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IMPLEMENTING IT SERVICE MANAGEMENT: A CASE STUDY FOCUSSING ON CRITICAL SUCCESS FACTORS

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ABSTRACT

Queensland Health, a large Australian government agency, implemented a centralised IT service management model based on the ITIL framework. This paper presents an in-depth case study of the implementation. It sheds light on the challenges and breakthroughs, confirms a set of factors that contributed to the project's success and offers a learning opportunity for other organisations. The study indicates that the commitment of senior management is crucial to the project's success as is a project champion and the recognition of the need for an appropriate change management strategy to transform the organisational culture to a service-oriented focus. Maintaining close and forthright relationships with multiple vendors facilitates technology transfer to in-house staff while a benefits realisation plan is a valuable tool for tracking and communicating tangible and intangible project benefits to the project stakeholders. An effective project governance and execution process further contributes to the implementation success.

KEYWORDS: IT service management, IT Infrastructure Library, ITIL, critical success factors, CSF, public sector, case study.

INTRODUCTION

In past years a confluence of circumstances has driven IT functions to become more service-oriented so that they can be better aligned with the business objectives of their organisations. These trends include the growing pressure for organisations in the public as well as private sector to operate on a more cost-effective basis, the increasing dependence on IT for near real-time information to support mission-critical activities, the need for enhanced reporting integrity so as to meet stricter regulatory requirements, and more exacting demands from users and senior management for reduction in the level of tolerance and failures in the IT infrastructure. The IT service management (ITSM) model represents a paradigm shift for IT functions as it deemphasizes the management of IT assets and focuses on the provision of quality end-to-end IT services. While there are many avenues for IT functions to achieve the transformation, the growing majority have chosen the IT Infrastructure Library (ITIL) framework to provide implementation guidance and a common language of communication.

This paper presents the findings of an in-depth case study that examines the experience of Queensland Health (QH), a large government agency, in the implementation of a centralised IT service management model based on the ITIL framework. It sheds light on the challenges and breakthroughs met by QH,

confirms a set of critical success factors and offers a learning opportunity for other organisations that are embarking on or are in the midst of a similar endeavour. After the concepts of ITSM have been introduced with a brief background on ITIL, a review of relevant literature is presented along with the research question and approach. The QH project is then described with particular emphasis on challenges and breakthroughs. The discussion focuses on the critical success factors confirmed in the case analysis. Finally, the conclusion sums up the findings and provides directions for further research.

IT SERVICE MANAGEMENT AND THE ITIL FRAMEWORK

IT service management is the provision of quality customer service by ensuring that customer requirements and expectations are met at all times [27]. The majority of the organisations that have implemented the concept have adopted the ITIL framework, which is a set of descriptive guidance documents that was originally developed in the 1980s by the UK Government agency, Central Computer and Telecommunications Agency (CCTA), to promote efficient and cost-effective IT operations within government controlled computing centres. Championed by the internationally active IT Service Management Forum (itSMF), the ITIL phenomenon has spread from the UK government data centres to the IT departments of private and public organisations around the world. The ITIL best practice framework enables managers to document, audit, and improve their IT service management processes.

In mid-2007 ITILv2 was further enhanced to ITILv3, which extends the ITILv2 processes and structures them within a lifecycle model. In this lifecycle model, IT services are designed, created, transitioned into the live environment, operationally supported, continuously improved and retired at the end of their lifecycle [28]. Most organisations view ITILv3 as an evolution of ITILv2, not a replacement, as ITILv3 is intended to facilitate the alignment of their ITSM processes and overall business requirements and to avert the danger of creating process silos.

Shown in Table 1 are the two primary components in ITILv2, service delivery and service support, which consist of 10 core processes and the service desk function. The QH project is based on ITILv2.

LITERATURE REVIEW

There is extensive literature reporting studies that investigate success in IT implementation, especially in the ERP area, but

little in the ITSM field. In South Africa, Potgieter et al. [32] conducted a case study with a government organisation and concluded that both customer satisfaction and operational performance improve as ITIL processes are implemented. After analysing ITIL implementation in six German firms, Hochstein et al. [12] found the benefits from ITIL alignment are improved client/service orientation and the quality of IT services; greater efficiency due to standardization, optimizing of processes and process automation; and transparency and comparability through process documentation and process monitoring. Cater-Steel et al. [6] replicated Hochstein's research with 12 organisations in Australia, the United Kingdom and New Zealand, and found the benefits realised by ITIL included improved focus on IT service management, more predictable infrastructure, improved consultation with IT groups within the organisation, smoother negotiation of service level agreements and seamless end-to-end service. The relationship between IT governance and ITSM was investigated by Toleman et al. [43], Grewal and McDonald [10] and Praeg and Spath [33].

Although Cater-Steel et al. [6] reported on the phenomenon of organisations adopting ITIL concurrently with other frameworks such as CobiT, CMMI and ISO 9000, the authors are aware of only two other studies focussed on the process of implementing ITIL. Cater-Steel and McBride [4] used actor network theory to examine the successful adoption of ITIL by a large UK financial institution. In Norway, Iden [17] identified seven success factors associated with ITIL implementation in a university environment.

