Visualising and mapping stakeholder influence

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Abstract

Purpose – The purpose of this paper is to offer insights into a tool that one of the authors has developed to help map, and thus visualise, stakeholder power and influence within the performing organisation.

Design/methodology/approach – The concept described in this paper has been tested at several large international gatherings to well over 200 active professional project managers. The feedback to date has been very positive. This positive feedback led to testing of these ideas through research being conducted during 2004/2005 by one of the authors who is a candidate for the doctor of project management (DPM) at RMIT.

Findings – The research is centred around this tool, the stakeholder circle, as a means to provide a useful and effective way to visualise stakeholder power and influence that may have pivotal impact on a project's success or failure. The stakeholder-circle tool is developed for each project through a methodology that identifies and prioritises key project stakeholders and then develops an engagement strategy to build and maintain robust relationships with those key stakeholders. An example of the tool is presented.

Originality/value – Future papers will provide case study examples currently under way of the use of this tool. The implication for this tool's use is that project managers can clearly visualise and map stakeholder influence patterns that have significant impact on stakeholder outcome expectations.

Keywords Project management, Stakeholder analysis, Influence

Paper type Conceptual paper

Introduction

Project management is a relatively recent professional discipline. It initially developed out of the construction and defence industry's need to plan, control and manage large, complex series of activities (projects) to produce for example, a hospital, bridge or battleship (Morris 1994).

Effective project managers require keen analytical and intuitive skills to identify stakeholders and work with them to understand their expectations and influence upon project success. This facilitates managing a process that maximises stakeholder positive input and minimises any potential detrimental impact. The authors argue that project managers need to be able to engage more effectively with the hidden reservoirs of power that are exercised by project stakeholders in the interaction between individuals in their social networks.

Successful completion of project deliverables, however, is critically dependent upon relationship management skills, amongst these the need to achieve project objectives that fully address stakeholder expectations throughout the project lifecycle (Cleland, 1999, chapter 6). However, one major task that needs to be undertaken in developing a project's strategic aims is to identify stakeholders in order to develop a project brief that best addresses their often conflicting range of needs and wishes. Traditionally, development of tools, techniques and frameworks to identify stakeholders and

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managing relationships with them has been the subject of a muted focus compared with the more robust focus upon the "iron triangle" of cost, time and quality management. The ability to understand the often hidden power and influence of various stakeholders is a critical skill for successful project managers. Stakeholders can be a considerable asset, contributing knowledge, insights and support in shaping a project brief as well as supporting its execution. Any tools that help project managers to identify and visualise stakeholders' likely impact advances their ability to address the often-thorny problem of stakeholder relationship management.

Project management does not occur in a vacuum. It requires an infusion of enthusiasm and commitment powered by the full range of project stakeholder energy sources, particularly from project management colleagues, that can be tapped much like connecting to an energy grid. The key to this is for project managers to know how and when to connect to this organisational grid and identifying who the key connectors (stakeholders) should be. Without attention to the needs and expectations of a diverse range of project stakeholders, a project will probably not be regarded as successful even if the project manager was able to stay within the original time, budget and scope.

The purpose of this paper is to describe some tools that not only identify stakeholders but also measure their potential influence and impact. The first part of the paper is a brief review of literature relating to stakeholder theory for a better understanding of the environments from which stakeholders emerge. The second part discusses some tools that may be used to identify stakeholders for projects and measure their potential influence. The paper concludes with some observations of the authors.

This paper is essentially theoretical in nature and is proposing a way in which project managers can facilitate improving project-management performance. It is part of a continuing study that forms the basis for a doctoral thesis of one of the authors of this paper. The authors have presented ideas about developing and managing stakeholder relationships with the model of the "stakeholder circle" as a tool for visualising stakeholder influence to several large groups of professional project managers and have had favourable feedback on these occasions. Subsequent papers will report on the effectiveness of the stakeholder circle. Research continues on a number of case studies, but data analysis is not sufficiently advanced to discuss testing the stakeholder-circle model in this paper.

