives; and (iii) producing an efficient plan. However, only 17% of the publications reviewed cited all three factors. Pinto and Prescott (1988) suggest ten critical factors related to project implementation success. Their top three factors – project mission, top management support, project schedule - mirror the findings of Fortune and White. Hartman and Ashrafi's research (Hartman and Ashrafi, 2002) into projects in the IS and IT industries in Canada identify these three factors within their top ten list, but none are within the top three. Their top three is defined as sponsor approval, sponsor consultation and effective communication within the project team. Although there are variations in ranking, and factors among all three sets of authors, the top lists are very similar. Appendix A lists the top 10 critical success factors by author.

IT project success has been consistently low for the past thirty years. Lack of attention to the human and organizational aspects of IT has been cited as a major contributing factor to the low success rate of IT projects (Ewusi-Mensah and Przasnyski, 1991; Clegg et al, 1997; Brynjolfsson and Hitt, 2003). Literature (Johnston and Carrico, 1988; Mata et al, 1995; Feeney and Willcocks, 1998; Peppard et al, 2000) suggests that an organization must develop capabilities within the IT department, and organization wide, in order to improve the success rate. Learning from experiences is seen as key in developing capabilities in IT projects (Lyytinen and Robey, 1999), yet this practice is still largely neglected.

2.2 Organizational learning

A learning organization, as defined by Garvin (1993) is an organization "skilled at creating, acquiring and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights." Garvin (1993) states "continuous improvement requires a commitment to learning." According to him, becoming a learning organization requires policies and programmes to be in place, as well as concrete

changes in behaviour. The changes are key, for as he states, "without accompanying changes in the way work is done, only the potential for improvement exists. "

David Nadler (1989) makes an interesting proposition that "at the core of effective organizational learning is a mind-set that enables learning-efficient companies to recognize the value of productive failure as contrasted with unproductive success." According to him, productive failure is one that "leads to insight, understanding, and thus an addition to the commonly held wisdom of the organization." While an unproductive success occurs when "something goes well, but nobody knows how or why." What he is suggesting is that both failures and successes should be analyzed in order to create productive successes "where we know what we're doing right, and where we can take the lessons and apply them elsewhere. "

This is widely recognized, but is it widely practiced? With an average success rate of 25% on IS projects, one has to wonder. According to Lyytinen and Robey (1999), IS development projects "*remain susceptible to failures because organizations fail to learn from their own experiences."* Ewusi-Mensah and Przasnyski (1991) surveyed top IS executives from varied organizations in Los Angeles and Orange Counties to determine the factors which influenced abandonment of IS projects. Although the response rate was low, 8.7%, (which can probably be attributed to the sensitive nature of the information being sought) the results highlight that organizational factors, including organizational, behavioural and political issues, and end-user related issues can be blamed for a significant part of the abandonment dilemma. Extensive qualitative and quantitative research across a wide cross-section of industries (Brynjolfsson and Hitt, 2000; Clegg et al, 1997) has also highlighted that failures in IT are rarely purely technical in origin, and success from IT results from its implementation as an essential component of a broader system of organizational changes, including new business processes, new strategies and new skills, which increases productivity over time. Ewusi-Mensah and Przasnyski (1995) suggest that organizations should institute formal mechanisms, e.g. post implementation reviews, for uncovering causes of failed or abandoned projects, and communicate the lessons learned widely, to aid in organizational learning. This would create *productive failures* in Nadler's words.

2.3 Benefits perspective

Research within the UK (Ward et al, 2007), Switzerland (Schwabe and Bänninger, 2008) and Australia (Lin and Pervan, 2003), found that only a minority of organizations adopted a comprehensive approach to managing benefits. They also found the focus on benefits was typically during the early phases of a project as part of the justification process, with benefits then ignored during the following project phases. The responsibility for benefits in both Australia and Switzerland studies is assigned approximately 50% of the time, to senior management, while in the UK study this figure fell to 36%. In terms of post implementation reviews, the UK and Australia studies revealed 29% and 23% of organizations respectively did not carry out any form of review. In all three studies, only half of the respondents who carried out reviews assessed benefits delivery post implementation.

Although the need for a comprehensive BM approach has been identified, the majority of literature on the topic details the general steps necessary, with little said about the specific activities and necessary competences which would aid in the development of a BM capability within an organization. Ashurst et al (2008) have identified a Benefits Realization Competence Framework, which identifies four distinct competences, each associated with numerous distinct practices.

With the IS/IT project success rate consistently low over the past thirty years, one begs the question "If we are consistently 'failing', why aren't we learning from our failures?"

3.0 Research Methods

The research was carried out as participative project with the goal of contributing to the organisation as well as making a wider scholarly contribution. The main focus of this project for the organization was to provide insights into the factors hindering the realization of benefits from IT investments. The project was primarily an exploratory one, aiming to identify (i) the strengths and weaknesses of current project approaches and (ii) how benefits to be accrued from IT investment projects are identified and managed. Additionally, using the Benefits Management Competence Framework identified by Ashurst et al. (2008), an evaluation of the competences within the

company to successfully realize benefits was performed. By exploring the strengths and weaknesses of current project approaches used within the company, the research identified key issues, and recommendations for improvement within the case organization. In term of a wider contribution to knowledge the objectives of the research were to:

- Explore the value of the framework of practices put forward by Ashurst et al. (2008) as a way to assess current benefits realization competences and identify areas for improvement.