Many information systems researchers favour the critical success factors (CSF) approach in examining implementation (for example, [37]; [31]; [14]). We decided to use the CSF approach to examine the experience of QH, and reviewed CSF studies related to ERP implementation for insights and directions since ITSM implementation shares many of the features of ERP:

- ERP and ITSM projects require considerable financial resources and are risky.
- As both ERP and ITSM are built on best practices, some “customisation” in the form of changes to the business processes is necessary to ensure that the resulting system will meet the needs of the organisation.
- Organisations implementing ERP and ITSM commonly engage vendors to leverage the deep knowledge that these external parties gather from their experience with a wide range of clients.
- Change management is a central issue in both ERP and ITSM implementation as they require staff to work across functions under a redesigned process environment.

The distinction between the two is that ERP implementation is centred on a software package whereas ITSM implementation is based on a set of industry guidelines and standards.

The CSF approach was first established in the 1960s and popularised by various researchers, including Rockart and Bullen [36] who provided an operational definition of CSF: “key areas where things must go right in order to successfully achieve objectives and goals” (p.9). It has been pointed out by Williams and Ramaprasad [45] that although the CSF approach is widely used by researchers to produce a plethora of factors, it is important to discriminate between different levels of criticality. They distinguish four types of criticality: (1) factors linked to success by a known causal mechanism, (2) factors necessary and sufficient for success, (3) factors necessary for success, and (4) factors associated with success. This research offers guidelines to practitioners by focusing on the fourth level. We identify a set of CSFs associated with successful ITSM implementation.

TABLE 1. Key service delivery and service support processes in ITILv2
(adapted from [26])

Focus: Business as the customer of the IT services		
Service Delivery (Tactical Level)	Service level management	<i>Negotiates service level agreements.</i>
	Financial management	<i>Manages an IT service provider's budgeting, accounting and charging requirements.</i>
	Capacity management	<i>Ensures that the capacity of IT services and the IT infrastructure is able to deliver agreed service level.</i>
	IT Service continuity management	<i>Manages risks that could seriously impact IT services.</i>
	Availability management	<i>Defines, analyses, plans, measures and improves all aspects of the availability of IT services.</i>
Focus: User of the IT services		
Service Support (Operational Level)	Service desk (service function)	<i>The single point of contact between the service provider and the user.</i>
	Incident management	<i>Restores normal service operations as quickly as possible.</i>
	Problem management	<i>Prevents incidents from happening and minimises the impact of incidents that cannot be prevented.</i>
	Change management	<i>Controls the lifecycle of all changes.</i>
	Release management	<i>Implements approved changes to IT services.</i>
	Configuration management	<i>Maintains information about configuration items required to deliver an IT service, including their relationships.</i>

Prior CSF studies in ERP implementation

Pinto and Slevin [30] developed ten CSFs from their study of over 400 projects, including information system projects, and organised them into a strategic-tactical framework. Holland and Light [15] adapted Pinto and Slevin's CSF model for ERP implementation while retaining the separation between strategic and tactical CSFs. The researchers contend that strategic CSFs pertaining to project mission, top management support, and project schedule and plan are important at the beginning of the project. Allen et al. [2] investigated the issues associated with ERP implementation at a number of UK universities using Pinto and Slevin's as well as Holland and Light's CSFs. They concluded that in addition to the strategic and tactical CSFs identified by these two groups of researchers, other factors concerning organisational culture, political structures, communication and relationship and knowledge management are equally crucial to the success of ERP implementation. Similar findings were obtained by Finch [8] in his study of a completed information systems project in which he ascertained that Pinto and Slevin's ten-factor model could not account for external organisational and environmental factors and those relating to the cultural climate in the company investigated.

A comprehensive ordered list of 22 CSFs was proposed by Somers and Nelson [41] based on the results of their survey among senior IS executives from companies which have implemented ERP systems. Their influential work was further built upon by Akkermans and van Helden [1] and Plant and Willcocks [31]. Based on their findings Akkermans and van Helden theorised that the top ten CSFs in the Somers-Nelson list were interrelated and that "changes in one of them influenced all the others, directly or indirectly" (p.45). Plant and Willcocks found a shift in emphasis of the CSFs in the Somers-Nelson list as the project progresses from the initial to the final stage in their longitudinal studies of international ERP implementation. Markus and Tanis [23] attempted to understand success in ERP adoption through a process-oriented lifecycle framework organised according to various dimensions: phase, outcome, necessary conditions, probabilistic processes and recipe for success. In the same style, using the CSFs which they have elicited from earlier research, Parr and Shanks [29] relate them to each phase of a process model of ERP implementation that they developed.

Sumner [42] reviewed the ERP literature and extracted a list of critical success factors that are important to ERP implementation. Cater-Steel and Tan [5] also obtained such a list from the literature relating to successful IT implementation projects, including those of ERP, and used it in a survey of attendees at the 2005 itSMF Australia National Conference to gauge their perceptions about the importance of success factors in ITIL implementation. Adhering closely to Rockart and Bullen's [36] notion that CSFs should be a "relatively small number of truly important matters", Brown and Vessey [3] drew on their in-depth study of ERP implementation over the past decade to arrive at a list of five CSFs.

A number of observations can be drawn from the above literature review. Firstly, the older findings do not reflect current IS trends, such as reliance on external expertise and emphasis on change management. A number of researchers have addressed tactical factors that influence success in relation to the phases within the project lifecycle while others focused on strategic factors requiring attention by corporate management at the start of the implementation. Lastly, the extensive length of the CSF lists from some researchers runs counter to the CSF concept as

it tends to distract rather than focus management's attention on what is really important.

