(1) Title:

Lessons from the untold success story: Outsourcing Engineering and Facilities Management

(2) Authors:

Prof. Steve Burdon
School of Management
University of Technology, Sydney
Cnr Quay Street, Haymarket
Sydney
Australia
Tel: +61 9514 3072
Email: steve.burdon@uts.edu.au

Dr Ajay Bhalla
Associate Professor
Cass Business School
City University
106 Bunhill Row
London, EC1Y 8TZ
UK
Tel: +44 207 040 8702
Email: a.bhalla@city.ac.uk

Abstract:

Over the past decade, there has been proliferation in number of studies looking into IT enabled outsourcing. Little attention has been given to outsourcing of services in other sectors, such as Engineering and Facilities Management (EFM), which have also seen explosive growth. The article builds on a market research study of twenty-six outsourcing contracts making up approximately fifteen percent of Australia's EFM segment. This article aims to take a detailed look at the benefits sought and actually obtained from EFM outsourcing. The most successful contracts were then correlated against the most successful practitioners and the management issues further examined in five case studies. A number of learning points were apparent, and these can be grouped under four generic success factors: choice of contract style and management, relationship management, innovation management and workforce management.

1. Introduction

Organizations have been increasingly turning to outsourcing in an attempt to enhance their competitiveness, increase profitability and refocus on their core business. In the academic and practitioner literature, emphasis has shifted from outsourcing parts, componentry, and hardware subsystems towards the even greater unexploited potentials that intellectually-based systems offer (Quinn, 2000). Over the past decade this has led to abundant research in the area of IT/IS management outsourcing. To add to this, Europe and North America has traditionally been the focus of outsourcing studies. More recently, Lacity, Willcocks and Feeny (2004) have looked into the Business process outsourcing, and Berggren and Bengtsson (2004) have re-drawn our attention to outsourcing in the manufacturing sector. Comparatively, Engineering and Facilities Management (EFM) outsourcing has received little attention. Typically EFM outsourcing spans engineering services such as operations and maintenance outsourcing services, which include structural, mechanical, civil, instrumentation and electrical maintenance. Facilities Management involves services associated with real estate management and systems. Of course the motivations for outsourcing in any industry are driven by an ever-greater organizational pursuit to ensure cost discipline, whilst improving quality of service and delivery capability (Domberger, 1998). However, as the outsourcing has become a popular mechanism for differentiation by contracting out the non-core activities, the differences in the motivations for outsourcing have emerged. This has been ignited by the debate as to what is core and what is non-core function. For instance, Lacity et al. (2004) noted that back office functions are considered as key contributors to competitive advantage. In this respect,

organizations can benefit by drawing learning from different types of outsourcing and the outsourcing practices in different geographic locations.

This paper is based on a study carried out by the University of Technology, Sydney in collaboration with Transfield Services, one of the largest EFM outsourcing providers in Australasia and South East Asia, and Boston Consulting Group. A questionnaire was sent to the top fifty Transfield Services customers which made up 75% of Transfield Services $1 billion annual turnover. The questionnaire covered the benefits organizations sought and achieved from outsourcing, and asked executives to rank the key success factors in an outsourcing relationship. Each of the organisations contacted were asked to complete the questionnaire for their largest outsourcing services contract, whether that was with Transfield Services or another provider. We received responses from twenty-six firms in Australia and New Zealand. The survey was followed up by case study analysis of five companies. In each case, they were asked to provide additional details of their largest outsourcing contract. The companies were: BlueScope Steel Port Kembla, New South Wales (NSW) Police Property Services Department, NSW Department of Commerce, Shell Australia and Tranzrail (NZ). Two or three managers from each company were interviewed on one or two occasions each. The managers came from three levels-those with overall responsibility for strategic outsourcing, those with responsibility for outsourcing Operations and Maintenances, and those with responsibility for the operational implementation of the outsourcing contract.

The paper proceeds as follows: first, we present the motivations for outsourcing, and report the benefits organizations sought and actually obtained from EFM outsourcing. Second, we identify the four key management areas for success. Our objective is to

present lessons for senior executives, who will learn to assess the viability of benefits of outsourcing, and generate learnings as to what are the major underlying determinants of successful outsourcing strategy. On average, the organisations whose contracts were analysed believed they would be making further use of outsourcing providers, but which services should stay in-house and which and how services needed careful and continual review?