- Explore the relationship of recent work on benefits realization with wider perspectives on project success factors and organisational learning and consider the implications for the development of benefits realization competences within an organisation.

The research was designed as a case study in a single organisation. According to Yin (1981) "as a research strategy, the distinguishing characteristic of the case study is that it attempts to examine: (a) a contemporary phenomenon in its real-life context, especially when (b) the boundaries between phenomenon and context are not clearly evident." Given the limited previous research, and the exploratory nature of this research study, case studies were an appropriate selection. Also as Blumberg et al. (2005) state, with relation to case studies, "an emphasis on detail provides valuable insight for problem-solving, evaluation and strategy", which ties in well with the purpose and identified outcomes of the study.

Purposive sampling was employed in selecting three projects to be analyzed. As Bryman (2004) states, "*such sampling is essentially strategic and entails an attempt to establish a good correspondence between research questions and sampling*." Project 1 and Project 2 were two extreme cases – Project 1 is seen as somewhat of a benchmark for the company, highly successful, while Project 2 was never successfully completed. Project 3 was selected as a more typical case. By comparing and contrasting these heterogeneous projects, key themes were explored which illuminated the research questions.

Project 1

Project 1 was a six-month project started in September 1999. The project involved implementing an IS solution comprising of two integrated systems. Clear objectives and benefits were identified for the project prior to its approval. The justification was prepared and submitted by managers from the business side. These benefits were both tangible and intangible, with specific targets set. Objectives were outlined as follows:

- The ability to tie together the flow of work within the organisation.
- Reduced labour costs through better planning.
- The ability to prioritize and schedule work more effectively.
- Lower material inventory through better project scheduling.
- More timely and accurate job closures.
- Better monitoring and reporting on work progress
- Improved employee productivity.

Project 2

Project 2 was formally launched in June 2002. The primary objective of the project was "to develop an activity based cost of service model that will show how performance of activities against set targets, impact on the cost of service to the customer, and to provide insights as to how performance could be improved, as well as the implementation of an organization-wide business intelligence reporting system" A number of benefits were identified prior to the project's approval. Most of these were intangible, with no targets associated; a key one identified was 'improving the management decision making processes'.

Project 3

Project 3 was launched in June 2006 and took two years to implement. It was implemented months after the initial scheduled date, and over budget. The purpose of this project was to migrate one of the legacy systems to a new platform that would provide features and benefits as the business grows and responds to new challenges in its market. Within the Project Charter, strategic business alignment was justified, and a number of project objectives along with targets were identified, most of which were associated with the technology solution. Examples are:

Objective	Performance Measures
System installed on time	The system should be completed as scheduled with a 5% variance allowable.
System installed within budget	The system should be completed on budget as planned with a 5% variance allowable.

Project Objectives Sample

The benefits identified to be gained from the system were both tangible and intangible, but no targets were specified for these. These were outlined in the project kickoff presentation as follows:

- Increased efficiency.
- Increased customer satisfaction.
- Reduced customer complaints.

Table 1: project outlines

As stated by Saunders et al (2007), unstructured and semi-structured interviews can be very helpful to seek new insights. Bryman (2004) concurs, and suggests that in multiple-case study research, structure is needed to facilitate cross-case comparability. For this reason, semi-structured interviews were employed. Interviews were carried out with key players involved in the IS projects at all levels, including project sponsors, project managers, and project members. A total of seven interviews were performed, with some interviewees being involved in more than one of the projects analysed.

Structure for these interviews was provided by the literature. A framework was developed based around six key themes - the business value of IT, project success, benefits planning, benefits delivery, benefits review, benefits exploitation, and questions were keyed to these dimensions. The interviews had a structured element with questions keyed to themes that emerged from previous interviews or from documents and reports. The unstructured element allowed interviewees to both identify and explain, in their view, the key constructs.

An interview guide was developed and a pilot interview was performed to refine the interview guide, and assess and improve the researcher's interview style. There was flexibility in the order and number of questions depending on the content and flow of conversation. Interviews were recorded and subsequently transcribed, and notes were taken for all interviews. Company documents were used as a secondary data source, to validate the findings of the primary research. According to Blumberg et al. (2005) different sorts of evidence provide different measurements of the same phenomenon and increase the validity. To enhance validity, multiple sources of evidence in the data collection phase were used (triangulation of documents and interviews) to reduce researcher bias, and establish a chain of evidence. Documents examined include project charters, project schedules, change management plans, communication plans, and progress reports.

After the transcription process, each interview was coded based on themes emerging from the interview itself. A total of thirty-nine themes were coded. The qualitative

analysis software program, ATLAS.ti WIN 6.0 DEMO version was used to assist with the analysis, allowing quick aggregation and comparison of data.