Research question

This study sheds light on the challenges and breakthroughs met by QH during their ITIL project and confirms a set of success factors on which organisations should focus at the start of a centralised ITSM implementation project. The CSF concept is used to examine the following research question: *what factors influence the success of implementing IT service management?* To this end, the CSFs from the work of Somers and Nelson [41], Parr and Shanks [29], Sumner [42] and Cater-Steel and Tan [5] were analysed for recurring factors, as summarised in the Appendix. In the analysis the list of 22 CSFs from Somers and Nelson's study were first distilled into groups of common themes and the resulting five groups were labelled as follows: corporate management, vendors, organisational change (people and processes), project governance and execution, and ERP software. The CSFs from Parr and Shanks, Sumner and Cater-Steel and Tan were then mapped to these five groups. Next, the ERP software-specific CSFs were eliminated as they are irrelevant to ITSM implementation. The results from the 2005 national itSMF Australia survey [5] were also considered in determining the following candidate list of five strategic CSFs for further evaluation: senior management support, project champion, relationship with vendors, change in corporate culture, and project governance and execution.

RESEARCH METHOD

The study employs the in-depth case study method for gathering evidence. This method is considered to be appropriate in view of the exploratory, theory-building nature of the investigation, in particular, its focus on a contemporary information systems issue, and the relatively understudied research area [47]. The research has been inspired by collaborative practice research [24]. Through our involvement in itSMF conferences and seminars, we developed a collaborative relationship with key members of the QH ITIL project team.

Data collection

In 2005, QH staff responded to an ITIL adoption survey conducted at the itSMF national conference. The survey collected information on many aspects of ITIL implementation, including critical success factors. Subsequently, in 2006, we conducted an in-depth interview with three members of the ITIL project team. The interview instrument was based on that developed by Hochstein et al. [13]. The interview questionnaire includes items covering all core ITILv2 processes, as well as details of the implementation strategy and critical success factors. In 2008, an informal interview was conducted with the current QH ITIL project manager to determine the extent of progress since the initial interview and to confirm the findings from the preliminary analysis. The interviews were audio-recorded, transcribed and verified by QH staff.

Data gathered from the survey and interviews was triangulated with other information that the researchers gathered from public presentations and forums relating to the QH ITIL project. Other secondary data for the study were obtained from official documents provided by QH, its corporate websites, practitioner journals and online reports pertaining to the ITIL project. We

drew on the experience of the team members to provide additional background information that is valuable to the interpretation of the evidence.

Data analysis

Rather than simply describing the ITIL adoption experience, a set of critical success factors was derived from the extensive literature on ERP implementation and used as a lens to analyse the QH case. The objective was not only to test the explanatory power of this CSF list in the QH case, but to extend the list. The subsequent content analysis of the primary and secondary data sought to identify and confirm additional factors which were critical to the success of the QH ITIL project.

The interview transcripts were examined and themes highlighted. These themes were then mapped to the candidate list of CSFs derived from the ERP implementation literature. Content analysis was also applied to the secondary data to corroborate and augment the evidence collected through the interviews. Potential problems of construct validity were addressed by using multiple sources of evidence to provide multiple measures of the same phenomenon [47]. Although research involving a single organisation is limited in terms of generalising findings, this is compensated by the “intimate connection with empirical reality” providing a richness of data essential for the inductive process of developing a “testable, relevant, and valid theory” [7].

In the next section, quotations from the interviews are shown in *italics*. Excerpts from documents are also presented to provide an in-depth account of the QH project.

QH ITIL PROJECT

Queensland Health, as the largest State agency in Queensland, is a highly complex and widely distributed organisation with a staff strength of about 50,000 employees [34]. Its mission is to provide dependable health care and better health to all the communities in the State. The agency accomplishes this by delivering a range of integrated services, including hospital inpatient, outpatient and emergency services, community and mental health services, aged care services and public health and health promotion programs, through a network of 20 Health Service Districts and the Mater Hospitals. The responsibility for building the health information systems lies with QH’s Information Directorate (QHID), which is acknowledged as the largest IT operation in Queensland with over 800 staff and 285 networked sites. QHID provides IT services to the entire user base at QH through support systems and information for clinicians’ use to make critical decisions. These support systems are designed to operate on a 24 x 7 basis right across the State of Queensland, which is seven times the area of Great Britain and two and a half times the size of Texas.

In 2004 QHID reorganised and consolidated its IT operations bringing together five previously separate IT functions in response to concerns that a decentralised structure was not meeting the level of IT services that users expected. Shortly after the reorganisation, the Queensland Government commissioned the Queensland Health Systems Review [35] to examine the problems that QH was experiencing and identify a range of reforms.

The Transformation Program

One of the initiatives that emerged from the review is the Transformation Program which has the broad aim of moving

QHID to a new service-oriented organisational structure and new mode of operation in terms of both governance and IT service delivery capabilities. To ensure that the longer term gains from the Transformation Program will be less at risk, QH instigated a number of initiatives, one of which calls for the development of a sustainable organisational capability to undertake IT service management more effectively using the ITIL framework. As the ITIL framework was new to QH, established consultants and vendors were engaged during the early stages of the ITIL implementation project. QH senior management further assigned the Manager of Continuous Improvement to the role of overseeing the implementation process, promoting the benefits among QH staff and liaising with the consultants and vendors.

