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An investigation into the impact and use of project management methodologies in organisations in Ireland

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MANAGEMENT INFORMATION SYSTEMS

COMPETITIVE PAPER

AN INVESTIGATION INTO THE IMPACT AND USE OF PROJECT MANAGEMENT METHODOLGOGIES IN ORGANISATIONS IN IRELAND

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ABSTRACT

The purpose of this study is to examine the impact of the implementation of a project management methodology on organisations, specifically in relation to the impact on the project manager, the project team and the organisation as a whole and to determine whether using a project management methodology can help project managers and organisations to better manage software projects. Five organisations in Ireland participated in the study and one project manager from each organisation was interviewed. The size of the organisations, the level of experience of the project managers interviewed and the methodology implemented varied. Differences as well as similarities across the organisations were identified. While the findings show that implementing and using a project management methodology is not without its difficulties, the benefits identified far outweigh the drawbacks. The study finds that it is not important what methodology is used as long as a methodology is used. However, there are benefits that can be realised by using an industry standard methodology as opposed to an internally developed methodology. The results also suggest that adapting an industry-recognised methodology to fit with the business processes can have a positive impact on the flexibility of the methodology. The findings of the study propose that by implementing and using an project management methodology, organisations gain a uniform approach to project management, have better control of projects, increased visibility on their progress, improvements in the success rates of projects and a means of comparing projects using specific measurements, with potential implications for practice.

Keywords: project management, methodology

INTRODUCTION

In recent years there has been a dramatic increase in the amount of project-based work in all areas. This has been instigated by factors such as developments in information technology,

changes in environmental regulations, increasing customer involvement, the drive towards shorter product life cycles, increased productivity and the complexity of inter-organisational relationships (Bredillet, 2005; Hartman & Ashrafi, 2002). This has led to the expansion of projects and project management beyond the traditional areas of construction and engineering and, as a result, is providing new challenges to the discipline of project management and also to organisations and individuals (Bredillet, 2005).

To date, the failure of information systems (IS) projects is very high, with the ineffective monitoring of tasks and risks, user resistance, project politics, lack of communication and the ineffective management of changes and inadequate hand-over procedures contributing to failure (Mahaney & Lederer, 2003; Winklhofer, 2002). These IS project failures can have serious consequences for the competitiveness and survival of an organisation (Winklhofer, 2002). However, according to Yetton et al. (2000), project performance can be improved by project managers meeting their responsibilities within an organisation that supports professional project management practice.

Although a simple definition of project management is not possible, Atkinson (1999) states that project management is a combination of management, planning and the management of change while Abbasi and Al-Mharmah (2000) state that project management is the art and science of planning, designing and managing work throughout all phases of the project's life cycle and attempting to achieve planned objectives within specific time and cost limits, through the optimum use of resources, using an integrated planning and control system. The Project Management Institute (PMI, 2005) defines project management as the application of knowledge, skills, tools, and techniques to a broad range of activities in order to meet the requirements of a particular project.

PROJECT MANAGEMENT IN ORGANISATIONS

The growth of project management in organisations has come about since the 1960's when organisations began searching for new management techniques and organisation structures that could support a changing environment (Kerzner, 2001, p48). The traditional, functionally structured organisation did not permit the cross-functional cooperation that was essential for successful project performance (Payne, 1993). Project management was often ad-hoc, with informal and temporary policies and procedures established for particular projects (Milosevic, 1996). Project managers were challenged to keep their projects focused and at the same time support their organisation's need to adapt to changes and uncertainty in the business environment (Olsson, 2006). By the 1970's and early 1980's more and more organisations restructured to formalise the project management process and moved from an informal project management approach to a more structured approach (Kerzner, 2001, p49). By the 1990's implementing project management was recognised by management as a necessity, as companies realised that they must compete on a basis of quality as well as cost (Kerzner, 2001, p67; Frame, 2002, p8). Rapid change became common, with project targets constantly moving, which led to greater complexity and to the implementation of standard methods and procedures to manage this complexity (Frame, 2002, p33).

Difficulties Facing Project Managers

Project managers are critical to the successful development and implementation of information systems and information technology projects (Parker & Skitmore, 2005; Wateridge, 1997). However, project managers face many difficulties when managing software projects, relating to poorly defined goals and specifications, lack of a project plan and unrealistic deadlines and budgets (Jurison, 1999). A project may not have a sound basis or tasks may be inadequately defined. It is not uncommon for users to be unsure of their needs and to change requirements midway through the project resulting in software projects falling short of what was required (Jurison, 1999; Kerzner, 2001, p1056). In addition, some

project managers may not have the commitment and support of senior management resulting in inadequate resources to complete the project or difficulty dealing with any political issues that may arise in projects (Schwalbe, 2006, p51; Kerzner, 2001, p56).