Based on previous IS based research (Peppard, 2001; Koners and Goffin 2007), case analysis was conducted in three main stages in order to identify the strengths and weaknesses of the IT project approaches, how benefits are identified, tracked and monitored, as well as assess the BM capability. Data from each case was analysed separately, based on the coded themes, to give a complete picture of the BM and IT project approach to each project. The same data analysis framework was used for each case. Evidence from the different interviews was triangulated with evidence from the documentation. The Benefits Management Competence Framework developed by Ashurst et al. (2008) was used as the criteria to evaluate the levels of BM competences present. The practices recommended for BM were compared to what was practiced within each of the three projects. Then in a process of data reduction each case was written up in detail by one of the researchers and then reviewed by a second researcher. This case level analysis is not included in this paper because of space constraints.

An iterative process resulted in a final case summary and cross-case evaluation. Comparisons were then made across the three projects to determine where similarities and differences exist to identify key factors influencing success / failure. As suggested by Ashurst et al (2008), the within case and cross case analysis was conducted in multiple iterations to fully *understand the whole*. Comparison of the evidence from the analysis with existing literature was also performed to further inform the analysis.

4.0 Findings

4.1 Project analysis

There are quite a few similarities shared among these three projects. The project governance structure is similar, with a steering committee present in all three instances, and the Project Sponsor sitting on the committee. The project team structure is also similar, with members being drawn from the business and IT, and the use of consultants to assist. An offsite Project Office was utilised for the duration of all three projects. These are the key strengths within the present project approach. The

governance framework helps mitigate the risks associated with IT projects, while the combination of internal business and IT expertise along with external consultants helps the development of an IT solution, which meets business requirements. The offsite location ensures resources concentrate fully on the project.

On analysing the three projects, a number of factors are cited as having influenced the outcome of the projects. These include management support, the project team – composition and skills, change management, user involvement, communication, consultants, and technical issues. In terms of project team resources, the level of skills and decision-making authority of members varied from project to project. The level of user involvement, change management, and communication techniques also varied. These would have been mainly attributed to Project Sponsor and Project Manger actions, and according to one Project Manager interviewed, *"much is dependent on the Project Manager and the Project Sponsor"*. Management support also played a key role.

The table in Appendix B presents a comparison of the effects of each of these factors on the project outcome, + denotes a positive effect, - denotes a negative effect, and | denotes no effect. The factors are listed in order of importance based on the percentage frequency they were cited in the interviews.

Project 1 was deemed highly successful, and this can be attributed to the management support received, the project team skills, as well as the level of user involvement. The skills of team members were seen as key, especially their business understanding and decision making authority. Project 2 was abandoned, mainly due to technical issues as well as the disruption of the project team. Lack of support from senior staff, and lack of change management skills also played a part. The issues with Project 3 affected it mostly by causing delays. Part-time resources, team members with a partial business understanding, and user involvement in the latter stages meant things took longer than expected. However, a technology solution was successfully implemented. The skill set of the team was seen as a major factor contributing to the outcome of the project in all instances.

Of the seven factors highlighted in the analysis, six are listed within the table of project success factors (Appendix A), with the exception of consultants. These may be subsumed within the authors' project team factor. However, for the purpose of this research they were separated to examine the configuration and impact of internal and external expertise independently.

Regarding the external expertise, the level of consultant experience within the sector of the organization was found to be lacking in some cases. Their knowledge of the software was beneficial; however knowledge transfer was not always as complete as expected. The importance attributed to knowledge transfer demonstrates the company's commitment to developing its internal expertise. It is therefore not surprising that the internal expertise was the most cited success factor.

The skills highlighted as necessary were a thorough understanding of the business – processes, information flows and culture; the ability to be a change agent; technical IT skills; and the decision making authority to action recommendations for changes. As found by Peppard et al (2000), these skills should be organisation wide, residing within both the business and IS functions. Given the importance of skills to the project outcome, the level of benefits realization competence within the organisation was examined to determine if this contributed to the lack of benefits realization experienced. Results and areas for improvement are discussed in the next section.

For Project 1, the supervisory level, an in-depth business understanding of the staff was highlighted as essential to the project. Their understanding of IT and how it could assist in meeting their requirements also was beneficial. For Project 3, this level of expertise was not in place, and in hindsight, it is thought that such expertise would have greatly assisted in a more successful outcome. How is it that after success with this approach so many years ago that it was not followed in more recent projects? One Project Sponsor laments:

> *"I am still amazed that we had a project that worked and sometimes we don't always follow that methodology."*

The lack of a post project review, with findings communicated widely to encourage organisational learning can be listed as an important factor. This is the major weakness within the current project approach. Such reviews should aim at developing best practices for project management within the company, and promote learning from experiences, thereby reducing unproductive successes. They should also measure the achievement of benefits with an objective of putting steps in place to keep extending benefits accrued from system use.