The journey so far

As at the end of 2006, QHID had established the processes for incident management, change management and configuration management, and was on the verge of completing processes for release management and problem management. At the same time the existing eleven zonal help desks were consolidated into a single corporate-wide service desk to enhance the ability for QHID to resolve incidents at first point of contact. With the accomplishment of the centralised service desk and all processes within service support, QH reached a significant milestone in its ITIL project. Attention was next turned to service level management and other complementary processes. A mechanism for the continuous improvement of the newly installed processes was also instituted.

Senior management level staff were allocated process owner roles to ensure that the project progress was sustained as they were able to deal with “*change resisters*” and make quick decisions. As part of project governance, a customer committee named the “Operations Board” comprising senior customer representatives from both corporate and clinical areas was established to review the performance of QHID and provide a customer perspective on any proposed initiatives and changes. Fujitsu Australia was engaged to develop a process design methodology handbook to provide guidance to the implementation team members.

At the start of the project in 2005 a process maturity assessment was jointly conducted by Fujitsu Australia and QHID to establish the existing state of QHID’s process chain, ascertain the interfaces between the different processes and determine the optimal implementation sequence. The results from the assessment, as depicted in Figure 1, formed part of the project baseline and helped to define the initial implementation priorities as well as set targets to raise the maturity levels of the various processes.

An important element in the process design methodology developed by QHID is the benefit realisation plan. The purpose of the plan is to identify and manage the realisation of the benefits that are attached to each new process. These benefits, which include both financial and non-financial measures, are recorded in a benefit register and tracked by the project executive team on a monthly basis. Each process is also associated with a set of key performance indicators which are monitored and reported to senior management.

To fast track project execution, QHID introduced the timebox approach into the ITIL project. This technique is grounded in the philosophy that dates are not flexible but deliverables are. QHID had previously suffered from a “*get agreement from everybody*

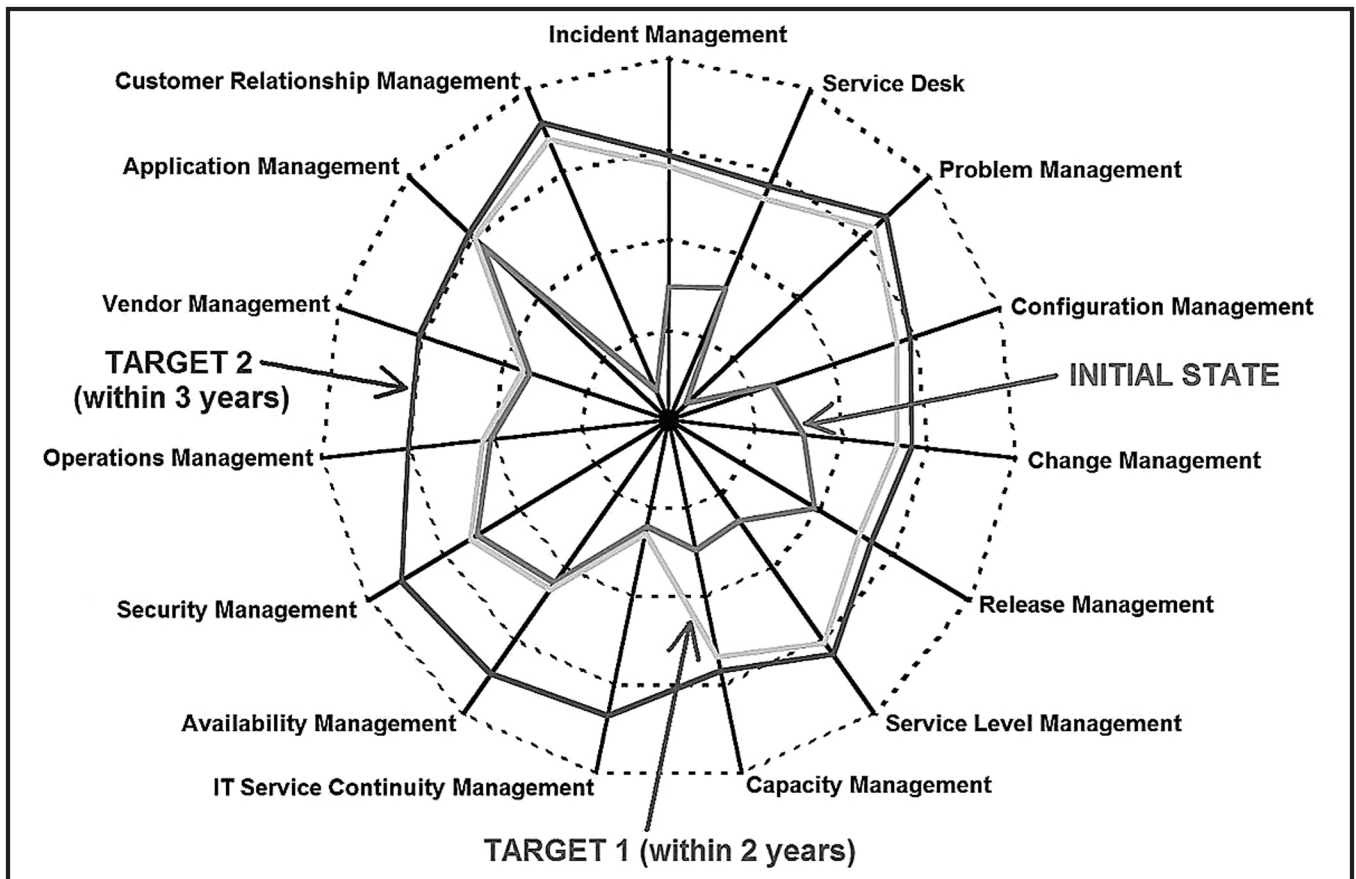


FIGURE 1. Results of process maturity assessment [39]