Identifying stakeholders

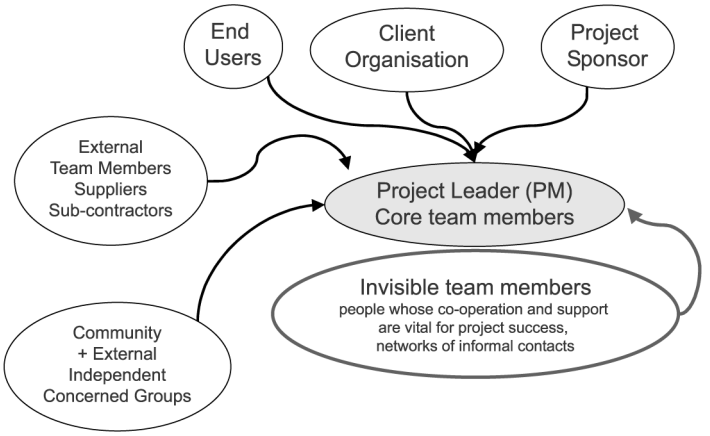
Stakeholder theory offers a number of perspectives and thus expectations that stakeholders may hold. Social science stakeholder theory tends to focus around concepts of justice, equity and social rights having a major impact on the way that stakeholder's exert moral suasion over project development or change initiatives (Gibson, 2000). Thus a view can prevail that a stakeholder is someone affected by a project and having a moral (and perhaps a non-negotiable) right to influence its outcome. This view is very broad and its consequences unmanageable because there are so many ways in which a project can impact a very wide range of people – from affecting a business environment through to other more physical or social dimensions that relate to quality of life issues. Instrumental stakeholder theory holds that stakeholders and managers interact and the relationship is contingent upon the nature, quality and characteristics of their interaction (Donaldson and Preston, 1995). In this

view, the identification of stakeholders is more concerned with their instrumentality, agency capacity, or being vectors of influence. This view implies a need for negotiation, and expected reactions ranging from standoff to mutual adjustment depending on such intermediate variables such as trust and commitment, motivational forces (being harmonised or in conflict). Jones and Wicks (1999) offer a convergent stakeholder theory that explains stakeholder actions and reaction to change, leading to a need for project managers to strive to develop mutual trusting and cooperative relationships with stakeholders. A consequence of this theory is that their actions should be morally based on ethical standards. By meeting these two objectives, organisations can gain competitive advantage. This accords with triple bottom line (3BL) principles. The 3BL envisages performance success being defined as not only meeting financial bottom line performance measures but also environmental and social responsibility performance measures (Elkington, 1997).

What becomes clear, whatever philosophy one holds regarding stakeholder theory, is that "legitimate and valid" stakeholders need to be identified and their power and influence mapped so that their potential impact on projects can be better understood. Appropriate strategies can then be formulated and enacted to maximise a stakeholder's positive influence and minimise any negative influence. This becomes a key risk-management issue for project managers. Failure to appreciate this has led to countless project failures as has been detailed in the literature, for example in (Morris and Hough, 1993).

Briner *et al.* (1996) identified four sets of stakeholders: client; project leader's organisation; outside services; and invisible team members. Cleland (1995, p. 151) recognised the need to develop an organisational structure of stakeholders through understanding each stakeholder's interests and negotiating both individually and collectively to define the best way to manage stakeholder needs and wants. He, like many other project management writers, identifies several clusters of stakeholders from the supply chain. Stakeholders have been described as "The ones who hold the beef" (Dinsmore, 1999), those who have an interest, essential in "people-oriented project cultures" and effectively managing these stakeholders is essential at all points in the project from "initiation" to "closeout" (Cleland, 1995).

Figure 1 provides a stakeholder model that helps us visualise where they may emerge from (Walker, 2003, p. 261). Apart from the stakeholder groups identifiable by their more obvious connection with projects there are clear and major groups that are invisible but whose cooperation and support is vital for project success. These groups would include family support networks – this has family-friendliness workplace implications – but it also includes communities of practice and other social networks. People naturally tend to form knowledge networks to share and re-frame knowledge that they routinely or occasionally use. History provides many such examples of learning communities, the trades and guilds of Europe since medieval times, for example, and more recent cases in point are documented in many organisations. One is the Daimler Chrysler Corporation where groups of people clustered around a particular skill to form "tech clubs" (Wenger *et al.*, 2002). The power of people forming communities and coalitions to learn from each other has triggered a great deal of interest and led to the concept of communities of practice (COP). A COP shares knowledge and skills and sustains its members through obligations to exchange knowledge, providing access and accessibility to shared insights and knowledge about



Source: Walker (2003)

Figure 1.
Stakeholder model

the practice of work (Wenger *et al.*, 2002, p. 4). This hidden stakeholder group is often ignored and yet COPs provide a significant source of influence and referential support that project managers can tap into.