The reasons cited for the absence of post-implementation reviews are a lack of resources and time to conduct the evaluation; it is not seen as a priority once the IS system has been implemented. Time after implementation is usually focused on correcting any technical issues being experienced. According to Zedtwitz (2002) time is the most often stated reason why post-project reviews are not conducted. As he states, "people are unlikely to devote time and effort to yesterday's problems since natural incentives favour moving ahead to the next problem instead of spending valuable time on reviewing a just completed project." It is recommended that a post implementation phase be included as part of the project lifecycle, and as such the Project Manager would be responsible for ensuring that a post implementation review is carried out. The post implementation review document should be identified as a key project deliverable.

Within the organisation, the lack of post implementation review is largely a cultural issue. Benefits are loosely identified at the project justification phase, as concrete justification is not presently enforced. Evaluations of projects, IT or otherwise, are typically not done, as they are not seen as priority. Although IT projects are led by the business, the projects are still perceived by the business as IT projects, hence there is concentration on the implementation of the IT solution, and not on the achievement of benefits which the IT solution is implemented to provide. Also, due to the lack of a competitive environment there is not an emphasis on continuous improvement. Leadership has a critical role to play , and those that lead and manage IT projects must themselves focus on business benefits and not IS delivery. Presently this is not the case. There is no accountability for project results or benefits - once the IS solution is implemented the project is viewed as complete. However, the need to shift thinking has been acknowledged by senior management, and this is a work in progress.

4.2 Assessment of Benefits Realization Competences

All interviewees agreed that IT has significant business value, by promoting efficiency and aiding in improved decision making. However, it was believed that the business was not realising the true benefits from its systems. As one Project Manager remarked:

"Generally very successful in implementing IT projects from a transactional perspective but less successful in realizing the full potential benefits from a strategic perspective given the level on expenditure on IT projects over the years"

A technical lead concurred, stating:

> *"In terms of the technical aspects I think they have been very successful. So typically the applications do what they were designed to do. Where it comes to the users I would say there has been minimal success."*

So after projects are completed, software is functioning, and the system is in use, there seems to be difficulty in maximizing benefits from the technology.

The framework of practices for Benefits Realization proposed by Ashurst et al. (2008) was used to evaluate the competences at the organisation to help determine the present benefits realization capability. Four tables (Appendices C to F) detail the practices related to each of the four distinct competences – Benefits Planning, Benefits Delivery, Benefits Review and Benefits Exploitation within the organisation.

Benefits Planning

Although some benefits planning practices were identified within the company, they are not widespread (see Appendix C). The process of benefits identification needs to be refined, and measures, targets and benefit owners identified (BP3). Due to the lack of emphasis on benefits post implementation, although project members are actively involved during the project, their mandate typically ends soon after implementation and is usually focused on getting the software to function as required. Their

responsibilities do not specifically address benefits realization, as this is not addressed as part of the project planning.

As former British Prime Minister Winston Churchill once said, "*Those who plan do better than those who do not plan, even though they rarely stick to their plan*". Planning for benefits is essential, and the extent of planning prior to project approval must be more in-depth, and focused on benefits (BP8). Any potential initiatives should have business objectives, stakeholders and benefits identified, measures and time frames for benefits realisation, and associated costs explicitly stated. The necessary business changes, their impact, individuals responsible for them, and resources required also need to be detailed. The use of a single, mandatory, standardised business case template was recommeded to the organisation, allowing projects to be easily reviewed, compared to others, and prioritised.

Benefits Delivery

There was no focus on specific benefit targets throughout the project lifecycle and the benefits delivery competence is weak (see assessment of practices in Appendix D). The need to assign responsibilities for benefits is highlighted (BD2) and as a result there was a lack of business leadership. The areas of business change leadership, and specification and implementation of organizational changes need to be geared more towards change for the achievement of benefits. Presently the focus is on changes necessary for the software to function within the environment.

The delivery of benefits is highly reliant on the individuals involved in the process. The leaders and project team members have a pivotal role. The process requires a governance framework with a focus on realizing benefits. The present governance framework should be extended to include benefits owners, and specific role descriptions developed so everyone understands their mandate. These individuals will be charged with leading the BM process, and it is important that they possess the requisite communication, engagement, and change management skills. It is therefore important that core project members are trained in these areas.

Benefits Review

As there is presently no formal post-project review process (BR3/4) within the company, it is not surprising that no benefit review competency exists (see Appendix E). This is critical, as it affects the ability to learn from projects and extend benefits.

Throughout each project, reviews should be held to determine progress to achievement of benefits. As Peter Drucker suggested, "*Follow effective action with quiet reflection. From the quiet reflection will come even more effective action*." Regular reassessments during the project lifecycle should be conducted, and action taken where necessary to maximise benefits. After implementation, there is typically a lag before benefits begin to be realised. Benefits-focused post-implementation reviews must be built in as part of the project process, and the responsibilities of individuals in this process should be addressed as part of the governance framework. These typically transition from monthly to quarterly to annually as business changes become more stable and embedded into day-to-day operations. The findings of these reviews should be communicated widely to facilitate organisational learning, and develop best practices.