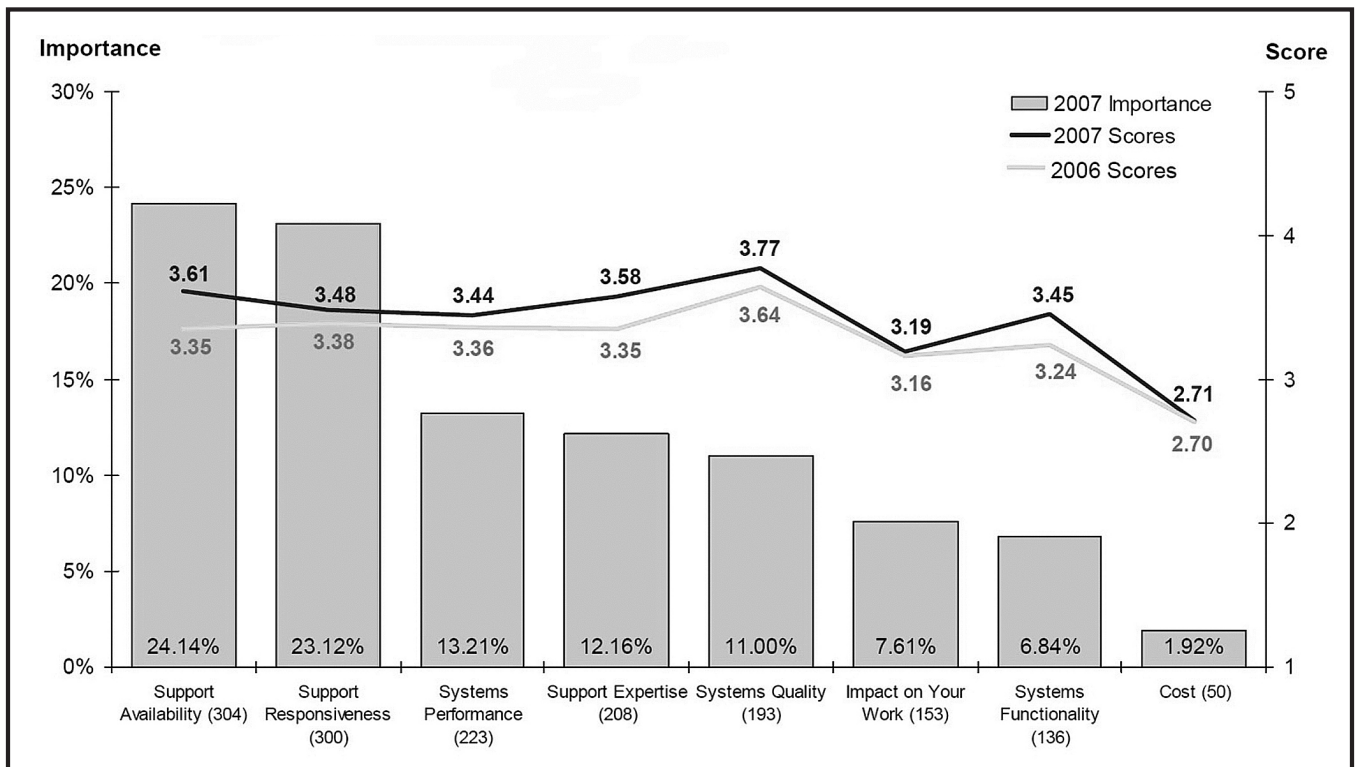


FIGURE 2. QH customer satisfaction survey results.

on everything” syndrome which meant that progress was slow. QHID soon developed a mantra of “*progress not perfection*” after recognising that 80 percent completion is a great start and that the other 20 percent can be completed through continuous improvement. This modus operandi resonates with one of Brown and Vessey’s [3] success factors concerning the “satisficing mindset in which 80 percent solutions are accepted as good enough” (p.67).

The change management issues faced by the agency are formidable in view of the scope of the Transformation Program which calls for a drastic reduction in the number of position descriptions and operational areas in QHID’s new organisation structure. To alleviate the anxiety of the staff, QHID took pains to build transparency into the project execution by disseminating relevant information through corporate newsletters and the intranet, and team briefings. Senior user managers represented in the Operations Board were also provided with performance reporting on QHID’s accomplishments so that they could relay the results to their departments. Most QHID staff completed the ITIL Foundation training course, some progressing to the advanced level, to provide a common ITSM language of communication.

In terms of benchmarking, QHID commissioned Gartner to conduct annual Customer Satisfaction Surveys to gain better insights into the perceptions of the customers and gauge their level of satisfaction. As shown in Figure 2, the users judged support availability and support responsiveness as the two most important criteria. In the 12 months from 2006 to 2007, the satisfaction level increased for all eight criteria.