2. Motivations for Outsourcing

The literature on outsourcing often cites generating cost efficiencies, and controlling the costs as the key reason for outsourcing. Outside vendors are regarded as specialists who can provide similar or better level of service at a lower cost than available in-house (Barthelemy and Dominique, 2004). However, one-off cost reduction is not the only driver. Through outsourcing, firms can generate various non-financial benefits. Firms can respond to environmental uncertainty in ways that do not increase costs associated with internal bureaucracy (D' Aveni and Ravenscraft, 1994). They can also focus on building their core competencies, while outsourcing the non-core activities to specialist vendors for both one-off and continual improvements. This is because firms are reported to have limitations as to the depth of specialist knowledge possessed by the suppliers (Quinn, 2000). For example, it has been reported that many firms find it increasingly difficult to acquire, develop, and retain the people and technical know-how in-house necessary to maintain existing complex systems and develop and implement new technologies (DiRomualdo and Gurbaxani, 1998). There is also hesitation as to if the firm will be able to afford development risks for any desired

innovation, as compared to suppliers who have vested interest in innovation and are able to spread risks across multiple present and future clients (Quinn, 2000). By outsourcing the entire activity that is not a core competence (Quinn, 2000) to specialist vendors, firms, thus, can speed innovation and accrue higher returns at lower costs. However, it has pointed out that what is core and what is non-core is an academic debate (Kakabadse and Kakabadse, 2002), and firms can indeed benefit by outsourcing of core competencies (Baden-Fuller et al., 2000). In summary, the academic and practitioner literature continues to emphasise that many critical capabilities reside outside the boundaries of the firm and that outsourcing enables firms to access these at lower costs. In two of the case studies reviewed, eg outsourcing the operation and maintenance of railway tracks and oil refinery operations have safety and reliability issues that are both strategic and essential.

2.1 Drivers for Engineering and Facilities Management outsourcing

To determine the importance of drivers for outsourcing, the questionnaire listed fourteen benefits and asked respondents to rank, by decreasing order, the importance of these to their decision to outsource. To ascertain the degree to which executives were satisfied in attaining the benefits they were seeking, the questionnaire asked respondents to rate their satisfaction with the outcome on a scale of 1-10.

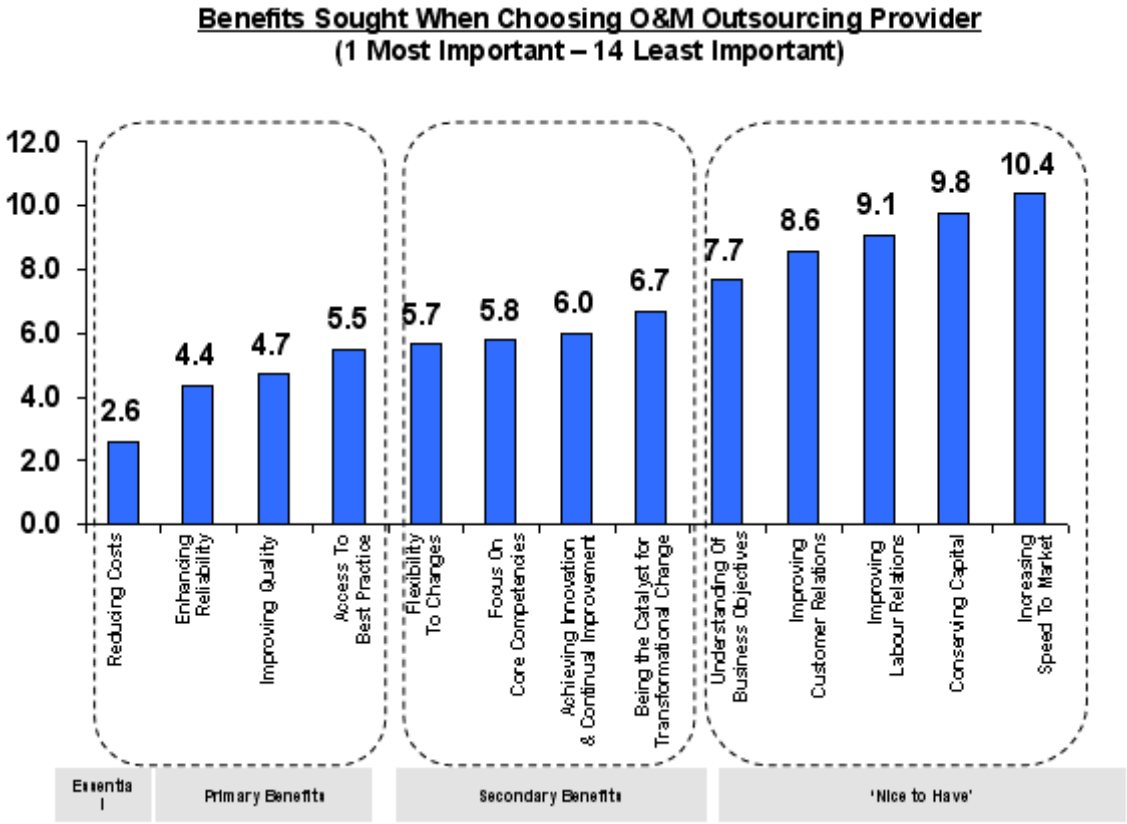
2.1.1 Cost Control is the antecedent to outsourcing: The survey showed that *cost reduction* is twice as important as the next most desired benefit of outsourcing – enhancing reliability – and stands alone as the main reason for outsourcing (See figure 1). While there are other benefits sought and expected from outsourcing functions, those benefits are measured and tend to be valued in terms of cost reduction. All the