Benefits Exploitation

The benefits exploitation competence is very low (see Appendix F) with no clear ownership for ongoing benefits realisation or measurement (BE1/2). This is consistent with the general low level of benefits realization competences. It follows that if planning for specific benefits is suboptimal, and there is no focus on benefits throughout the project lifecycle, and no benefits review process, then exploitation of benefits would prove difficult. Once again the significance of benefits owners to drive the process of benefits exploitation is underscored.

Overall competence evaluation

There is a belief in the organisation that the IT projects undertaken have been moderately successful, but there is no evidence to either substantiate or disprove this claim due to the lack of benefits reviews (BR3/4). It is true that the projects were typically result in a successful IT solution implementation, but in the absence of

project evaluations it is not known to what degree these projects meet their stated objectives. The lack of post-implementation review is a cause of concern and needs to be addressed, as it restricts organisational learning from IT projects.

The key strengths found are (i) the presence of a governance framework which helps to mitigate the risks associated with IT projects, (ii) the combination of external and internal business and IT expertise on the project team, and (iii) the use of an offsite project office to ensure resources concentrate fully on the project. We recommended that the project governance is modified to focus on benefits realization.

Research by Ward et al (2007) showed the top five differentiating practices in successfully delivering benefits. These practices are performed during the planning and review phases and require great improvement at the case study organisation. Table 2 lists these and comments on their existence.

Practice	**Present**	**Comment**
Transferral of lessons learned	x	Individuals learn from their experience, but it is not documented and shared widely.
Evaluation and review of organizational changes	x	Evaluations of projects and their outcomes is not common practice
Development of benefit delivery plans	x	Emphasis is on technology delivery and not benefits delivery
Evaluation and review of benefits delivery plans	x	Emphasis is on technology delivery and not benefits delivery, and evaluations of projects and their outcomes is not common practice
Development of organizational change plans	√	Plans are developed but changes are targeted towards successful implementation of the software solution, not benefits realization.

Table 2: Top Five Most Differentiating Benefit Management Practices

Comparison of present practices with the benefits realization competence framework proposed by Ashurst et al. (2008) confirmed that the BM competences within the company are quite low. The framework although quite in-depth was simple to apply and provided insights to BM best practices. Within the organisation, benefits are typically identified at the beginning of the project and used as part of the justification.

No targets are typically identified for these, and therefore are not monitored. The focus is on delivery of an IT solution rather than the delivery of business benefits. The absence of benefit reviews hampers the exploitation of the IS solution in order to fully maximize benefits. We recommended that the company perform a pilot of the Benefits Management framework on a few IT projects in order to develop a process suitable for its requirements, and then establish a consistent Benefits Management approach for all IT projects.

4.3 Benefits Realization and Project Success Factors

Table 3 illustrates how each of the project success factors (Appendix A) relates to the practices and competences for Benefits Management. The linkage is based on our analysis of the case.

Success Factor	BM Phase	Role in BM Process
Project Team	Planning Delivery Review Exploitation	The project team is critical to delivering benefits. During the planning phase their role is to assist in stakeholder analysis, defining benefits and developing the benefits realization plan. During delivery their focus is on the changes necessary to realize benefits and engaging stakeholders to achieve this. During review their input is crucial for identifying lessons learned. And as key resources from the beginning of the project, would be valuable in identifying areas for further exploitation of benefits post implementation.
User Involvement and Communication	Delivery –BD3	Communication and user involvement are critical to ensuring that there is understanding of benefits and acceptance of changes necessary to realize them.
Change Management	Delivery –BD4 and BD7	Changes to processes, structures, roles, etc. need to be specified and implemented.
Management Support	Delivery –BD2	Management must actively support and lead the benefits realization process as a whole. In terms of the delivery phase, management, particularly the Project Sponsor must drive the process, ensuring the focus of the project is on benefits realization.
Consultants	Planning – BP7 Delivery –BD4	Consultants assist during the planning phase by providing input into the capability of the technology. During delivery they can also provide insight into best practices and recommend changes based on requirements, and benefits identified.

Success Factor	BM Phase	Role in BM Process
Technical Issues	Planning – BP7 Review – BR5	During the planning phase, the design of the IS solution is established, based on the capabilities of the technology. On completion of the project, a review is done to determine the contribution to the corporate IS/IT architecture, the strategic alignment and implications for future projects.

Table 3: linking project success factors with benefits practices

The project success factors literature has provide a useful element of the analysis and have been complementary to the framework of practices for BM. What the success factors approach does not provide is: a clear focus on benefits; and secondly specifics on what to do.

If they are used in the context of IT projects focused on the delivery of benefits, the success factors for successful project completion can assist with the successful realization of benefits. This necessitates the focus on exploiting benefits after implementation of the IS solution. The human resources involved have been identified as critical to both project success and benefits realization, and governance has a major role to play. The present structure – Steering Committee, Project Manager, Project Team - is good, however the roles need to be clearly defined. By outlining what is expected from each individual role, and defining processes to be followed, an approach to projects which focuses on maximising benefits can be developed.