The complexity and diversity of QH’s ITSM requirements rendered it difficult to rely on a single centralised tool to manage all processes. Fortunately, the agency was able to engage the assistance of HP, a major ITSM tool vendor, to customise an integrated and automated toolset that is consistent with the ITIL framework and to advise QHID on the technical implementation.

Challenges and breakthroughs

QHID experienced two failed attempts at the beginning of the ITIL project. To begin with, although the project had strong endorsement from QH senior management, the commitment was not manifest in the project implementation. For instance, process owners were not staffed at the right level but were instead arbitrarily allocated. The project was also conducted on a “*business as usual*” approach to the extent that schedule, resource and expertise issues were not given due attention. A comment from one of the project team members aptly summarises the situation: “*We just can’t do it anymore. We’ve got to keep the lights on as well!*” Furthermore, the initial decision to integrate ITSM and Quality Management System processes blurred the focus of the project and it was abandoned. Crucial change management issues arising from the reorganisation of the IT function were not accorded priority and subsequently led to pockets of resistance and an atmosphere of negativity and scepticism. To compound the problem, the effort to obtain buy-in from staff through extensive consensus-seeking proved to be counter-productive as their new roles in the restructured organisation were not resolved.

Once the teething issues from the two false starts were addressed and appropriately rectified the project began to show dramatic results.

DISCUSSION

The content analysis, interview transcripts and documents provided by QH confirmed all five CSFs previously identified: senior management support, relationship with vendors, change in corporate culture, and project governance and execution. It is proposed to modify the factor *relationship with vendors* to *relationship with multiple vendors* as the case highlights the important role of multiple vendor relationships which is different to that recognised in the literature previously. Strong support was found for an alternative factor: realisation of benefits. Selected quotes from the interviews to substantiate these six factors are reproduced in Table 2. The six CSFs are now discussed.

Senior management support

Without question, previous research has established that senior management support is critical to the success of any major IT initiative (for example, [42]; [3]). The involvement of senior management in this project could also be viewed as an IT governance issue as it includes leadership, organisational structures and processes to ensure that the organisation’s IT sustains and extends the organisation’s strategy [38]. However, senior management support per se does not ensure successful implementation but rather it is the extent of their commitment, or “visible support from the top” as McPhee [25], (p.xv), Auditor General for the Commonwealth of Australia, put it. This condition is clearly illustrated in the QH ITIL project. The project was initially struggling to gain traction as there was limited senior management support and the appointed process owners lacked the appropriate authority to deal with issues expeditiously or provide the needed directions. After senior management provided support by giving it a new charter and appointing the Manager of Continuous Improvement, the project gained momentum. Holland and Light [15] recounted a similar situation with one of their ERP studies which led the researchers to raise the caution that in large-scale ERP projects senior management should understand the magnitude of the implementation and that they should be prepared to allocate sufficient resources. The warning is equally applicable to large-scale ITSM projects.

Project champion

According to Howell and Higgins [16], project champions “make a decisive contribution to the innovation process by actively and enthusiastically promoting the innovation, building support, overcoming resistance and ensuring that the innovation is implemented” (p.40). The crucial role of a project champion in ERP implementation is consistently demonstrated in ERP studies (for example, [41]; [29]). These studies established that the project champion should be a senior manager, someone who is able to negotiate for the resources needed to move an idea to fruition and who understands the underlying technology as well as the business and organisational context. These attributes are well reflected in the QH project. However, in the QH project the role of the project champion is complicated by the fact that the ITIL implementation is subsumed within the larger Transformation Program, thus giving rise to a complex environment for project execution. The roll-out of new ITIL processes proved to be particularly challenging amidst the job uncertainty and sporadic redeployment of QHID staff, including senior members in the project team. To compound the problem, the implementation

TABLE 2. Interview quotes supporting candidate CSFs

Critical success factors	Supporting quotes
Senior management support	<p><i>“They (senior management) have persisted with the investment because they have real belief that at the end of the day it affects patients.” [1]</i></p> <p><i>“There obviously was strong senior management support and even to the level of all the process owners are members of the executive team as well, who are people who report directly to our CIO.” [1]</i></p>
Project champion	<p><i>“We’ve got two particular people on the executive team that have been in organisations where ITIL has been implemented well and they’ve seen the benefits. So, they have been strong advocates along the way.” [1]</i></p> <p><i>“We’ve been fortunate to have very strong process ownership, so the people in those roles have championed it down through the organisation.” [1]</i></p> <p><i>“I believe you actually need more than one (champions) in an organisation this size. You need pockets of people all over the organisation that are champions who can see the value and sing the benefits to others.” [2]</i></p>
Relationship with vendors	<p><i>“We’ve been very open, very honest (with Fujitsu and HP). We haven’t tried to hide our cards so that we can squeeze them for every dollar.” [1]</i></p> <p><i>“We partnered a Fujitsu resource with a QH resource. And two people worked on one process and in doing that the skills transferred to the QH person.” [1]</i></p>
Change in corporate culture	<p><i>“We did a fairly ambitious restructure of the whole information division because the previous structure didn’t really lend itself to an end-to-end service provision.” [1]</i></p> <p><i>“Change resistance, negativity . . . we’ve really just managed through. You know, keeping them informed, constant communication, giving them training, that sort of thing which is really all you can do.” [1]</i></p> <p><i>“Essentially a far greater number of people need to be given some ownership of the processes and their role within those processes. They then have some ownership and they feel they are part of it instead of it being forced upon them.” [2]</i></p>
Project governance and execution	<p><i>“We failed in the past . . . we had to consult every man and his dog 100 times, get everyone to sign off and, of course we just never got anywhere.” [1]</i></p> <p><i>“What we do is we meet with them (ID Operations Board) on a bi-monthly basis and we provide them performance reporting on how ID is going — so it’s very transparent.” [1]</i></p> <p><i>“If you don’t have a strong business case, not from only within the IT organisation but from across the entire Queensland Health organisation, it won’t us get there.” [2]</i></p>
Realisation of benefits (<i>Not in original list of candidate CSFs</i>)	<p><i>“If we couldn’t clearly quantify where the benefits were, we’d then start getting lots of questions: why are you doing it because we could be spending the money elsewhere?” [1]</i></p> <p><i>“We had to show clear and quantifiable savings across the organisation and benefits across the whole organisation that tied into the objectives of the organisation.” [2]</i></p>