Another issue project managers' face is that they often find themselves in the role with little or no formal training (Carbone & Gholston, 2004; Pressman, 1998). Sometimes project managers are promoted on the basis of their technical skills, but often lack the necessary team management skills (Nellore & Balachandra, 2001). This can leave them ill-prepared to take on the responsibility of managing a project and a team (Pressman, 1998). Carbone and Gholston (2004) state that while organisations should invest in developing the skills of their project managers, few organisations offer project management training programs and even fewer are requiring an internal or external project management certification.

Project Management Methodology

Project management is a complex and difficult task and many organisations have not yet recognised how strong project management skills can contribute to achieving business objectives (Bernstein, 2000; Nellore & Balachandra, 2001).

According to Kerzner (2001, p1056), the best way to increase the likelihood of an organisation having a continuous stream of successfully managed projects is to develop a good project management methodology that will support all projects. A project management methodology provides a structured approach to delivering a project and consists of a set of processes, with each process having clearly defined resources and activities (Turner, 2000; Blackburn, 2002). It should consist of guidelines, techniques, tools and templates and it should be flexible, so that it can be easily adapted to every project (Murch, 2001; Kerzner, 2001, p1056).

A project management methodology sets out what an organisation regards as best practice; improves inter-organisational communication; and minimises duplication of effort by having

common resources, documentation and training (Clarke, 1999). There is no reason why companies cannot develop their own methodology and it is not important which methodology is used (Kerzner, 2001, p85). However, it is important is that the methodology is usable by the project team as it is people and not methodologies that manage projects (Kerzner, 2001, p85; Bruggere, 1979; Jaafari & Manivong, 1998). For those that do not wish to develop their own methodology, there are several internationally recognised project management methodologies available, for example, the Project Management Body of Knowledge (PMBoK) and Projects IN Controlled Environments (PRINCE2) (McManus & Wood-Harper, 2002).

Drivers of the Implementation of a Project Management Methodology

By the 1990's, organisations had realised that implementing a project management methodology was becoming a necessity. This came about for several reasons: management developed an understanding of project management and recognised a need for greater efficiency; management realised the impact on cashflow if workers did not meet schedules; and customers expected good project management practices as part of their solution (Kerzner, 2001; Milosevic, 1996). Organisations should move towards a standard project management approach and reap the benefits that a standard approach can provide (Milosevic, 1996).

Issues facing organisations implementing a project management methodology

There are several requirements that should be met to ensure the successful implementation of a project management methodology. Good planning is required in order to successfully adopt and implement a project management methodology; senior management must demonstrate their support for the methodology; this support must be communicated to all employees; the methodology must cater for projects of all sizes; and roles and responsibilities must be well defined and communicated to all staff (Brown, 1999; Loo, 1996).

Other factors have been identified that can affect the introduction and application of project management in an organisation. These include: the level of project management knowledge and practices by employees; the cost and time required to provide formal training in project management; resistance by employees to the use of a project management methodology; and an additional management overhead may be created and a change in mind set may be required for organisations that have strong vertical reporting lines and little tradition of change as they are not very receptive to cross-functional project management structures (Brown, 1999; Abbasi & Al-Mharmah, 2000; Loo, 1996).

According to Kerzner (2001, p1056) the two most common barriers to the successful implementation of a project management methodology are cultural resistance and the perception of bureaucracy. If the methodology does not support the organisational culture, the result will be a lack of acceptance of the methodology, inconsistent application of the methodology, infrequent use, poor morale and possibly even diminishing support for project management. He also states that what converts any methodology into a world-class methodology is its adaptability to the corporate culture, and that the processes of project management will be readily adopted if their value can be shown in terms of being able to do more with less. In order to successfully adopt a project management methodology, organisations must establish a project management culture that aligns with the social and technical aspects of project management (Kendra & Taplin, 2004).

Benefits of Using a Project Management Methodology

Despite the difficulties that face organisations in the implementation of a project management methodology, they are becoming increasingly aware of the benefits that implementing a single, common, structured method for project management can bring (OGC, 2002). The benefits to the organisation include: the imposition of effective scope management on projects; effective project and milestone planning; scheduling, and controlling of costs,

budgets and resources; and the acknowledgment of the importance of documentation (Loo, 2002; Abbasi & Al-Mharmah, 2000; Dicks, 2000; Payne & Turner, 1999). These authors also stress the importance of having high calibre project teams; stakeholder participation; effective communications within teams and externally; and the provision of a consistent method of reporting across all projects, allowing staff to move between projects without having to relearn the management approach.