4.4 Development of benefits competences through organizational learning

A successful BM capability requires development of BM competences. According to Ward and Peppard (2002), a competence is developed through the underlying skills, knowledge and experience, both business and technical, as well as the behaviour and attitudes of the human resources. The absence of a benefits-driven post implementation review means there is no driver for organizational learning from either successful or failed projects.

5.0 Implications for Practice

Through an in-depth case study exploring current BM practices across three projects within an organisation, this study confirms several findings reported in previous research and also raises issues that are less well covered. There was no formal BM

methodology in the organisation: also benefits are identified early on for project approval and not tracked throughout the project; benefits owners are not identified; and post implementation reviews are not carried out.

This research highlights the fact that to maximize benefits from IT one has to go beyond the typical project lifecycle and develop BM competences, within which the project lifecycle is only a part. Organisations may find that they accrue more benefits when they adopt such an approach.

People play a central role within this process. Not only must individuals possess BM capabilities, change management capabilities are necessary to achieve buy-in, and without management support it will be an uphill battle The mandate to maximize benefits does not rest with the IS department alone, and business and IS must come together for effective benefits realization. Managers, IS and business alike, must be proponents of BM and implement initiatives to develop BM competences. Of utmost importance is the need for a sound governance structure, detailed planning and post project reviews, with the aim of learning, accumulating knowledge, and further developing competences.

6.0 Conclusions

BM is one of the IS competences which make up the organizational IS capability (Ward and Peppard, 2002). Most of the research surrounding BM has been focused on assessing current practice within various contexts, e.g. Ward et al (2007) in the UK, Schwabe and Bäninger (2008) in Switzerland, and Lin and Pervan (2003) in Australia, but not much is said on the specific practices which underpin a BM capability. These studies have highlighted that businesses believe that BM is critical, but the adoption rates of BM practices are quite low, and satisfaction rates with current BM practices is even lower.

Ashurst et al. (2008) developed the Benefits Realization Competence framework, which details Benefits Realization practices necessary to develop a Benefits Realization competence, and ultimately a Benefits Realization capability. This framework was applied during this study to assess the general Benefits Realization

capability within the organization. This was useful for identifying general practices, which would assist in the benefits realization effort and in developing recommendations for action by the case study organisation. Further work developing the framework and testing out its use as a diagnostic tool, in action planning and developing enhanced competences would be valuable.

Ashurst et al. (2008) note that Benefits Realization practices are underpinned by individual knowledge, skills, experience, and evidenced through their behaviour. This project highlighted the criticality of the skills of project team members, and an appropriate governance structure, with well-defined roles and responsibilities, in order to guide and focus the process. To date, the literature has not defined a recommended BM governance structure, with not only roles and responsibilities but also specific requisite skills for each role. Further research in this area would be valuable.

This exploratory project provides preliminary evidence that recent work on benefits realization is consistent with previous work on success factors, but is differentiated in two important respects. Firstly, BM requires a shift in mindset to focus the projects specifically on benefits: which are enabled by business changes and delivery of an IT solution. Secondly, the framework of benefits realisation practices goes beyond work on success factors by providing specific guidance on what to do linked to the different competences and phases of a project. It would be value to explore both these areas of changing mindset and adoption of new practices in a programme of action research to develop BM competences.

The organisational learning perspective has been highlighted as of critical importance. This is well represented in the framework of benefits realisation practices but remains a major ‘knowing-doing’ gap (Pfeffer and Sutton, 1999). The absence of benefits-driven post implementation reviews is potentially a major barrier to organizational learning and the developments of organizational competences for benefits realization. It would be valuable to explore an organizational learning perspective on the development of BM competences.

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Appendix A: Critical Success Factor Comparison

	Authors		
Ranking	**Pinto and Prescott (1988)**	**Hartman and Ashrafi (2002)**	**Fortune and White (2006)**
1	Project Mission –clarity of goals and general directions	Owner is informed of project status and his/her approval is obtained at each stage	Support from senior management
2	Top Management Support	Owner is consulted at all stages of development and implementation	Clear realistic objectives
3	Project Schedule/Plan	Proper communication channels are established at appropriate levels in the project team	Strong /detailed plan kept up to date
4	Client Consultation	Clearly defined mission	Good communication / feedback
5	Personnel – Recruitment, selection and training of the necessary personnel for the project team	Top Management Support	User/client involvement
6	Technical Tasks – Availability of technology and expertise to accomplish technical steps	Achieves Business Purpose	Skilled/suitably qualified/sufficient staff/team
7	Client Acceptance	Detailed Project Plan	Effective change management
8	Monitoring & Feedback	Appropriate Resources Available (technology & expertise)	Competent project manager
9	Communication	Formal Change Management Process	Strong business case/ sound basis for project
10	Troubleshooting – Ability to handle Unexpected crises and deviations from plan	Completed with minimal and mutually agreed scope changes	Sufficient/well allocated resources