[1] = Interview 2006; [2] = Interview 2008

involved all QH sites, which are geographically scattered throughout the State, and cut across the political structures of the organisation. It is therefore not surprising when one of the interviewees lamented that the effort requires “*more than one (champion) in an organisation this size*”. The project was made even more difficult when the original project champion was reassigned halfway through the implementation. Fortunately, a capable replacement, who has been involved in the QH project all along, stepped into the role.

Relationship with multiple vendors

The decision to outsource some of the activities and tool requirements to vendors such as Fujitsu, HP and Gartner proved

to be effective. It is interesting to note that different vendors were engaged at different stages of the project. QHID were careful to source the required expertise at the right time and ensured effective technology transfer from the consultants to the QHID staff. The importance of forging an open and honest relationship with vendors is usually discussed in the context of strategic and longer term outsourcing projects but is evident in this case. The contribution of trust, cooperation and communication to outsourcing success was highlighted by Grover et al. [11] and they stressed the ability of the vendor to provide service quality beyond expectations. This observation is further resonated in the work of Lee and Kim [22] who posited that mutual benefits, commitment and predisposition are important predictors for outsourcing success. Kern and Willcocks [20] further noted that managing the

client-vendor relationship is part of the risk mitigation process, and hence, should be accorded greater importance than merely operationalising the contract.

Although many researchers have stressed the importance of vendor relationships, to-date there is very little research focusing on multiple vendors despite the fact that many organisations have multiple outsourcing contracts. A high degree of coordination of activities is necessary if multiple parties are involved in providing a service [46]. The QH case demonstrates an effective partnership involving three vendors is a complex undertaking. Effective coordination of multiple vendors was critical to the success of the implementation. This is a ripe area for future research.

Change in corporate culture

Various radical change and incremental change theorists have proposed contrasting tactics for managing change in IT implementation [21]. Resistance and counter-implementation, in general, should be overcome by adopting incremental, facilitative approaches as Keen [19] has stressed. Twenty-seven years later the same message applies in this case of implementing service management improvements. QHID recognised the need to change the culture from a technology focus to a focus on service. ERP researchers, including Brown and Vessey [3] and Ifinedo [18], caution that in ERP projects cultural issues must be rigorously addressed and that the desired change must be managed as an integral part of the implementation plan. Golden [9] asserts that “when well-executed, ITIL can shift an IT organization’s culture and focus from the technology to the business strategy . . . but culture change is probably the hardest type of change to manage, and ITIL’s processes are only as effective as the degree to which your staff adopt them”. The culture change at QH was difficult to achieve in the midst of an organisation restructure but when senior staff were appointed as process owners, trained and provided with resources, the culture changed. This “*clout*” of the process owners to implement necessary changes in the organisation was similarly observed by Shang and Seddon [40] in their work on ERP implementation. However, when QHID attempted to obtain buy-in from project participants they erred by being overly consultative thereby causing the project progress to be hampered. Holland and Light [15] reported a similar occurrence that was not promptly corrected thus leading to a significant increase in the cost of the ERP project they investigated.

Realisation of benefits

Despite its intuitive appeal, investment in ITIL requires economic justification of benefits and to date there has been little research undertaken to quantify the benefits from ITIL implementation. In South Africa, Potgieter et al. [32] conducted a case study with a government organisation and concluded that both customer satisfaction and operational performance improve as the activities in the ITIL framework increase. Cater-Steel et al. [6] found that many organisations reported difficulty in determining tangible benefits from ITIL adoption. Nonetheless, even if these ITIL benefits were suitably quantified so as to build a sound case for the investment, Ward et al. [44] observe that in most IT implementations few organisations tend to follow them through to implementation to ensure that the benefits are managed successfully. To facilitate the realisation of the benefits associated with each process solution QH used novel concepts such as the benefit register, benefit deposit slips and a benefit saving bank

which are all part of its ITSM process design methodology. The benefits realisation plan further enhanced communication between senior management and the project team and contributed to ongoing commitment to the project.