Kezner (2001, p85) states that where senior management create a corporate culture that supports project management and the use of a project management methodology, several benefits can be provided, including: faster "time to market" through better control of the project scope and deadlines; lower overall project risk; better decision-making process; greater customer satisfaction, which leads to increased business; and more time available for value added efforts, rather than internal politics and internal competition. Communication levels and risk management within projects also improve with the use of a standard approach to project management and research shows that a more proactive approach to risk can be adopted (Milosevic et al., 2001; Ibbs, 2000).

In addition, a single project management approach can: bring together a team of individuals that are focused on delivering a result within a specified timeframe; provide a single point of contact for the project team, management and the customer; provide the project with a project manager; and promote strong team building with the opportunity for individual growth and development within the team (Loo, 1996). Research by the Standish Group (2001) and Brock et al. (2003) shows that there is a positive link between the use of a project management methodology and the success of a project.

Drawbacks of Using a Project Management Methodology

While the impact on an organisation of using a project management methodology is generally found to be positive, there are also some negative effects. The amount of documentation

required and its generation can be very time consuming and is the biggest drawback to rigorous project management methodologies (Dicks, 2000; White & Fortune, 2002). Formal project management methodologies, especially if they are complying with the International Organisation for Standardisations (ISO) standards, require extensive tracking, sign-off and maintenance of procedures. ISO requirements have necessitated that many companies make documentation development a formal part of their overall software development process, resulting in a continuous cost for organisations (Dicks, 2000; Burgess, 1998; Bicegoa & Kuvajab, 1996). In addition, there can be an issue in relation to the lack of training in the methodology and too much emphasis being placed on following the standard (White & Fortune, 2002). There is also a need to continuously evaluate and improve the methodology, which takes time and effort and adds to the cost of using a project management methodology (Kerzner, 2001, p1057). However, despite the time required to implement and maintain project management methodologies, the many advantages outweigh the disadvantages, especially when the increases in customer satisfaction are taken into account (Dicks, 2000).

RESEARCH METHODOLOGY

The objective of this research was to focus on service providers in Ireland that have implemented an internationally recognised project management methodology; to examine the extent to which the project management methodology has been implemented; and to examine the impact the implementation has had on project managers, the project team and the organisation in relation to the management of software projects.

The implementation of an internationally recognised project management methodology is relatively recent to organisations in Ireland and following a review of the literature, it was apparent that there is a lack of both qualitative and quantitative research in this area. As the subject under investigation is new and there was little existing research, the objectives of this research highlighted the need for exploratory research. It was deemed more appropriate to use

an inductive approach for this study, which would allow the researchers to collect data and develop a theory as a result of the data analysis.

Due to the small numbers of organisations in Ireland that have implemented a recognised project management methodology, the researchers were of the opinion that it would be difficult to identify a significant number of organisations to allow the researchers to conduct a survey that would provide the volume of quantitative data required for analysis. Hence, the researchers decided to carry out an in-depth study of the experiences of selected organisations, which allows for the collection of rich data.

The research strategy selected for this study was case study. The researchers decided to conduct multiple case studies, as opposed to a single case study, to obtain a broader view of practices in several organisations in relation to the use and implementation of project management methodologies. Using multiple cases would also allow for comparison and analysis across organisations and the research would not be limited to the experiences and views of a single organisation. For the purposes of this research five case studies were employed, as it was thought that this number would allow a certain amount of comparison and may be representative of current practices in organisations in Ireland.

Target Profile of Participant Organisations

The target profile of participant organisations for this research was:

(a) Organisations that are service providers were the primary focus of this research due to the large number of such organisations in Ireland.

(b) Organisations in Ireland that employ more than 50 individuals, on the assumption that organisations smaller then these would not have dedicated project managers. Large multinational organisations such as Microsoft, IBM, and Hewlett Packard were excluded as it was felt that organisations such as these would have had project management methodologies in place for quite a number of years and that they would be more

representative of the processes employed in their country of origin rather than of those used in Ireland.

(c) Organisations were required to have implemented a recognised project management methodology or an adapted version of a recognised methodology, such as PMBoK or PRINCE2 in the past one to three years. This time period was selected because:

- Organisations that started implementing a methodology within the last year may not have had the time to implement a significant portion of the project management methodology.
- Organisations that implemented a methodology more than three years ago would possibly not be able to recall the impact of implementing a project management methodology.

Data Collection

As the researchers wished to gather detailed opinions and perspectives on the subject of project management methodologies, the primary method of data collection was a semi-structured personal interview. This allowed open-ended questions to be asked, which provided the detail and depth of information required by the researchers. Using a semi-structured interview gave the researchers more control over the data collection than other types of data collection methods and also provided the researchers with the opportunity to ask additional questions, when necessary. Even though interviews can be time consuming, they were suitable as a data collection method that could be employed within the timescales available for this research.

FINDINGS AND ANALYSIS

Research interviews were conducted in April and May 2006 with one project manager in each organisation. It must be noted that the responses of each interviewee to the questions were

based on their own experiences and knowledge of implementing and using a project management methodology within the context of their organisation. These views do not necessarily represent the overall view of each organisation.