Appendix B: Project Comparison

Success Factor	**Project 1**		**Project 2**		**Project 3**	
	Effect	Comments	Effect	Comments	Effect	Comments
Project Team (20%)	+	The cross functional team comprised individuals with the necessary business understanding and decision making authority. Functional users were forward-looking, looking to improve the processes, and had an understanding of how IT could assist in this effort.	-	The team required more experienced individuals from the operating departments as well as change agents.	-	The cross functional team required more individuals with a good holistic business understanding and decision making authority. All stakeholders were not represented on the project team.
User Involvement (16%)	+	Users were involved from the beginning to identify their requirements, benefits for them, and gain buy-in	-	Discussions were held with stakeholders to try to gain buy-in, but they did not see the benefits for them. Benefits were identified as general, benefiting the company, but not specifically for each type of user/ stakeholder	-	Users were involved, but some users became involved in the latter stages in the project, when their input was needed much earlier
Change Management (15%)	-	Software changes were kept to a minimum and no additions to scope were allowed. Business processes were changed to promote best practice. Scope was reduced as a result of issues with change management.	-	Although a change management strategy was developed it did not assist in garnering the required commitment to the project and changes necessary	-	Necessary business processes were not adjusted to maximise system benefits

Success Factor	Project 1		Project 2		Project 3	
Management Support (10%)	+	Management supported the project from its inception, with a wide cross section of the senior management team supporting the benefits the project was to provide.	-	The management support for this project can be questioned as key project members were removed to take up other duties. The project was perceived as affecting one department, so wide support was lacking.	-	Management did not release resources to the project on a full time basis. The project was perceived as affecting one department, so wide support was lacking.
Communication (8%)	-	Meetings were held, and presentations made to conduct training, keep users up-to-date with project progress as well as to inform them of process changes. Status meetings were held regularly with project members. The team suffered from the lack of a qualified communications specialist.	-	Discussions and presentations were held regarding the project. Status meetings were held regularly with project members. The team suffered from the lack of a qualified communications specialist.	+	Users were kept informed by newsletter and presentations. Customers were informed via the media about the cutover phase. Status meetings were held regularly with project members. The presence of a communications specialist was beneficial.
Consultants (5%)	-	Lack of consultant experience posed a problem, and knowledge transfer to team members was not enough	-	The group of consultants came together specifically for this project. They were not experienced in the utility environment, and their recommendations were not readily embraced.	-	Consultants brought a level of experience with these types of system and provided quality assurance. However there was contention between the three sets of consultants.
Technical Issues (1%)	|	No technical issues were identified	-	There were issues with hardware capability, and the technical solution delivered was not customizable by staff	-	A new technology infrastructure was implemented, and the technical staff did not have the relevant expertise. Additional consultants, software and licences were required after the project was initiated in order to fulfil technical requirements.

Appendix C: Benefits Planning Competence Assessment

Practice	Description	Output	Present	Comments
BP1 Identify strategic drivers	'Top down' activity to clarify the strategic/business drivers for the project and its contribution to the achievement of business strategy.	Strategic drivers analysis	√	Within Project 3 the strategic justification for the project was outlined, and explicitly aligned with the company's mission. However, this was not explicitly detailed for project 1 or 2.
BP2 Analyze stakeholder expectations	Conduct a structured, 'bottom-up' analysis of the stakeholders' requirements, in terms of delivered benefits	Analysis of expectations by stakeholder	√	For Project 1, a needs assessment of each department was carried out to identify stakeholder requirements and benefits. This was attempted in Project 2, but some stakeholders did not know what benefits the system would bring for them, so they were not sure of their requirements. For project 3 a holistic view was not provided, so the resulting analysis was not complete.
BP3 Identify and define benefits	Review of strategic drivers and the stakeholder requirements, to identify/agree the target benefits	Benefits analysis including: agreed measures, targets and benefit owners	x	General benefits were outlined for each project. However, they were not segmented by stakeholder group, and no measures, targets, or benefit owners were identified.
BP4 Establish benefit/ process interactions	Relate the benefits to business processes to identify where changes will take place and help identify relevant measures. Assess the variability and uncertainty in the process and consider the implications for benefits realization	Process/benefit map	√	For Project 1 the process changes that would assist in achieving benefits were identified.

Practice	Description	Output	Present	Comments
BP5 Establish benefit/ stakeholder interactions	Identify stakeholder groups affected by the technology, and changes required to realize the benefits. Identify business change issues and actions required including communication and engagement with the stakeholders, and the re-design of job specifications.	Stakeholder impact assessment	√	For Projects 2 and 3 a change management plan explicitly identified the stakeholders affected by the technology, issues they had with the business change, and measures to address these.
BP6 Establish organization/ benefits interactions	Explore the interaction between the benefits and a full range of perspectives on the organization	Organizational impact assessment	x	This was not done for any of the three projects
BP7 Establish technology/ benefits interactions	Establish a design for an IS solution that takes account of the capabilities of the technology.	Conceptual architecture overview	√	The design for the IS solution in all three projects was based on the outlined requirements and the capability of the software package, based on consultants' recommendations.
BP8 Plan benefits realization	Develop an overall plan to show the business case (what the benefits are) and how they are going to be realized. The plan relates to the type of project and ensures the delivery of benefits is phased as relevant and that there is appropriate consideration of organizational factors.	Benefits realization plan: defines the benefits and the actions required to realize them	x	No plan was developed for any of the three projects.