firms studied had initiated an outsourcing policy in order to reduce costs, with the desired cost saving being between 10 and 20%. Cost savings are sought in two stages: initial cost savings derived from restructuring the workforce, restructuring processes, and introducing new systems and ongoing cost savings derived from implementation of best practice, continual innovation and the reduction of liability costs achieved through, for example, improved safety levels and a more productive split of preventative and emergency maintenance operations.

Cost reduction received an above average score on satisfaction but the case studies revealed that there is a difference between degrees of satisfaction at the strategic level and degrees of satisfaction at the operational level. At the strategic level, where the 'big picture' is clearer, the satisfaction with cost savings was higher than at the operational level, where overall cost savings are not always immediately noticeable.

Cost savings peak at around 4-5 years, as does satisfaction with the outsourcing relationship. The case studies showed that cost savings are being delivered but revealed a number of factors that inhibit satisfaction with cost savings, particularly in the first year of the contract. Invariably, the reason for this is that the implementation of the contract reveals the true cost of the function and, in doing so, obscures the real cost savings. The cost of the original in-house service is usually misunderstood and underestimated, both as a raw cost and in terms of long-term liability costs. Studies have shown that when internal transaction costs are thoroughly analysed, they can be extremely high (Quinn and Hilmer 1994), and often the lack of factoring hidden outsourcing costs inflates the outsourcing benefits (Berthemely, 2001).

Figure 1: Companies Seek Reduced Costs, Improved Quality and Enhanced Reliability Through Access To Best Practice