Tools for visualising stakeholders and their influence

Cleland (1999, p. 151) offers a process for managing stakeholders being: identifying appropriate stakeholders; specifying the nature of the stakeholder's interest; measuring the stakeholder's interest; predicting what the stakeholder's future behaviour will be to satisfy him/her or his/her stake; and evaluating the impact of the stakeholder's behaviour on the project team's latitude in managing the project. He also provides some practical advice on how to do this, though much of it can be easily identified (not surprisingly) as a project management methodology of planning, organising, motivating, directing and controlling. The problem that the authors have with this approach is that most stakeholder groups and individuals are external and hence many of the project management sub-processes are impossible to achieve. For example, project managers simply cannot exert control or coordination on external groups where direction depends on types and kind of power bases that are not available to the project manager. Also, many organisationally internal individuals are outside the boundaries of authority available to project managers. Cleland (1999, p. 175) offers, after the first step of identifying stakeholders has been achieved, a simple way to visualise stakeholders and their likely impact and influence. The approach is simply to list stakeholders along one axis of a table, list the significant stakeholder interest along another axis of the table and to then indicate the perceived magnitude of their interest.

This idea can be expanded using concepts derived from risk management. Risk assessment can be undertaken using a probability-impact analysis. This approach is, however, cautioned against in terms of these systems needing to distinguish between

not only the size of impacts and their probability of occurring but also the nature and timing of feasible responses to such risks (Ward, 1999). Ward and Chapman later argued that risk is perhaps a misleading term and that uncertainty would be a better term to use (Ward and Chapman, 2003). However, as a first step in assessing the potential impact of a stakeholder interest in terms of contributing to project success the product of an interest-strength and its influence-impact potential may provide a useful form of visualising these two dimensions of stakeholder interest. This simple idea is illustrated in Table I. From the stakeholder perspective they have a vested interest in the project's success that varies in intensity from very low to very high. Also the impact of that interest can be assessed in terms ranging from very high to very low.

This provides one means by which a stakeholder interest intensity map can be developed. It can also be segmented as seen above and can be applied to a sub-set of stakeholders. In this illustration we are illustrating collegial and communities of practice interest. This could be useful in designing strategies for maximising collegial support and commitment to project success and developing success criteria measures. The "impact" part of the index relates to the power that these individuals may have to exert influence. Their influence is bounded by their source of power.

Before moving on further with any discussion of power and influence it would be wise to explain these terms. Yukl (1998) defines three source groups of power and describes their characteristics:

(1) *Position power* derived from statutory or organisational authority: formal authority; control over rewards; control over punishments; control over information; and ecological (physical/social environment, technology and organisation) control.

(2) *Personal power* derived from human relationship influences or traits: expertise; friendship/loyalty; and charisma.

(3) *Political power* derived from formally vested or conveniently transient concurrence of objective and means to achieve these: control over decision processes; coalitions; co-option; and institutionalisation.

Stakeholder Interest	**Stakeholders Vested Interest Intensity Index (VIII) value**									
For colleagues and COP:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Develop team's skill base	VH	H	N	N	L	VL	H	VH	L	N
Enhance workplace environment										
Family-friendly policy										
Demonstrated lessons learned										
Exemplar of better practice										
High-profile/strategic project										

Vested Interest (v) levels 5 = Very high, 4 = High, 3 = Neutral, 2 = Low, 1 = Very low
Influence impact levels (i) 5 = Very high, 4 = High, 3 = Neutral, 2 = Low, 1 = Very low
Vested interest-Impact Index (VIII) = $\sqrt{\{v*i/25\}}$ eg if Vested Interest (v) level = 4 (high) and Influence impact levels (i) then VIII = $\sqrt{\{4*4/25\}} = \sqrt{\{16/25\}} = 0.80$ = high

Table I.
Stakeholder interest intensity index

Greene and Elfrers (1999, p. 178) outlines seven forms of power:

(1) *Coercive* – based on fear. Failure to comply results in punishment (position power).

(2) *Connection* – based on "connections" to networks or people with influential or important persons inside or outside organisations (personal + political power).

(3) *Reward* – based on ability to provide rewards through incentives to comply. Is expected that suggestions be followed (position power).

(4) *Legitimate* – based on organisational or hierarchical position (position + political power).

(5) *Referent* – based on personality traits such as being likeable, admired etc thus able to influence (personal power).