Practice	Description	Output	Present	Comments
BP9 Design a framework for business change governance	Design a governance framework addressing the business change project, including the enabling IS/IT activities. Agree how to bring together the sponsor, benefits owners, project manager and other stakeholders through appropriate meetings, workshops and other forms of communication.	Governance framework	x	A common governance framework existed for all projects but this focused mainly on project implementation success, and less on business change and benefits realization. This structure can be easily modified to do so. A major problem is the absence of identified benefit owners.
BP10 Benefits driven risk assessment	Take a proactive approach to risk that focuses on business change and benefits realization	Risk assessment and action plan	x	Risk assessments were done for projects 2 and 3, but these focused on risk to successful project implementation, not benefits realization

Appendix D: Benefits Delivery Competence Assessment

Practice	Description	Output	Present	Comments
BD1 Establish an adaptive project life-cycle	Establish a project life-cycle enabling change during the project in response to learning/ uncertainty – based on iterative, incremental delivery and a small number of major phases controlled by phase end milestone reviews. The adaptive life-cycle continues into benefits ramp up and evolution deployment.	Project approach – including definition of phases, deliverables and milestones	√	All projects had a project plan outlining phases, deliverables and milestones. However, the lifecycle did not extend past project implementation.
BD2 Actively lead the business change	Design, build and lead the project team and governance framework with a focus on realizing benefits. In particular, address responsibility for benefits for the organization/sponsor, benefits for the end user and the effectiveness of the team.	Role descriptions	x	Responsibilities for benefits were not assigned within any of the three projects
BD3 Ensure continuing active involvement of stakeholders	Ensure there is communication and involvement with all stakeholders (based on the stakeholder analysis) to gain insight, ownership and support for changes.	Participation and Communication plan	√	There was communication and involvement of stakeholders within all three projects. However, the levels of these varied from project to project.
BD4 Specify changes to work and organizational design	The project focuses on the design and delivery of a business solution. This will typically require consideration of: business processes, working practices, structures, roles, management framework, performance measures and culture	Business solution design	√	For Projects 1 and 3 consideration was given to business processes, working practices, structures, and roles, but to varying degrees and with varying levels of success.
BD5 Make benefits-driven trade-offs	Trade-off decisions (features, cost and schedule) are driven from a benefits perspective	Change log/decision log	x	This was not practised.

Practice	Description	Output	Present	Comments
BD6 Ensure benefits-driven risk management	Take a proactive approach to risk that focuses on business change and benefits realization	Updated risk assessment and action plan	x	This was not practised. Risk management was focused on project implementation.
BD7 Implement organizational changes	Implement new and revised business processes, working practices, structures, roles, management framework and performance measures. Take action as required to encourage cultural changes.	Changed organization – this activity needs to be monitored to ensure that planned changes are actioned	√	For project 1 and 3 new business processes and working practices were introduced.
BD8 Benefits driven training and education	Ensure education and training are focused on the realization of benefits.		x	Training was focused on learning the IT solution

Appendix E: Benefits Review Competence Assessment

Practice	Description	Output	Present	Comments
BR1 Establish portfolio based evaluation criteria	Establish project evaluation criteria related to the application portfolio – that is, using either different criteria for different areas of the portfolio or using a basket of measures and changing the weighting.	Evaluation framework and criteria	x	No evaluation criteria were established for any of the three projects.
BR2 Benefits driven project appraisal	Use agreed evaluation criteria to undertake a systematic assessment of benefits.	Benefits assessment report	x	No benefits evaluation was performed for any of the three projects. This is recommended by a number of interviewees as necessary to improve.
BR3 Identify actions to realize further benefits	Where planned benefits have not been achieved, or opportunities for new benefits have been identified, a benefits' action plan needs to be established.	Benefits action plan	x	This was not done for any of the three projects
BR4 Facilitate lessons learned reviews	Carry out lessons learned reviews at key stages in the project and on project completion	Lessons learned report and action plan	x	This was not done for any of the three projects
BR5 Complete architectural roadmap review	Carry out a review on completion of a project to consider the contribution to the overall IS/IT architecture. Also consider the strategic alignment of a programme and implications for future projects/releases.	Updated architecture roadmap	x	This was not done for any of the three projects

Appendix F: Benefits Exploitation Competence Assessment

Practice	Description	Output	Present	Comments
BE1 Ensure ownership of continued benefits exploitation	Establish a clear business role for ongoing ownership of realizing benefits	Agreed/active benefits owner	x	No benefits owners were identified for any of the three projects
BE2 Maintain benefits driven training	Training is focused around benefits realization and establishing new ways of working.	Up to date training/ education resources. Ongoing training plan and provision	√	Training is constantly being conducted, but the majority focuses on learning the IT system and not establishing new ways of working.
BE3 Evolve working practices	Continue to evolve working practices post deployment to realize further benefits	Revised working practices	x	This is not typically practiced. Work practices are typically changed as part of a project.