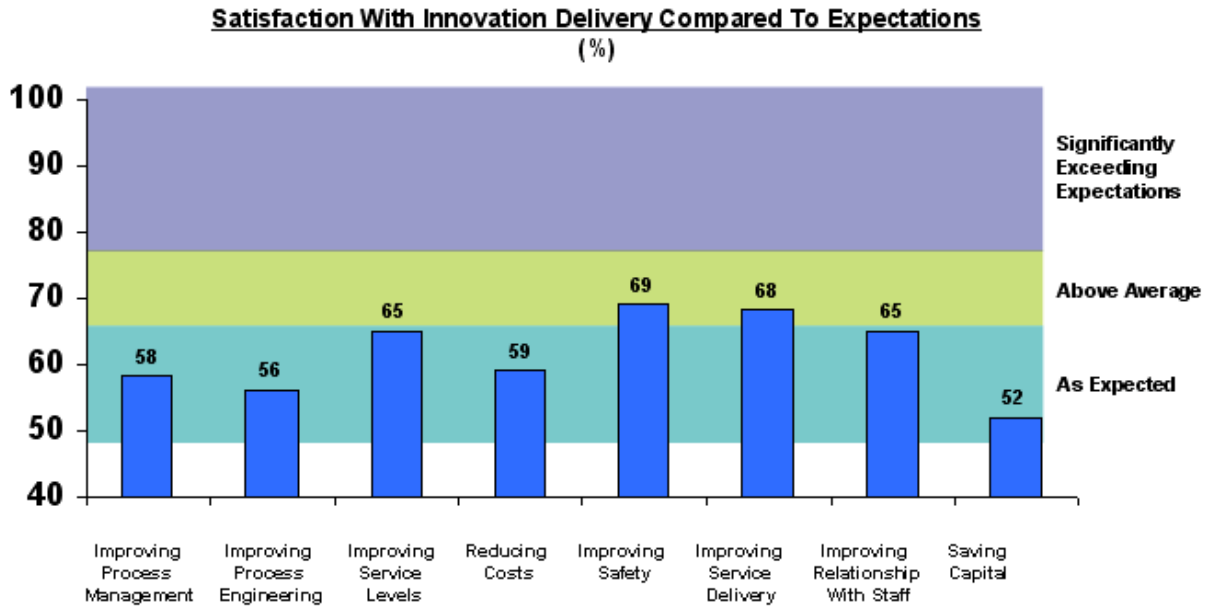
2.1.2 Primary benefits sought after costs emphasise enhanced reliability, quality and access to best practice: Whilst cost is the number one priority and a necessary prerequisite for any outsourcing arrangement, improvement in reliability are the number 2 and 3 element in importance. This is concurrent with the findings reported by Kakabadse and Kakabadse (2002). Enhanced reliability and quality is interpreted differently in engineering and facilities maintenance organisations. For example, the rail operator Tranz Rail uses the rail network downtime to measure reliability, and measure of track quality index to evaluate quality. For the facilities maintenance organisations, quality compliance is a key performance indicator, and reliability is primarily measured by the responsiveness and capability of the subcontractors, for instance the elapsed time to fix a breakdown. Access to best practice is interpreted in five areas, namely Access to Best IT Systems and to Best Contract Alliance Practices,

Best of Class Benchmarking of Costs, Best Practice in Preventative/Breakdown Procedures and Workforce Utilisation Practice. There was a variation in perceived need for access to best practice, and contrary to the findings reported by Kakabadse and Kakabadse (2002), this aspect of outsourcing appears to have minimal impact on the decision processes involved in implementing an outsourcing relationship, whether it is a simple transactional contract, or an alliance. Cost savings, and perhaps service levels, dominate the decision process.

2.1.3 Flexibility, focus on core competencies, and innovation emerge as secondary benefits: Firms value flexibility in the contract to deal with the changes, although to a lesser extent than they value cost and quality. The interviews revealed that flexibility to change the contract, specifically the Key Performance Indicators (KPI's), is essential to the successful development of the relationship. The initial KPI's are usually a guesstimate, which is the result, of the difficulty firms experience in estimating the true cost of embedded functions such as maintenance.

Other secondary outsourcing benefits emerged as the management and resource focus on core competencies, and innovation and transformational change to achieve cost savings. For the EFM sector the firms gave eight different areas where they sought innovation (see. Figure 2). Satisfaction with innovation is at its highest when the innovation has resulted in improved safety and improved service delivery. However, it is not seen as effective in reducing costs, saving capital or improving process engineering and management. This would appear to be a major impediment to further outsourcing of services and moving to a greater number of alliance style contracts. The outsourcing providers will need to learn greater industry and service skills to improve their contribution to continual innovation and continuous improvements in cost and service parameters.

Figure 2:



2.1.4 Least Valued Benefits

The least valued benefits (figure 1) were: understanding business objectives, improving customer relations, improving labour relations, conserving capital and increasing speed to market. There was no correlation between satisfaction with the contract and achievements in these benefit areas. For some of these benefits, such as understanding business objectives, customer and labour relations, it is likely that some organisations took them as a given and their satisfaction levels were only affected as a means to deliver the essential and primary benefits of cost and service level.

3. Managerial Guidelines for Success:

Based on our research, we propose four key success factors as a guiding framework for how managers can best leverage their current capabilities and realise the benefits of EFM outsourcing.

3.1 Choice of Contract Style and Management

3.1.1 Choice of Contract

Two main types of contract exist in EFM outsourcing: Schedule of Rates and Alliance. Alliance contracts for either services or skills are defined as being "open book", with profit based on performance and penalties for non-performance. We found that alliance type contracts for EFM sector tend to be 5 years duration compared to 3 years for schedule of rates. Schedule of Rates contracts tend to be used as a starting point for outsourcing contracts by organisations with less outsourcing experience and less understanding of their cost and service levels (quality and reliability).