(6) *Information* – based on possession to or access to information perceived as valuable (position, personal + political power).

(7) *Expert* – based on expertise, skill and knowledge, which through respect influences others (personal power).

The nature of power and influence, the sources of this power and the way in which it is used to contribute to or manipulate cooperative relationships underpin all procurement strategies and the relationships that develop from these. It is interesting that a number of books have appeared providing advice on the use of power to undermine the competitor and to win against a perceived enemy. The works of Machiavelli and Sun-Tzu are among the most prominent. A recent book on power and its use – which features ideas from the Machiavelli, Sun-Tzu and others – relates to winning power and holding power for personal gain and not to achieve a goal that is shared by others (Greene and Elfrers, 1999). Positional power, however, is the least effective of the three outlined in building commitment to shared objectives, win-win outcomes and constructive dialogue whether in resolving differences or building shared understanding. Project managers need to be aware of the types of power that people can wield to influence the opinions and actions of others.

While Table I provides a useful visual representation it can be made more informative through employing a greater degree of graphical imagery. For example Table I does not indicate individual versus group influence where a group with relatively weak individual power may exert strong influence when banded together. The proximity to the project's driving force is also unclear and can be of use when trying to visualise influence as cause and effect patterns. Those with strong power and influence but somewhat distant from the project driver may seem transparent/invisible or "shadowy", thus their potential impact though real may be underestimated using Table I as a visualisation tool. Other project team stakeholders may have deep (extensive) or shallow (limited) influence in terms of their network of others that may be proxies for their interest. For example, an individual with weak influence on the project driving power force may have very deep and strong influence on another individual or group that may in turn have a very strong influence on the project power source. These kinds of influences are difficult to visualise from a tool such as Table I. Whereas Table I provides part of the picture, the nature of influence networking links is not apparent. Before presenting the stakeholder-circle concept, it is necessary to first explain how people can exert influence through networks.

A useful tool for visualising power and influence patterns is social network mapping. This is also a simple concept that extends the concept of an organisation chart as mapping people's position in a hierarchy to one of their position as influencer and shaper of ideas and opinion. Figure 2 below is an example of mapping issues and influencers. Note that this may well become too complex to be applied to all stakeholder influences but the authors believe that this is the way that some experienced project managers think when trying to understand why an interest position may be held by a particular stakeholder and to understand the source of intensity of that interest.

This conceptual map is based on the Interest "Z" being substantially shaped by opinions on issue "X" as perceived by the project sponsor's very high influence upon the policy for "X". Now the source of this opinion held by the project sponsor is actually key person K1 who was a former colleague and mentor of the project sponsor. K1 belongs to two groups A and B and these groups are affiliated to university cluster A that has undertaken research and training on Y which is strongly linked and correlated to issue X. Also, group B is affiliated to the professional association B and that has helped to shape opinions on Y. Once such influence maps can be constructed and developed either cognitively or actually drawn, the way to respond to the opinion becomes clearer.

The way to track these relationships and influences would be through normal qualitative research techniques such as interviewing people (usually informally) to find out who knows who, in what context and the strength of the influence. Such information and knowledge can also be available through highly open and visible sources such as directories, web sites (home pages for example) or most likely through the "grapevine". Astute project managers keep their antennae active constantly. It is this aspect of emotional intelligence that can make a significant difference in relationship management within organisations (Goleman, 1998; Dulewicz and Higgs, 2000).