Project governance and execution

Drawing from his experience at the Australian National Audit Office, McPhee [25] asserts that clear objectives and appropriate accountability, risk management, monitoring and reporting, staying focused on the project and other important elements of project governance and execution bear on successful project implementation in the public sector. QHID’s ITSM process design methodology subsumes a number of familiar project management elements such as project initiation and project monitoring. Supplemented with its corporate-wide project management practices, the project steering committee, with QHID CIO as the program sponsor, was able to monitor and manage the project outcomes with great effect. The project team resorted to the timebox technique which proved to be invaluable as deadlines were intentionally fixed so that a working process solution can be produced within a short timeframe. This is to ensure that implementation costs are contained and that benefits can be reaped as early as possible. However, QHID did not stay focused on its project objectives when they attempted to integrate the new ITSM and existing Quality Management System processes. The distraction caused the project schedule to slip as the integration between the two sets of processes proved to be a difficult and tedious task. The project team had failed to understand the strength of ITIL, that is, its philosophy of continuous improvement. Once this was recognised, the integration effort was abandoned and the team started a continuous improvement cycle around the new processes that they have implemented.

CONCLUSION

It is evident that a number of factors have contributed to the success of the ITIL project at QH. Senior management support per se is not sufficient: senior staff from the business units should be appointed to high level committees and senior management must understand the magnitude of the implementation and ensure that the project is adequately and appropriately resourced. A senior manager is also needed to champion the project. QHID leveraged external expertise from multiple vendors at different stages in the project. Instead of merely operationalising the contracts, they made an effort to develop close and forthright relationships with the vendors to ensure effective technology transfer to the QHID staff. They also understood the need to have an effective change management process to move the culture from a technology focus to a focus on service. As the change involves organisational restructuring, careful planning, reinforcement of the project objectives and appropriate appointment of process owners was carried out to achieve the transformation. Further, QHID put in place a benefits realisation plan to track and communicate tangible and intangible benefits of the project and in this way maintain the commitment from senior management and business managers. Effective project governance and execution and staying focused on the project also contributed significantly to the success of the ITIL project.

The primary limitation of this research to date is that the interviews and documents have only involved staff who were actively involved and supportive of the project. No doubt there

would be opposite views both from IT staff and users, although the customer satisfaction surveys returned favourable results. To extend this research and gain a broader view, interviews with a wider range of stakeholders will be conducted. In future, the study may be extended to analyse other components of the Transformation Program, and also to compare QHID ITIL experience with that of other large IT organisations, both in the public and private sectors.

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APPENDIX: Mapping and analysis of candidate CSFs

CSF Groups	Somers & Nelson [41]	Parr & Shanks [29]	Sumner [42]	Cater-Steel & Tan [5]
C	1. Top management support	Management support	Top management support	Commitment from senior management
P	2. Project team competence	Best people fulltime	Obtaining a balanced team (e.g. a mix of technical and business skills) Obtaining/retaining the right ERP skill set Use of business system analysts	Quality of IT staff allocated to ITIL implementation Ability of IT department to change IT systems
O	3. Interdepartmental cooperation	Balanced team	User involvement Strategic partnering between software implementers and business partners	Involvement of client/customer
P	4. Clear goals and objectives	Definition of scope and goals	Effective management of project scope and objectives	
P	5. Project management	Deliverable dates Smaller scope	Creating projects with smaller scope Effectively managing “misfits”, including incompatibilities in data, incompatibilities in processes, and incompatibilities with operating procedures	
O	6. Interdepartmental communication		Effective communications and coordination skills Effective management reporting capabilities (in shakedown phase)	Centralisation of IT service
P	7. Management of expectations			
C	8. Project champion	Champion Empowered decision makers	A champion	Champion to advocate and promote the ITIL framework
V	9. Vendor support			
E	10. Careful package selection			
E	11. Data analysis and conversion			
P	12. Dedicated resources			Sufficient allocation of IT staff to ITIL implementation
P	13. Use of steering committee			
P	14. User training on software		Effective training of end-users	ITIL training provided for client/customer ITIL training provided for IT staff
O	15. Education on new business processes			
O	16. Business Process Reengineering			
E	17. Minimal customization	Vanilla ERP	Implementation of a “Vanilla” ERP (reengineering business processes)	
E	18. Architecture choices		Effective integration with legacy systems	

(Continued)

APPENDIX: Mapping and analysis of candidate CSFs *(continued)*

CSF Groups	Somers & Nelson (2001)	Parr & Shanks (2003)	Sumner (2003)	Cater-Steel & Tan (2005)
O	19. Change management	Commitment to change	Commitment to change by all stakeholders	Effective change management for client/customer Ability of IT staff to adapt to change Ability of the IT department to adopt best practices Culture of TQM and continuous improvement
V	20. Partnership with vendor		Effective management of supplier relationships	
V	21. Use of vendors' tools			Availability of ITIL software tools Ease of use of ITIL software tools
V	22. Use of consultants		Effective use of consultants	Competent ITIL consultants at early stage of implementation ITIL consultants providing on-going assistance
C				Sufficient funding for ITIL initiative

NOTE:

CSF Groups: C = Corporate management; V = Vendors; O = Organisational change (people & processes); P = Project governance & execution; E = ERP software

Items in italic were eliminated from the analysis as they were specific to ERP software implementation

Items in bold were also identified from the analysis of the 2005 national itSMF Australia survey [5] results.