Profile of the Organisations

Five organisations participated in the research and a high-level profile of each organisation is presented in Table 1. Some of the organisations have several office locations within Ireland or have offices in multiple locations around the world. As practices can vary across locations within the same organisation for the purposes of this research the findings relate to the location in which the interview was conducted.

	Case One	**Case Two**	**Case Three**	**Case Four**	**Case Five**
Industry of Organisation	Financial Services	Building Society	Technology Services	Financial Services	Insurance
Total number of Employees	65	1000	4000	2500	2000
Number of IT staff	14	80	50	200	170
Location of offices	Ireland & UK	Ireland	Worldwide	Ireland, Europe & USA	Ireland

Table 1: High-level profile of organisations

The level of experience of the project managers interviewed varied across the organisations, as did the number of projects that they managed before and after the implementation of the new project management methodology. A high-level profile of these project managers is displayed in Table 2.

	Case One	**Case Two**	**Case Three**	**Case Four**	**Case Five**
Years of experience as a project manager	1.5	8-10	9	8	7
Number of projects managed before the implementation of the methodology	3	50	4	5	20
Number of projects managed after the implementation of the methodology	2	6	2	2	5

Table 2: High-level profile of project managers interviewed

Case One

Case one is a financial services organisation operating in the UK and Ireland with a small information technology (IT) department in its Irish office. Prior to the implementation of the current project management methodology there was an internally developed methodology in use. However, as the project managers did not have extensive project management experience they were unsure if they were using best practice. They expressed a desire to obtain a qualification in project management to improve their knowledge as well as developing their own personal career. The benefits to the organisation were also considered and, when approached, management provided their full support for the project managers to complete a project management program and to implement a standard project management methodology. The project manager interviewed identified several benefits of implementing and using a project management methodology, including: the provision of a formalised project management structure; the provision of a consistent set of controls for managing all projects; increased awareness of the project deliverables and the project status within the project team; and an improvement in communication amongst the project team, the project manager and management. There were also some minor problems identified, relating to slight resistance from staff to the new methodology and a slight increase in the amount of documentation required, both of which were resolved once staff became familiar with the new methodology.

Case Two

Case two is an Irish building society that had no project management methodology in place prior to the implementation of the current project management methodology. Project management in this organisation was very haphazard and varied from one project manager to another depending on their experience. Following the development of a major strategy plan at organisational level, senior management realised that if the organisation did not enforce a common methodology for managing projects it would not be possible to accomplish all the

proposed plans. There was also a general consensus from management that money could be saved by implementing a methodology by helping to bring projects in on time and within budget.

A methodology was identified and implemented and it was readily accepted by the IT department. The project manager interviewed identified several benefits as a result of the implementation, including: the provision of a consistent approach to project management; tighter controls on project schedules and project cost; a common way for people to engage within the organisation; the realisation that a project management resource needs to be committed to manage a project; the improvement of resource allocation on projects; and better management of customer expectations. There has also been a noticeable increase in the levels of satisfaction amongst IT staff and an increased awareness of the project team on the project status.

However, the organisation did experience difficulties with getting buy-in from all staff and divisions and with trying to get senior management to follow the process for new requirements. This project manager also acknowledged that it is not always possible to enforce the use of the methodology in some circumstances, for example, if a project has specific time constraints.

Case Three

Case three operates in the technology services industry and has offices worldwide. This organisation was previously an independent company, and it had an internally developed, well-documented methodology in place prior to its take-over. This organisation tends to work on long-term projects for external customers and the drive for project management certification was partly a result of customer demand, partly due to the desire of management to have a uniform approach to project management as part of Capability Maturity Model

Integration (CMMI) certification, and partly to have it as an additional selling point during the sales process.

As this organisation had an effective methodology in place previously there was no resistance from staff to the implementation of the new methodology because the benefits of using a methodology had already been realised. As a result the project manager believes that there were no major additional benefits following the implementation of the new methodology other than project teams being more aware of the project status.

However, this organisation did experience problems with customer buy-in when trying to implement the new methodology on existing long-term projects in relation to increased documentation; resistance of customers to change from the existing methodology; and the implementation by some customers of their own project management methodology.

Case Four

Case four is a large financial services organisation with offices in Ireland, Europe and the USA, which had no official project management methodology in place prior to the implementation of the new methodology. Each division or project manager would have set their own standards for a project. The implementation of the project management methodology was driven by a strategic decision at senior management level as there was a desire at organisational level to provide a common method of running and managing projects; to use best practice where possible; to have a single reference point for all staff involved in a project; and to have a consistent, transparent process for tracking and monitoring projects.

