MEASURING PROJECT SUCCESS IN LOCAL GOVERNMENT

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ABSTRACT:

Local government (councils) in New South Wales (NSW), Australia, are responsible for the management and delivery of projects in various fields such as: information technology; engineering; and planning. Council budgets for capital works can vary from less than 2 million ($AUD) in smaller councils to over one hundred million ($AUD) in large city councils. Although projects are publicised and promoted as examples of effective local government, operations often comprise the bulk of the statutory reporting requirements. One reason for the preference of operational reporting over project reporting is the difficulty associated in measuring the success of projects. This paper will discuss the issues local government project managers must consider to determine if their project is a success.

Keywords:

project management, project success, local government, New South Wales, Australia.

INTRODUCTION

Government in Australia is divided into three tiers: federal; state; and local. Each local government (council) must abide by both federal legislation and the relevant state legislation. Public organisations, such as councils, are expected to achieve high levels of success over a number of performance measures (Boyne & Walker 2002). Local government in New South Wales (NSW) has been the subject of an on-going review by the NSW State Government, with a proposal to reduce the number of councils announced in November 2015, and subsequent decision in May 2016. Prior to this decision, councils were required to demonstrate how they were '*Fit for the Future'* (Office of Local Government NSW 2014) by meeting certain criteria. As with any Government review the financial status and capability of each council was scrutinised focussing on traditional financial statements and common financial ratios. It is within this context that project success is being considered. Project success is commonly defined in terms of the 'iron triangle': time; cost; and quality (Chen 2015; Irimia-Dieguez, Medina-Lopez & Alfalla-Luque 2015; Kerzner 2009; Koops et al. 2016; Wysocki 2013; Zwikael & Smyrk 2011). However meeting the time, cost and quality constraints of a project does not always relate to project success (Irimia-Dieguez, Medina-Lopez & Alfalla-Luque 2015; Homer 2004; Stevenson & Starkweather 2011; Toor & Ogunlana 2010). A literature review of public organisations and project success can uncover what a local government project manager needs to consider in addition to the "iron triangle".

RESEARCH METHOD

The research method used was a desktop study of secondary sources of primarily journal articles using a keyword search of "project management success". This method is appropriate due to the publicly available literature on the topic (Silverman, 2013).

MAIN DISCUSSION

Public projects and their stakeholders

Public organisations are expected to achieve high levels of success on a variety of performance measures (Boyne & Walker 2002). Project success is linked to creating new benefits or values at least cost (Wideman 1991). Measuring project success aids the project manager, team members and suppliers, to meet agreed objectives (Kendra & Taplin 2004), yet is one of the most challenging aspects of project management (Hartley 2003). One reason for this difficulty is that project success criteria differ from project to project (Müller & Turner 2007) and are measured differently by each unique stakeholder (Albadvi et al. 2011; Müller & Turner 2007; Hartley 2003; Stevenson & Starkweather 2011; Toor & Ogunlana 2010; Zwikael & Smyrk 2011). This scenario is exacerbated for public projects, because the opinions of multiple public-project stakeholders (internal and external) can influence the project (Jalocha et al. 2014). Public organisation goals, developed by their stakeholders, can be unclear, numerous and often conflicting (Bryson et al. 2010). In addition, public sector improvements, such as projects, are judged by the addition of public value or contribution to the public sphere, and are thus subject to contested values and debates (Woods et al 2015). Outside of the public sphere - and an often overlooked stakeholder group - is external consultants/contractors. Public projects often have to rely on external consultants and contractors to complete projects due to resource constraints. This group have a stake in the project as they rely on successful project completion to garner repeat work within the industry. If they cannot maintain on-going work, then they could find their market share reduced or may be unable to sustain their business. A study of public utility projects (water and sewer) in Saudi Arabia, found that delays (and thus failures) were contributed to: the contractor by the consultant; the owner by the contractor; and to the

consultant by the owner (Al-Khalil & Al-Ghafly 1999). If no agreement is reached on the cause of a failure, then it becomes difficult to implement improvement measures. No improvement to a failed project means limited possibility of future project success. In this case both internal and external stakeholder needs were not met. This is applicable to projects and project management in local government, where the use of contractors and consultants is prevalent. In the case of a waste collection contract for a small municipality (council), eight different groups of stakeholders were identified that could influence the outcome including: resident groups; a contractor; former employees; lawyers; and the media (Wirick 2011). From the literature it can be seen that stakeholders of public projects are a non-homogenous group who may have competing interests.