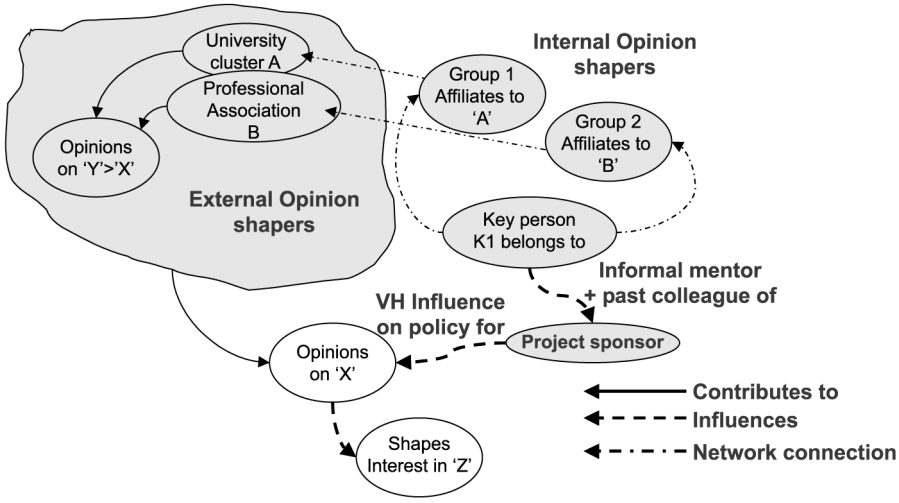


Figure 2.
Influence mapping

It could be appropriate for the project manager to attempt to change opinions on X because the link between X and Y may be flawed. It could be appropriate for the project manager responding to issue Z, to work out ways in which influence perceptions about X. This kind of map is useful for this purpose. This may be the way that experienced and effective project managers instinctively deal with stakeholder issues and it is this model that helps some project managers appear to be effective lobbyists and/or being more sensitised to key stakeholder issues that can make or break a project's perceived success.

Following from the use of techniques discussed above to map stakeholders and their influence patterns, a visualisation of stakeholder power and impact can now be constructed (Bourne and Walker, 2003). Figure 3 illustrates the concept (referred to as the stakeholder circle) that one of the authors has developed.

Key elements of the stakeholder circle are: concentric circle lines that indicate distance of stakeholders from the project or project delivery entity; patterns of stakeholder entities that indicate their homogeneity, for example a solid shade indicates solidarity while shading or patterning can indicate heterogeneity in presenting an interest; the size of the block, its relative area covered of the circle, indicates the scale and scope of influence; and the colour density can indicate the degree of impact. This tool can be very useful for project managers trying to understand, and trying to remain alert to, the nature of stakeholder impact. The concept model has been tested at Project Management Institute (PMI) chapter meetings and conferences (Weaver and Bourne, 2002) on several continents – in each case the presenter received many interesting questions and comments that indicated its resonance with practicing project managers.

Positive feedback from PM professionals at conferences and seminars led to testing of the concept of a visualisation tool to enable PMs to identify and engage the appropriate stakeholders for the benefit of the project. One of the authors is conducting research into power, influence and stakeholder engagement during 2004/2005 as a doctor of project management (DPM) candidate. The research is centred around the stakeholder circle as a means to provide a useful and effective way to visualise stakeholder power and influence that may have pivotal impact on a project's success or

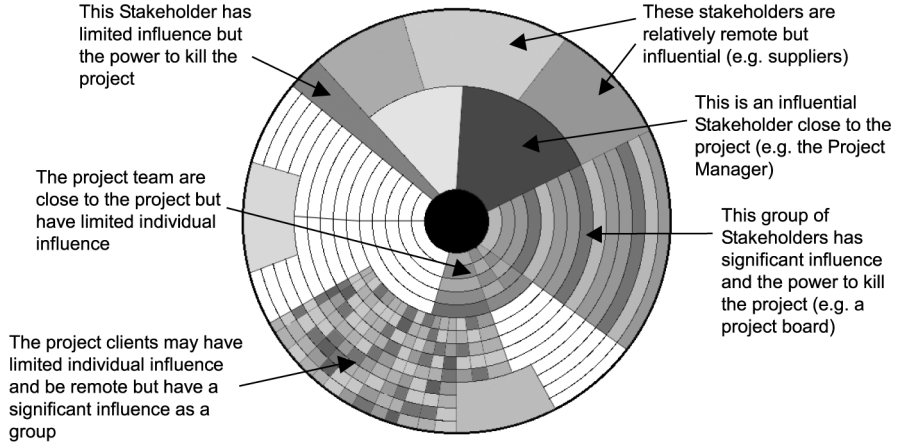


Figure 3.
The stakeholder circle

failure. The stakeholder-circle tool is developed for each project through a methodology that identifies and prioritises the important project stakeholders and develops an engagement strategy to build and maintain robust relationships with those stakeholders. The research is being conducted as action research with participants from five different medium-sized organisations on IT and construction projects. Further papers will report on the effectiveness of the stakeholder circle to the organisations participating in the research.

The above has provided a general discussion on power and influence flows that can be mapped in an organisation. The development of a way to identify stakeholders and to model and visualise their power and influence has been offered. The following section consists of a discussion on the significance of this identification and prioritisation on project management practice.