Most firms in our sample believed that alliance type relationships are required to deliver innovation and best-in-class practice. For organisations where additional benefits of alliance and strategic alliance models are required, the interviews revealed that the prerequisite of both parties is to meet a number of essential foundation requirements.

For any outsourcing contract, the first step is that cost savings of at least 10% are required in most instances otherwise the efforts involved in using an outside party are not seen to be worthwhile. Once this level one requirement has been met, the second level, trust and flexibility, needs to be addressed before implementing a partnership model. Until this need has been met to the satisfaction of both partners it is difficult to meet level three requirements of setting the right culture for alliancing. Once level three, the setting of the right culture, is achieved joint development of process management and best in class visions can be achieved. Once this level has been satisfied, it is possible to move to level five where a strategic alliance can be created, and strategic management decisions can be entered into successfully. The companies that had successfully moved to strategic alliances made sure they had satisfied the four level requirements before sharing strategic management decisions

3.1.2 Contract Management as a Core Competency

Whether the decision to outsource a service was taken by the senior functional manager head or at a more senior level, there was a range of views on whether contract management of outsourcing providers was essential and a core competence. There was a significant difference in the views of those with the most successful relationship: 40% of the most successful companies saw contract management as an essential competence, but only 20% of the least successful. In addition, of those organisations that were successful and saw it a s a core competence, 66% thought these skills needed to be developed before the contract was let. Interestingly, there was a general agreement amongst both the least and most successful organisations that the management skills required for alliance contracts were more complex and harder to develop and implement.

3.2 Innovation Management

3.2.1 Effective Management of Key Performance Indicators

Successful relationships depend on Key Performance Indicators (KPIs) that accurately reflect the top priorities of the firm. Typically in case of EFM outsourcing KPIs can be framed in eight categories: Cost reduction; Service levels speed and quality; Service levels availability of plant; Meeting statutory requirements; Safety; Customer Service; Linkage with end users performance; Contract Management. They play a vital role in aligning motivation, action and reward. The process of analysing the customer's needs, allocating degrees of importance and setting targets of performance and linking these to the outsourcing provider's payment is a key success factor. The latter is usually undertaken by linking 100% achievement to a profit percentage of the contract – often around 6%-8% - and then this profit percentage is reduced if there is less than satisfactory performance in one of the KPI parameters. The systems and culture to make this a tough but fair reflection of the results and a proactive motivator for both parties is a sign of a true alliance of equals.

3.2.2 Engaging in Constructive Tension

The most successful outsourcing relationships are the ones that have constructive tension built into the contract. Constructive tension is the contractual mechanism by which the relationship is kept invigorated to maintain the performance of service provider. To enable the constructive tension, it is essential that firms have renegotiation option built into their contracts. Constructive tension can be in number of forms, depending on the nature of the relationship, the activities being outsourced, and the number of agencies involved in the outsourcing contract. For instance, the mechanism used by BlueScope Port Kembla is the rolling five year contract where the contract is renegotiated every year, but for a further five years. This allows the provider and client to negotiate fresh KPI's based on recent performance annually but keeps enough guaranteed length in the relationship to allow certainty for the workforce. Key to generating meaningful constructive tension is linking the contractual mechanism to the KPI's and ensuring that the KPI's reflect accurately the business imperatives of the client. A constructive tension mechanism that is working well will be iterative – that is, the KPI's will change with each implementation of the mechanism, in the case of BlueScope Port Kembla, that is every year as the contract is renewed.

"Our KPI's today are not the ones we had a year ago and the ones we're going to have next year aren't the ones we have now...Every six months we have to jump a hurdle and you can't jump it on that day. It has to start day one..[Your] first goal is to make the KPI's and ...your second goal is the renewal of the contract."