The role of project management

Project success is affected by many factors outside the direct control of the project manager (Munns & Bjeirmi 1996). Over time it has been shown that project management and project success are not necessarily directly related, are different and distinct, and are often confused (Munns and Bjeirmi 1996; Baccarini 1999). It is possible to achieve a successful project even when management has failed and *vice versa* (Munns & Bjeirmi 1996). Successful project management may not be able to prevent project failure (de Wit 1988) where failure includes: a product not being used as initially intended; could not be marketed; or did not get its return on investment to the client (Munns & Bjeirmi 1996). A project that may appear successful may in fact be a failure due to internal conflict caused by changes in scope, design changes, or a need for additional funding (Avots 1969). This occurs in local government where a new piece of infrastructure is unveiled to the public and hailed as a success, however the design may have changed several times, or additional funding was required to complete the project. Examples of projects which were defined as successful despite not being completed on time, or being over budget, include: the Thames Barrier; the Fulmar North Sea oil project; and the Concorde. These projects were successful, even though the project control aspect failed (Munns & Bjeirmi 1996). In these situations, the project team was credited for a successful project which may not be deserved, and in opposite circumstances the project team may be blamed for a project failure (de Wit 1988). One such example of the opposite case is of two American power plants built within

budget and time, yet one went bankrupt and the other never produced commercial power (Homer 2004). In an Australian government context, a NSW state government water recycling project, completed five years past deadline, at a cost of $99 million and had not been commissioned more than three years after completion (Roberston 2016). The project failure was attributed by the government agency (owner) to the fact that actual demand for recycled water was much less than the forecast demand. Both the project management and the project can be considered unsuccessful in this case.

The success or failure of a project is more important than whether the project management was a success (Morris 2010). A project stakeholder or owner with a failed project is not going to be satisfied by the fact that the project management was successful. Avots (1969) in his study of project failures suggests that some projects are doomed from the beginning and should never have been undertaken. Other projects, such as the NSW state government recycling scheme, can be carried out too early, and fail as a result of an over-estimated need for the project. Selecting the right project at the outset, and screening out potentially unsuccessful projects, is more important to ensuring project success. Successful project management enhances project success, but does not guarantee a successful project.

Measuring project success – the Iron Triangle

Project management literature historically defined project success as the completion of an activity within the constraints of time, cost, and performance, known as the 'iron triangle' (Chen 2015; Irimia-Dieguez, Medina-Lopez & Alfalla-Luque 2015; Kerzner 2009; Koops et al. 2016; Wysocki 2013; Zwikael & Smyrk 2011). However meeting the time, cost and performance constraints of project management does not always underpin a successful project (Homer 2004); and these constraints are no longer the sole determinants of project success (Toor and Ogunlana 2010; Wideman 1991).

Adding to the Iron Triangle

Project success has been described as being complex, ambiguous, and variable throughout the project life cycle (Creasy and Anantatmula 2013) making acceptable performance criteria difficult to define. De Wit (1988, p.168) stated that referring to a project as a success or otherwise is 'nonsense' without qualification. Morris (2010, p.140) goes on further to describe success as a 'slippery' word, as it depends on what is being measured, by whom, and in what time frame. Numerous authors have suggested different ways of adding to the iron triangle to measure success, usually through additional success factors. Albadvi et al (2011, p.2) divide success factors into: 'Primary' – time, cost, quality, customer acceptance; and 'Secondary' – new opportunities, no disruption, and provide strategic alignment. Kerzner (2009, p.7) adds that the definition of project success now includes completion:

- Within time;
- Within budget;
- To specification;
- With acceptance of the customer/user;
- With mutually agreed upon scope changes; and
- Without disturbing the main work flow of the organisation.

Certain factors work against effective measurement, which led to the creation of well-known metrics, such as: milestones reached; percentage expended; equivalent units; and percentage of project completed (Hartley 2003, p.213-214). Even in the project management literature definitions of success are varied. In a study of 28 European Regional Strategy projects success was divided into four different categories (Wolf & Hanisch 2014, p.43). A 'high' category was taken to be those projects with an average percentage of objectives achieved of greater than 71%. Meanwhile s 'low' category of success included projects with an average percentage less than 65% (Wolf & Hanisch 2014, p.43). This assumes a project could have more than half of its objectives above 50% and not be considered a success (Wolf & Hanisch 2014). A different study of UK organisations had 44 respondents claim their project had been a success (Gray 2001, p.105). However, after subsequent probing, 14 of the 44 identified that their project had failed to meet performance criteria. This shows the variability of what the literature and practitioners determine to be a successful project.

Based upon the literature, a reason for ambiguity in measuring project success is related to a lack of a definitive list of success/failure factors (Belassi & Tukel 1996). Success measurements can also differ during the project life cycle (Jugdev & Müller 2005; Larsen & Myers 1999).

Comparisons through benchmarking

The challenge of acceptable performance criteria is sometimes overcome through the measurement of comparative performance (De Wit 1988, p.166). This can often be used in local government where project costs are benchmarked with a neighbouring - or in some other way similar - council. Benchmarking is done by measuring agreed criterion against best practice or a competitor (Hillson 2003, p.299, Pride et al. 2007, p.43; Schwalbe 2010, p.299), in this case another council. Noting the difficulty in grouping councils, and therefore the many different ways that a benchmark council could be chosen, the usefulness of this method needs to be considered for a meaningful comparison to be established.