This project manager has found that by having a methodology in place there is a more structured approach to project management. The implementation of a methodology has standardised projects and made it easier for management to compare projects across different departments. It also facilitates the movement of team members from one project to another.

However, this project manager is of the opinion that the project management methodology does not provide adequate support for managing people, or managing conflict in a team.

Case Five

Case five is an Irish insurance company that had an in-house project management methodology in place prior to implementation of the new methodology, although it was used inconsistently across the organisation. The main driver to implement a new project management methodology was the pursuit of CMMI certification by the organisation. There were some difficulties experienced in getting buy-in from all divisions of the organisation and obtaining agreement on the processes that would be included in the methodology.

This project manager identified several benefits of using a methodology including: the provision of a consistent approach to project management; a common way for people to engage within the organisation; tighter controls on project schedules; the improvement of communication between project teams and stakeholders; customers are more realistic in their expectations; and the increased awareness of the project team of the project status.

Other benefits have been identified at organisational level, including: the standardisation of projects for comparison purposes; the ability to easily move personnel from one project team to another; an increase in the levels of satisfaction amongst IT staff; having a clearly defined framework in place for external suppliers; and an improvement in the performance of project teams, making it easier to justify the existence of the internal IT department as the supplier of software solutions.

Project Management Methodologies Used

Prior to implementing the new project management methodology, the use of project management methodologies varied across the organisations (see Table 3). Two of the organisations (case two and case four) had no methodology in place at all, which may be due to the larger size of these organisations and the effort and support that would be required to

implement such a methodology. Of the three organisations that had a methodology in place, two organisations, both of which were small at the time, had a methodology in place that was developed internally and was used consistently across all projects. The remaining organisation (case five) followed an in-house methodology imposed on them by their parent organisation, and it had annual reviews and releases. However, it was used inconsistently due to the changing structure of the organisation. In recent years this particular organisation has taken a lot of new staff on board who have worked with different methodologies or with no methodology at all and it took a considerable amount of time for all staff to become accustomed to the in-house methodology.

	Case One	**Case Two**	**Case Three**	**Case Four**	**Case Five**
Previous project management methodology	Internally developed	None in place	Internally developed	None in place	Internally developed
Project management methodology implemented	PMBoK	Adapted from PRINCE2	PMBoK	Adapted from PMBoK	Adapted from PRINCE2

Table 3: Project management methodologies

The organisations (case one, three and five) that used an internally developed methodology prior to the implementation of the new project management methodology experienced different problems with using and implementing the methodology. The problems included: a lack of project manager experience in one case; resistance of staff to follow a standard process in another case; the imposition of a methodology by a parent organisation that did not necessarily suit the business model of the organisation in question, resulting in substantial cost overheads to customise it to fit the requirements of the organisation.

Drivers for Implementing a Recognised Project Management Methodology

All of the organisations that participated in the research made a decision in the last number of years to implement a project management methodology for the first time or to move away from their internally-developed methodology to an industry-recognised methodology. There

were several drivers behind this decision. The main driver, which was consistent across the large organisations (cases two, three, four and five) was a decision by senior management to implement a uniform approach to project management within the organisation. However, in two organisations (case three and case five), there were additional factors that influenced management's decision to implement a project management methodology. Both of these organisations were driven by their desire to obtain CMMI certification, of which a requirement is to have a project management methodology in place. Case three, whose customers are external to the organisation, also wanted to have certified project managers and to have a recognised methodology in place as a potential differentiating factor when competing with other vendors for business.

In the smallest organisation (case one) the project managers were the main driver behind the implementation. The project managers in this organisation seem to have had more direct influence on management to make the decision within a short timeframe to implement a methodology than in the large organisations, which may be due to its smaller size.

While there was some interest in the personal development and training of staff in all organisations, this seems to have been only a minor consideration.

Implementation of the New Methodology

The levels of adoption of the new methodology varied across the organisations. The smallest organisation (case one) implemented all relevant portions of the methodology without any adaptation, which may be due to its small size and the ability of the organisation to adapt their working practices to fit with the new processes. The large organisations, whose customers are internal to the organisation (cases two, four and five), implemented an adapted version of the methodology, which was required in order to fit with their existing business practices. The remaining organisation (case three), whose customers are external to the organisation, adopted the new methodology on new projects, but retained the old

methodology on existing projects and this organisation is trying to introduce portions of the new methodology where possible on these existing projects. The larger organisations (cases two, three, four and five) allow certain parts of the methodology to be omitted in smaller projects. Projects in the smallest organisation (case one) tend to be small in nature and hence do not require parts of the methodology to be omitted.