TSL Alliance Manager, BlueScope Port Kembla

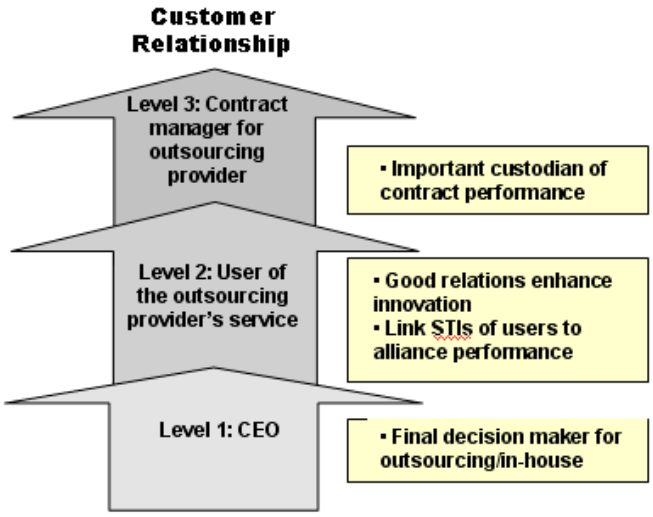
3.3 Relationship Management

3.3.1 Senior Management Involvement

Most companies in our sample wrote clauses with regard to KPIs but reported that they are at best a good guesstimate. The key to a successful ongoing relationship is the ability to alter them as the true extent and scope of the work required emerges. To enable effective relationship management many firms operate with an alliance board and alliance team structure. We found that most of the firms with successful outsourcing relationships were better at managing relationships at three levels (see figure 3).

For two of the case study organisations the decision to outsource their O&M service was a strategic one and the CEO took the issue to the main board for endorsement. In these instances, this action had a profound impact for the users of the outsourced service. Because the decision to outsource and its successful implementation was taken at CEO level, debate amongst users about whether this was a sensible decision was curtailed. Their clear task was to successfully implement the decision to outsource and part of their bonus pool was based on how well that implementation was undertaken. Where the user base was geographically dispersed, or where the predisposition to stay with sub-contracting was strong, this straightforward change to the reward system was a powerful cultural change agent.

Figure 3: Managing Three Levels of Customer Relationship to Outsourcee



3.3.2 Ability to Manage the Total Cost Element Model

Firms that reported a higher degree of satisfaction typically undertook a wider definition of partnership of the total costs involved, with both organisations in all the 10 cost elements. While this was not unusual for the outsourcing provider's total costs, such as implementation and termination costs, it was more unusual to ask both parties to manage previous functional system costs of HR and accounting, reduction in divisional support staff and the question of future annual productivity savings.

However, in the instances examined, the level of annual savings from these three elements was an additional 13%. The success in pursuing these indirect cost savings was improved by a joint effort and interestingly, could be addressed in a client/server or an alliance type contract, although from a cultural fit perspective was easier from an alliance approach.

In case of EFM outsourcing there is greater transparency regarding costs and the service provider's profit margins. In case of firms we studied, the average savings from the direct labour were often in the order of 20%. These are often easily identified as they are negotiated prior to the selection of the outsourcing provider.

We found that successful organisations spent considerable time focusing on ensuring the costs associated with services that were no longer required were eliminated. For instance, firms should be able to reduce the corporate overheads emerging from centralised functions such as HR, IT, Finance and administration, which are typically in the range of 5-10% of the outsourced function. Firms should also pay attention to the one-off implementation costs of making the change. In the firms we studied, the cost of implementation as a percentage of the contract varied significantly from 2% to 8% and is often amortized over the length of the contract. In case of EFM outsourcing, firms frequently negotiate the reimbursements for overheads and their profit margin covering the outsourcing provider before signing the contract. However, in case of successful outsourcing relationships performance payments are part of the equation and constructive tension is created from the use of KPIs and contractual renewal arrangements.

3.4 Workforce Management

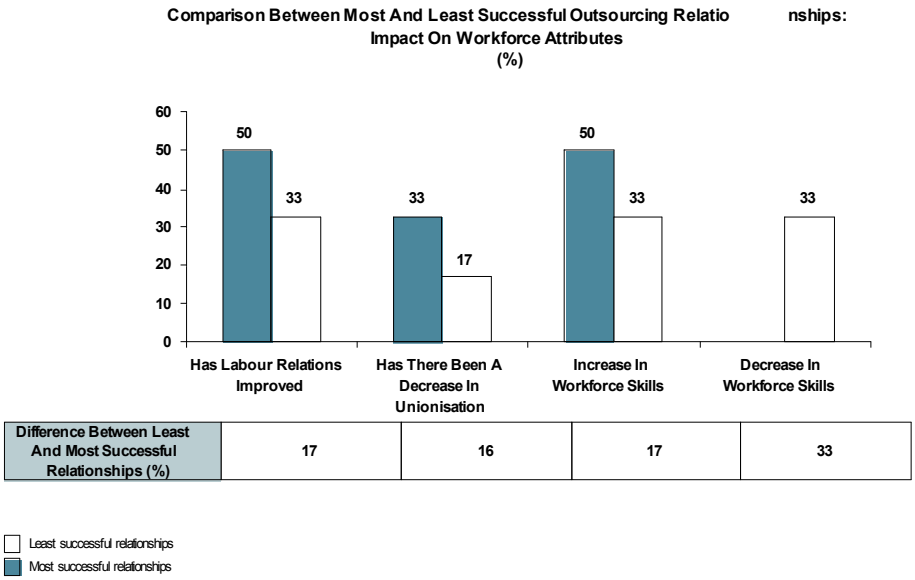
When choosing an outsourcing provider, managers need to evaluate the vendor's ability to provide excellence in workforce management. In nearly all cases the initial once-off cost saving is based on the outsourcing provider's ability to manage the workforce more efficiently than the organisation. The different cultural approach to back office staff and the fact that for the outsourcing provider they are front office staff was well described by Drucker (2002):