Concluding discussion

Understanding the power environment within the organisation and the position of the actors within it for particular issues is crucial (Lovell, 1993). With experience, this understanding is developed through a combination of conscious and intuitive, almost instinctive, thought processes leading to actions. It occurs through changing situations and adapting attitudes to be more in line with the project's goals (Block, 1983). This sounds deceptively simple, but requires knowledge of the environment and all the "players" in this process and what their drivers (needs and wants) are. Even when the project manager lacks formal power, he/she needs to be able to influence people and outcomes; through building and nurturing what power they have in optimising "coalitions of support" (Boddy and Buchanan, 1999). Failure to understand and control the political process has led to the downfall of many projects (Senge, 1990; Lovell, 1993). To successfully manage within an organisation's power structures it is also necessary to understand the organisation's formal structure (an organisation chart will illustrate this), its informal structure (friendships, alliances, maintaining acquaintance with former work colleagues) and thirdly its environment (each player's motivation, priorities and values) (Block, 1983).

Communication is vital for project managers for relationships with not only close, supportive "tame" stakeholders but also those that may be hostile to the priorities of project goals and vision. These power structures are complex and constantly changing requiring a high level of maintenance. Maintenance in the form of "active communication" systems with appropriate stakeholders will also provide "early-warning systems" (Briner *et al.*, 1996). Inevitably, "rogue" stakeholders (supporting one of the warring parties in the project team, or seeking to establish ascendancy over "tame" stakeholders, or with other hidden agendas) will incite conflict or cause trouble for the project manager. This trouble could be in the form of moves to cancel the project or even worse, change some aspect of the project; change the scope, technical direction, reduce the funding, require additional or different reporting. If project managers can established a credible foundation of understanding stakeholder influence and its intensity then they can engage influential stakeholders in active communication, and disaster may be averted in problematic situations. Conversely, stakeholder influence can be used as a subtle positive driver for project success.

A project manager must also be able to recognise the danger signals, the "early warning systems" the warning of possible trouble, particularly with senior stakeholders. Boddy and Buchanan (1999) list these danger signals as: interfering without consultation, not providing support when needed, poor communication links – too many reporting levels between the project manager and the senior stakeholder, unfounded promises or commitments. Only a project manager who has built credibility, and knows how to tap into the power structures of his/her organisation (through deep knowledge of stakeholders and their potential influence) can recognise these signs, and defuse potential crises before disaster strikes. The authors contend that the qualities and actions that make a good leader will support a project manager working successfully within the power structure of an organisation to maintain the objectives illustrated in the project vision and mission.

Making collaboration between influential stakeholders and the project manager happen depends on personal behaviour changes by knowledge workers to not only work collaboratively but also to share knowledge. Mitchell (2002, p. 59) maintains that "working collaboratively requires a great amount of team effort". COPs are one often-successful example of how knowledge workers collaborate to help each other solve problems and to share technical and organisational knowledge – they also provide powerful influencing mechanisms because of the inherent trust that is embedded within them. COPs are often scarcely visible stakeholder groups sharing a concern, a set of problems or a passion about a topic, and who deepen their knowledge in this area by interacting on an ongoing basis (Wenger *et al.* 2002). Nahapiet and Ghoshal (1998) have defined these modes of collaboration as "social capital" – "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit". Some stakeholder groups, such as community activists, form a COP to maintain contact and share knowledge about specific issues that can greatly have impact upon projects. The early parts of this paper highlighted such stakeholders as an example of often under utilised stakeholder-value. They are available for help and support for not only problem solving activities, but also for influencing others that can more strongly politically influence project management agenda.

This paper provides a means to better understand and respond to the questions of how to identify and measure stakeholder impact and, perhaps more importantly, to better understand the significance of their potential influence. The first part of this paper offered an explanation of how stakeholders might influence the outcome of projects and illustrated how they can be identified and their power and influence measured. It follows that project managers require a special skillset to manage stakeholders and to have an awareness of stakeholder influence in order to respond appropriately to garner this influence for project success.

Effective management of a project requires a range of analytical and planning techniques, especially when the project is large (and is operating in a large, complex organisation). These approaches feature strongly in project manager training and in the professions from which project managers are traditionally drawn. "A new emphasis is needed – acquisition and use of a wider range of interpersonal skills. These enable the project manager to work more effectively in the uncertain and political environments and to take the lead in managing the different interests around it ..." (Boddy and Buchanan, 1999).

By providing more project managers tools to better visualise stakeholder potential impact, we believe that we have broadened the potential responses of project managers to the environment they need to operate in.

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