Difficulties experienced when implementing a project management methodology

Even though the implementation of the project management methodology was considered to be successful by all project managers, some difficulties were experienced in the large organisations. The main difficulty in the large organisations (case two and case five) related to getting buy-in from all staff and divisions. The time and effort required, in particular in case five, for the various divisions to define and agree on the processes that the customised methodology would use was underestimated, resulting in an additional cost for the organisation. The project managers in both these organisations were closely involved in the implementation of the methodology and were fully aware of these issues. While these were not identified as issues in the other large organisations (case three and case four) this may be because the project managers in these instances were not as involved in the actual implementation of the methodology. In contrast, the organisation that has external customers (case three), had a problem with customer buy-in as opposed to staff buy-in when trying to implement the new methodology on existing long-term projects. Their customers did not wish to change as they liked the existing methodology and were familiar with it and they did not want to pay for the time required to develop additional documentation required by the new methodology. Some of their external customers also started to roll out their own project management methodology at the same time, and there were difficulties trying to agree with the customer which process from which methodology should be followed at a particular point in a project. The project manager in this case also found that while senior management made

the decision at a strategic level to implement a standard project management methodology, their focus changed to other priorities for example, the generation of new sales, once the decision was made.

In contrast to the large organisation there were no difficulties identified by the smallest organisation. This may be due to the fact that this organisation had an in-house methodology in place previously and it was a straightforward process for staff to switch to the new methodology. It may also have been easier to enforce the use of the methodology due to the small size of the IT department. All organisations experienced an overhead in re-training project managers in the new methodology, but this was more prevalent in the larger organisations.

Benefits of Using a Project Management Methodology

Using a project management methodology has its benefits and each of the project managers interviewed identified benefits pertaining to their organisation. All project managers interviewed were in agreement that the use of a project management methodology provides them with the necessary structure to manage a project effectively. Four project managers (cases one, two, four and five) stated that the main benefit was the provision of a formalised, structured approach to project management and a consistent set of controls for managing all projects. As case three already had a good project management methodology in place, this was not deemed to be an additional benefit.

Confidence levels of project managers improved in three cases (cases one, four and five) for different reasons. In one organisation (case four) this was due to the fact that project managers now have defined processes, guidelines and templates to follow and are not trying to design their own, whereas in another organisation (case one) the project manager was relatively new to the role and having a methodology in place provides her with the confidence and knowledge that she is conducting a project correctly and that she is following

best practices. A third project manager (case five) found that project managers now have a better understanding of project management, which was not always the case in the past.

All project managers believe that using the methodology has improved the quality of their projects, although there are no formal measures in place to quantify this. Each project manager was asked to define what was meant by quality and this was defined as: delivering what the customer required; minimising the number of defects raised post-implementation; increasing the levels of customer satisfaction and having enough documentation available to support a change and to make users aware of a change. In particular, two of the larger organisations (case two and case five), whose customers are internal to the organisation, stated that there is now a drive within the IT department towards providing a better quality product. By delivering a better quality product, customers are satisfied and less rework and maintenance is required from the IT department, which can result in more investment internally in IT. The two project managers (case two and case five), who were directly involved in the implementation of the methodology believe that since implementing the methodology there has been an impact on the speed of delivery of projects and on the success rates of projects. Their definition of a successful project also includes the cancellation of a project when it can no longer be justified. Another project manager (case four), who was not directly involved in the implementation of the methodology, found it difficult to say if the use of the methodology has had an impact on the success rates of projects. Since the implementation of the methodology, the project manager in this organisation (case four) is aware of one project that was cancelled, which may have been a result of using the methodology and having a formalised structure in place.

Two project managers (case two and case five), who have several years' project management experience and who were closely involved in the implementation of the methodology identified several additional benefits as a result of using a project management methodology.

They believe that using a methodology helps to better manage the expectations of customers and management stakeholders and ensure that they are realistic in their expectations. It has also helped to reduce project overruns as project schedules, cost and quality are much tighter than previously and the expectations around the deliverables of a project are much more accurate. By using the methodology effectively, project teams and management are aware of the reasons why a project may be behind schedule and whether the reasons for the overrun are valid. Both of these organisations tend to have larger projects and did not have a methodology in place previously, or had a methodology that was used inconsistently, which may be why these project managers feel they now have better control over their projects. In the organisation (case two), where a methodology was not in place previously, it also led to the realisation that a project management resource needs to be committed to manage a project, which was not always the case in the past. This project manager also stated that their resource allocation on projects has improved and the IT department are no longer trying to complete several projects at the same time with the same resources. Having the methodology in place allows this organisation to prioritise projects and allocate resources accordingly.

The organisation (case three) that had a good methodology in place prior to the implementation of the new methodology believes that there are no major additional benefits as a result of implementing the new methodology. In this organisation there was no evidence to suggest that the new methodology is more effective than the old methodology. Projects are not any more/less successful as a result of using a specific methodology, which suggests that it does not really matter what methodology is used, as long as a methodology is used.