> "When a new conductor is hired to turn around an orchestra that has suffered years of drift and neglect, he cannot as a rule fire any but a few of the sloppiest or most superannuated players……So it is the conductor's people skills that make the difference."

The detailed examination of how the workforce reductions form the agenda for future research, but the three elements involved are: reduced numbers, improved quality and better business processes.

The ability of the outsourcing provider to improve labour relations and increase workforce skills is well illustrated by Figure 4 below. There has been some academic debate about the impact of cost reduction and the level of unionization but in all the contracts analysed, the outsourcing provider's staff were all union members as they had been when the services were undertaken in-house. The difference appears to be related to the much greater attention, time and importance shown to the employees rather than whether they were in a union. This greater interest and communication, however, does appear to decrease the power of the union as can be seen in Figure 4. The difference in the impact on these three criteria between most and least successful relationships was significant.

Figure 4: Differences Experienced In Terms Of Shifts In Workforce Attributes



4. Concluding Comments

The relative success of the EFM sector in Australia and NZ in terms of satisfaction versus other services outsourcing sectors such as IT&T and BPO was significant. It is believed that the lessons from this study could well have some generic application to other sectors and perhaps in other geographic locations for EFM.Future studies could more closely examine cost savings and the reasons for these. Researchers can also undertake further research to test the generic applicability of these reasons for success.

References:

Baden-Fuller, C., Targett. D., and Hunt, B. (2000) Outsourcing to outmanoeuvre: outsourcing re-defines competitive strategy and structure. *European Management Journal* **18**(3), 285-295.

Barthélemy, J. (2001) The Hidden Costs of IT Outsourcing. *MIT Sloan Management Review* **42**(3), 60-70.

Barthélemy, J., and Dominique, G. (2004) The determinants of total IT outsourcing: An empirical investigation of French and German firms. *Journal of Computer Information Systems* **44**(3), 91-98.

Berggren, C. and Bengtsson, L. (2004) Rethinking Outsourcing in Manufacturing: A Tale of Two Telecom Firms. *European Management Journal* **22**(2), 211-223.

Domberger, S. (1998) *The Contracting Organisation: A Strategic Guide to Outsourcing*. Oxford University Press, Oxford.

D'Aveni, R., Ravenscraft, D. (1994) Economics of integration versus bureaucracy costs: Does vertical integration improve performance?. *Academy of Management Journal* **37** (5), 1167-1206.

DiRomualdo, A. and Gurbaxani, V. (1998). Strategic Intent for IT Outsourcing. *Sloan Management Review* **39**(4), 67-80.

Drucker, P. (2002) 'They're Not Employees, They're People', Harvard Business Review, Feb, Vol 80, Issue 2, pp70-78

Kakabadse, A. and Kakabadse, N. (2002) Trends in outsourcing. *European Management Journal* **20**(2), 189-198.

Lacity, M., Willcocks, L., and Feeney, D. (2004) Commercializing the back office at Llyods of London: Outsourcing and strategic partnerships revisited. *European Management Journal* **22** (2), 127-141.

Quinn, J.B. (2000). Outsourcing innovation: The new engine of growth. *Sloan Management Review* **41**(4), 13-29.

Quinn, J.B. and Hilmer, F.G. (1994) Strategic outsourcing. *Sloan Management Review* **35**(4), 43-56.