Impetus for improving project success

In measuring public project success, we can consider how general public service performance is measured. Public service performance is judged by multiple groups, including the community, ratepayers, staff and politicians, and is inherently political and contestable (Boyne 2004). The same qualities are applicable to public project performance. In addition to multiple stakeholders, government projects tend to have long durations and a large number of unknowns, which make them difficult to manage (Patanakul et al. 2015). As local authorities dealing with public money, council officers must avoid wastage and misuse of funds, and should seek ways to reduce costs. Inefficiencies could result in certain functions closed and out-sourced, or opened up to competition from the private sector (Hubbard et al. 2015; Boyne & Walker 2002; Ferlie 1992; Kessler & Purcell 1996; Lane & Wallis 2009; Nutt & Backoff 1993). Public organisations are challenged daily to do more with less, and under increased stakeholder scrutiny (Ambtman et al. 2015; Andrews et al. 2012; Appleby 1949; Bovens et al. 2008; Crawford et al. 2003; Favoreu et al. 2015; Fryer et al. 2015; Jagodich et al. 2014;

Krings et al. 2006; Nutt & Backoff 1993; Procca 2008). Increased project success may reduce public scrutiny or at least lessen calls for outsourcing due to misused resources.

The role of stakeholders

Some authors argue that the single most important contributor to project success is agreement of success criteria with stakeholders at the start of the project (Hartman and Ashrafi 2004; Wideman 1991). Others have included stakeholder agreement on success criteria as only one of a number of conditions for project success (Andersen 2012; Stevenson & Starkweather 2011; Turner 2007). As highlighted earlier, time, cost and quality may be important to the stakeholders, and project success factors can be perceived differently by different stakeholders (Aubry & Hobbs 2010; Boyne 2004; De Mascia 2012; Doloi 2011; Hartman & Ashrafi 2002; Lonka 2000; Wateridge 1998). Stakeholders will have different perceptions, so determining success criteria should not be an ad hoc activity, but planned and agreed between all stakeholders (Hartley 2003). Success criteria at the project outset are necessary, to establish appropriate criteria. (Lonka 2000; Turner 2009). Different success measures are useful, if they align with what the stakeholders consider success to be for that specific project (Hartley 2003).

A survey of 150 Australian project managers in 1999 revealed that project success was viewed in two distinct ways: traditional objectives of time, cost and quality; and the effectiveness of the project's product (Collins and Baccarini 2004). The survey discovered that project managers viewed the criterion of meeting the owner's needs as the most important success factor (Collins & Baccarini 2004). In a review of the Standish Group's CHAOS Report one reason why projects fail was the lack of meaningful client involvement (Wysocki 2010). Andersen (2012) in his study of Norwegian projects with 77 participants from a cross-section of enterprises, found through regression analysis that project success is significantly improved when the project owner is a part of the project activities, and when better use is made of project management guidelines. Also, project governance structure did not have a significant impact on project success as it limited the involvement of the project owner. Training of the project owner was also found to have a negative impact on project success; however no

definitive reasoning was given (Andersen 2012). Andersen's (2012) research echoes the work of Munns and Bjeirmi (1996) in relation to the involvement of the project owner contributing to project activities to improve project success. The early and continuous involvement of the project owner allows an increased sense of ownership of the project management function, and as such they are more likely to set realistic and achievable success criteria compared to an absent project owner. Alternatively, the early involvement of the project owner could just mean that both parties know what is going to be delivered through improved communication. This avoids the project manager delivering "x" when the project owner is expecting "y". As Morris et al (2000, p.156) suggest, project management is not delivering 'on time, in budget, to scope' but to deliver to the project owner's requirements.

CONCLUSIONS AND RECOMMENDATIONS

It can be concluded that to consistently measure success agreed criteria must be determined and agreed upon by the project owner (or stakeholders) and project manager early in the project management process, and at different stages of the project life cycle. This view is supported by others, who have posited that project success depends on the perspective of those who are judging it (Bryde & Robinson 2005; Koops et al. 2016; Rashvand et al. 2014). As projects can vary in size, duration, scope, funding and purpose, so too can the project success measurements.

This paper posed the question: "what does a local government project manager need to consider in addition to the 'iron triangle' in order to measure project success?" Based on a desktop analysis of existing literature, there is no single set of project success criteria a project manager must consider. However the literature does demonstrate that the success criteria needs to be agreed before the project commences and throughout the different stages of the project, by both the project manager and the stakeholders. Whatever these agreed success criterion are, they complement, not replace, the traditional iron triangle success measurements. In a bureaucratic organisation such as a NSW Council, there will always be a need to use known performance criteria and metrics, such as the iron triangle. However, if the true goal of delivering a public project is to add public value, then the local

government project manager must also endeavour where possible to satisfy the wide range of stakeholders.

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