Difficulties with Using a Project Management Methodology

While there are benefits to using a project management methodology some difficulties were also identified. Two project managers (case three and case four) identified the lack of flexibility for projects of smaller size (3-4 months duration) as a problem for them. While

another project manager (case one) found that the new methodology was less flexible than the old methodology, this project manager did not consider the lack of flexibility a real issue as tighter controls and less flexibility were required on their projects. The problem with flexibility of the methodology was only identified by organisations that use PMBoK. Of the two remaining organisations (case two and case five), who use an adapted version of the PRINCE2 methodology, the project manager in case two does not have an issue with the flexibility of the methodology. The project manager in case five, did not state whether there was an issue with the flexibility of the new methodology, but he did state that there had been issues around the flexibility of the old internally developed methodology, which was similar to PRINCE2. While one of the organisations (case four) had implemented an adapted version of the PMBoK methodology, the adaptation was very detailed and did not incorporate any major changes from the PMBoK methodology. This suggests that adapting an industry-recognised methodology may have an impact on the flexibility of a methodology.

In one organisation (case two) the project manager acknowledged that their projects do not always follow the methodology and that it is not always possible to enforce the use of the methodology. For example, if a project has specific time constraints, which do not allow for the full use of the process, project managers may take short-cuts. This organisation also has occasional problems with senior management who do not want to abide by the processes that are in place for initiating a project, especially if a project is a priority for them.

For all organisations, the levels of documentation required by the methodology for large projects were not deemed to be excessive. However, one project manager (case three) did have an issue with the level of documentation that was required for smaller projects and this project manager was of the opinion that the levels of documentation can be excessive for small projects. Another project manager (case one), whose projects are generally small, stated that slightly more documentation was required with the implementation of the methodology,

but that this was not causing any problems with staff once they became familiar with the methodology.

While four of the project managers believed that the project management methodology provided them with the necessary support to manage a project, one project manager (case four) disagreed, particularly in relation to provision of support for managing people, or managing conflict in a team. In this organisation projects often involve several departments, and the project manager does not have direct control over all individuals working on the project. This may be the reason for this project manager identifying this problem. Another difficulty with using a methodology for one organisation (case two) is that senior management do not always understand what project management is about and it is difficult to provide tangible evidence to them of the benefits of project management. A third organisation (case five) would like to have an overall view of whether IT projects are becoming more productive and more effective over time and the use of a methodology did not help with this problem.

Impact on the Organisation of Implementing a Project Management Methodology

In each organisation the implementation of a project management methodology was generally accepted by staff and there was no real resistance to using a methodology. In one organisation (case two) the methodology was readily accepted and welcomed by the IT department, which may be due to the fact there had been no methodology in place previously. Another organisation (case one) found that the methodology inhibited staff initially until they became familiar with the methodology and its processes, at which point it was readily accepted. A third organisation (case three) had a methodology in place previously and because the benefits of using that methodology had been realised there was no resistance from staff to the implementation of the new methodology. The projects managers interviewed in case four and case five were not aware of any resistance to the implementation of the methodology.

Benefits to an Organisation of Implementing a Project Management Methodology

In addition to benefiting project teams, implementing a project management methodology can provide several benefits to an organisation. All project managers interviewed stated that the project manager and project teams are now more aware of the on-going status of a project, its timescales and also how slippage can affect a project. This has also resulted in customers receiving more accurate reports on the status of a project. All project managers also agreed that using a project management methodology provides a common way for engaging with all relevant stakeholders within the organisation and that communication is now more standard.

Three of the larger organisations (cases two, four and five), whose customers are internal to the organisation, identified the standardisation of projects as a benefit, making it easier for management to compare various projects and measure staff performance across departments or divisions. Two of these project managers (case four and five) also found that having a methodology in place facilitates the movement of team members from one project to another project, something that was difficult prior to this because teams worked very differently and did not use a consistent methodology. In addition, it is easier to make new staff members aware of the processes that must be followed when working on a project team because there are standards in place.

The role of the project manager within organisations (cases two, three, four and five) is now more defined. As a result project management has become more desirable as a position in one organisation (case five) and people aspire more towards it now as they see it as a professional role that is part of a clearly defined career path. Another organisation (case three) has found that roles and responsibilities on a project are now clearer and each individual on a project team should know what is expected of them. This was not identified as a benefit in the smallest organisation, which may be due the fact that there are a very small number of project managers and the roles were already clearly defined.

Several additional benefits to the organisation were identified by the two project managers (case two and case five), who were very much involved in the implementation of the methodology identified. One project manager (case two) found that while using a methodology doesn't eliminate bad projects, it does help to identify projects that are not working and how much they are costing and when they should be stopped. The second project manager (case five), stated that using a project management methodology provides more reliable results than if no methodology was used. This project manager also found that using a methodology has vastly improved the performance of project teams in relation to bringing projects in on-time and in line with customer expectations, which has made it easier to get new initiatives and new projects approved and to obtain more investment for future IT projects. Consequently, the existence of the IT department can be justified, resulting in the use of the IT department to develop IT solutions as opposed to outsourcing the work to an external supplier.

