

PARTNERING WITHIN THE DESIGN TEAM

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Purpose of this paper - The purpose of this paper is to investigate the application of a partnering approach in the management of the design team for building projects in South Africa.

Methodology/Scope - In terms of the research design, both the literature review and empirical survey were launched into broad spectrum environmental and strategic influences and then channeled into increasingly pragmatic operational realities. The following constituent aspects of the main research problem were investigated: industry culture, building projects, formal structures, design teams, the partnering approach, as well as partnering practice. A 'groundswell' of evidence in all these categories, synergistically, proved useful in testing the hypotheses.

Findings - Although project management practitioners are in agreement with partnering goals, the approach has not yet found complete or general application in the South African building industry. In support of convincing findings in the literature review, impressions from the practitioners convey alignment with the idea that the partnering approach to management could measurably enhance the performance of design teams in practice.

Research limitations - The paper does not seek to describe the relevant phenomena with scientific completeness, but to expose the milieu into which the partnering approach ought to be applied.

Practical implications - It is recommended that the partnering approach to management is promoted in the local industry through the formal CPD courses of the professional institutes, whereby an exponential impact in the prevalent culture can be leveraged through design professionals.

Value - The study adds to the body of knowledge which informs and guides project managers and other professionals who seek to embrace the challenge to provide leadership that develops project team spirit as an essential catalyst to competitive project performance.

Key words - project management, partnering, design team, building projects, synergy, leadership.

1 INTRODUCTION

In the Guideline Scope of Services for Registered Construction Project Managers (Board notice 67 of 2004: 182) the following responsibility is listed amongst the normal services under the heading, Human Resources Management: "Promote the development of project team spirit to enhance project performance." This is a difficult thing to do. Other areas of concern, such as time, cost and even quality management are blessed with many techniques and systems to aid the Project Manager in sustaining project performance. Human Resources management, however, often require special skills for which a typical Project Manager is not sufficiently trained. This results in counter productive 'policing' of project team members through cumbersome administrative controls.

The King Report on Corporate Governance for South Africa (2002) obliges many clients (employers), contractors, material manufacturers and suppliers as well as professional consultants to comply with its provisions. In the Code of Conduct for all parties engaged in Construction Procurement – in terms of the Construction Industry Development Board Act (Act no. 38 of 2000) – the following is stated in the preamble:

“The construction industry operates in a uniquely project-specific environment, continuously combining different clients, consulting professions, as well as different contractors and sub-contractors in a variable supply chain. Procurement arrangements, which also vary considerably bind this supply chain and define the obligations, liabilities and risks that link the parties together in the delivery process.

The conduct of parties throughout the supply chain impacts on the ability of the industry to deliver value and to perform efficiently and competitively.”
(CIDB, 2003: 1)

This highlights an official acknowledgement of the problematic culture in the construction industry and indicates a new focus on the issues which underlie the Partnering philosophy. In fact, the Partnering approach has recently been promoted as a change in contract strategy on certain projects in a Practice Note (CIDB, 2006: 4) titled: Scaling up Delivery and Accelerating Empowerment. In this instance, Partnering agreements are viewed as an overall strategy involving all the stakeholders in the delivery system. Although policies and codes confirm the need to address issues of good faith, integrity and trust, the question of actual implementation remains. It is doubtful whether Partnering is even rarely, formally pursued inside project organizations beyond agreements on target costs.

This research focussed on the Partnering approach to management within individual projects and, as such, studies its implementation at a building block level where it helps to facilitate a shift in the construction industry towards a less adversarial culture. However, instead of studying the whole supply chain it pays particular attention to the application of Partnering within the design team, which is positioned at a central node in the project organization and from whose synergised knowledge and skills, technical quality, originality and appropriate solutions for the built environment can be harnessed.

The industry witnessed the pro-active formalization of values, techniques and guidance on best practice to advance a culture that supports cohesive project teams since the mid-1980's (McGeorge and Palmer, 1997:188). The Partnering philosophy is difficult to define as it has to do with the basis of relationships. McGeorge and Palmer (1997:189), defines formal Partnering as an explicit arrangement between the parties and its goals are quite clear. Stevens (1993, cited by McGeorge and Palmer, 1997:191) summarizes these goals as follows: “[Partnering] is not a contract but a recognition that every contract includes a covenant of good faith. Partnering attempts to establish working relationships among stakeholders through a mutually developed formal strategy of commitment and communication. It attempts to create an environment where trust and teamwork prevent disputes, foster a cooperative bond to everyone's benefit and facilitates the completion of a successful project.”