Drawbacks to an Organisation of Implementing a Project Management Methodology

There were no downsides identified in relation to training of staff in the use of the methodology or the cost of carrying out that training.

Only one organisation (case four) identified any difficulties with the methodology. This organisation that implemented an adapted version of a methodology has not had any revisions or updates provided since the methodology was rolled out. The project manager in this case is not aware of any feedback sessions held on how effective the methodology is, how the methodology works in practice and whether any improvements are required, but she feels that this may be a drawback of the methodology

Problems Resolved with the Implementation of the New Methodology

With the previous methodology, one project manager (case one) was concerned that there were no guidelines on how to use the methodology and the project managers were unsure if

they were using best practice. Both of these issues were addressed with the implementation of the new methodology. Another organisation (case five) had difficulty with scaling the methodology down to suit their needs and a lot of rework and effort was required to modify the methodology, This is no longer a problem with the new methodology as it was customised for the organisation. They also had some concerns around having a single supplier of the old methodology for support and training. This concern was also alleviated with the introduction of the new industry-standard methodology as there are several suppliers of the new methodology.

CONCLUSION

In this paper we addressed the impact on the organisation and the project team of implementing and using a project management methodology. Theory states that it is not important which methodology is used so long as the project team can use the methodology (Kerzner, 2001, p85). The findings of this study support this, which may result in an organisation adapting a recognised methodology to suit their business needs or having a condensed version of the methodology for smaller projects. The study also suggests that adapting an industry-recognised methodology may have an impact on the flexibility of a methodology. This could resolve the problems identified by White and Fortune (2002) which finds that a methodology can be difficult to model to the ‘real world’, or requires too much documentation. Implementing an industry-recognised methodology as opposed to an internally developed methodology was found to provide several benefits to the organisation, including the availability of several suppliers of the methodology and the expectation of external customers to have a recognised methodology in place.

Existing research by the Standish Group (2001) and Brock et al. (2003) has shown that there is a positive link between the use of a project management methodology and the success of a

project. All project managers interviewed believe that their projects are more successful as a result of using the methodology. However, there are no formal measures in place in any of the organisations to confirm this. The results of this study also show that by using a project management methodology the monitoring and control of projects is more effective and communication has improved. This suggests that by implementing and using a project management methodology the success rates of projects could be improved as Mahaney & Lederer (2003) and Winklhofer (2002) state that poor monitoring and control and poor communication are two factors that contribute to the failure of projects.

While Kerzner (2001) and Milosevic(1996) state several reasons for implementing a project management methodology, this study adds to this body of knowledge by finding that the main driver in the large organisations for the implementation of a methodology was a desire by senior management to have a uniform approach to project management across the organisation. As a result, management provided their full support and provided the time, money and the resources required for the implementation which concurs with existing literature (Brown, 1999; Loo, 1996). However, the main driver in the smallest organisation was the personal desire of the project manager to enhance her career prospects and her knowledge of project management. This may suggest that project managers in a small organisation can have more direct influence on management to obtain their support, which can benefit both themselves and the organisation.

The findings of this study also suggest that when a recognised methodology is being adapted for an organisation, the support and input of the various divisions within the organisation is needed to ensure a successful adoption of the methodology. In addition, where customers are external to the organisation and have a necessity to use the methodology, their support may also be required.

The literature puts forward various benefits of implementing a project management methodology including: a structured approach to project management; a common way of engaging with stakeholders; better communication; and better management of customer expectations (Loo, 2002; Abbasi & Al-Mharmah, 2000; Dicks, 2000; Payne & Turner, 1999). This research finds this to be the case, but it also finds that the project team are more aware of the status of a project; project managers are more confident in their role and the project management role is now more desirable as a position. In the case of the larger organisations the standardisation of projects provides management with the ability to compare projects across departments; and the performance of project teams in relation to bringing projects in on-time and in line with customer expectations has improved, which can lead to more internal investment in IT and the use of the internal IT department as the provider of software solutions as opposed to an external provider.

The findings of this study do not report any major drawbacks or difficulties with using or implementing a project management methodology. While the literature finds that the time and effort required to continuously evaluate and improve the methodology is a problem (Kerzner, 2001, p1057; Dicks, 2000) this study does not find that this is the case. However, this may be due to the fact that the organisations that participated in this study only implemented a methodology recently and they have not yet reached the point where updates and revisions are required. Future research may address this and also verify some of the other findings across a broader range of organisation sizes and industry types.

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