Considering the application of a Partnering approach within the design team as a strategic initiative is valid, since the management of these people, even through the implementation of customized techniques, require a mindset aligned with the Partnering philosophy. In this regard Project Managers have a leadership function.

As a primary data source a descriptive survey, in the form of a questionnaire, was employed to gain the views and insight of project management practitioners, specifically of lead managers for design teams. The corporate and ordinary members of the Association of Construction Project Managers (ACPM), plus a few non-members were judged to be a representative sample. Generalizations out of the almost 80% response (19 out of 25 questionnaires were completed and returned) are deemed to convey the opinions of the larger consultant population. The secondary data source entailed a literature survey in which deductive logic was employed in general analytical procedures. Both the primary and secondary data sources were surveyed only in terms of the composition of variables in the research design indicated in Figure 1. The categorization of data assisted to restrict the variables and indicated dependencies or causalities (Fellows and Liu, 1997: 96). The categories in Figure 1 are deemed meaningful and useful, because they were suggested by the sub-problems and support the logical testing of the hypotheses. Synthesized and integrated, these adequately addressed the research problem.

Specific assumptions and delimitations were also made to render the study less open-ended. The paper does not set out to prove that Partnering surpasses other management approaches, but that it is indeed a valid and beneficial approach within the context, as well as that it effectively addresses Human Resource management issues that influence project performance. In the paper, the relevant phenomena are not described with scientific completeness, but it endeavours to expose a milieu into which the Partnering approach ought to be applied.

3 FINDINGS

The investigation therefore navigated the route suggested by the research design through the variable categories as stated: the Construction Industry Culture (1), Building Projects (2), Formal Structures (3), the Design Team (4), the Partnering Approach (5) and the Approach in Practice (6). The restrictions caused by the two dimensional nature of the written word results in a linear process. However, the categories are also viewed as one would concentric circles, the one within the other, with the 'Construction Industry Culture' on the outside and the 'Approach in Practice' as the kernel (compare with Figure 1). In this way many causal relationships were clarified.

If this sequence of subjects is folded back into itself it closely represents the elements of the main hypothesis, namely that: *Project performance will be measurably enhanced by the application of a Partnering approach in the management of the design team for building projects in South Africa.* A 'groundswell' of evidence in all the categories, from the external environment to the project environment crystallized to synergistically prove the constituent aspects of the main hypothesis. The following are brief discussions of the synthesized findings from the results of the literature review and the questionnaire, in each category respectively.

3.1 Construction Industry Culture

From the studied sources it is clear that the design team, at the heart of the inter organizational workgroup formed for building projects, is positioned at the point of maximum interface between group members and other stakeholders. It represents a nodal point in the project organization where information is 'translated' and transferred between the involved parties. Being in this central position on all building projects, the design team has a reciprocal influence in terms of the wider construction industry. Projects are entered into and closed-out with specific attitudes having been reinforced or altered, influencing the nature of engagement of the team members in all following projects. In a sense, the design team represents a crucible of cultural and paradigmatic convictions.

The Project Management practitioners surveyed in the questionnaire confirm the prevalence of hampering adversarial attitudes amongst professional consultants (47.37% responded that this occurs 'sometimes' and 21.05% that it occurs 'often'). They also support the idea that a Project Manager should pro-actively develop synergy in the design team's work effort (nearly 70% of the respondents deemed this task 'absolutely' included within their responsibilities). The practitioners further prefer network structures to traditional hierarchical organizational structures by a margin of two to one, in alignment with the necessary shift in the industry culture towards a team oriented, Human Resources paradigm.

3.2 Building Projects

The literature review revealed that historically, project stakeholders in South Africa are generally of the opinion that there are inherent and systemic problems in the traditional systems that have had a detrimental effect on the performance of teams on building projects. There also seems to be consensus that this is largely a management issue, which is solvable by the application of strong leadership and a focus on Human Resource management. For example, De Beer (1984, cited by Hauptfleisch, 1988: 310-311) holds that building projects seldom go wrong as a result of a lack of technical knowledge, but because of a lack of management skill, especially with regard to human resources and communication, and that Project Management as a building process will probably be the most successful in elevating the utilization of Human Resources to the level of the effective utilization of technical resources; Pet (1979, cited by Hauptfleisch, 1988: 336) states that the success of a building project depends more on the individual in command than on the profession he is from or the specific building process.

Throughout the life-cycle of the project stages, multiple organizations are engaged in the exchange of either, behavior and ideas, or products (Howell, 1990:25). In other words, building projects have the dual nature of a purchasing transaction and service delivery, with the further complication that intellectual and physical assets are delivered piece by piece and in stages, presenting a unique management challenge. In this scenario effective leadership entails the keen discernment of the appropriate type of exchange involved, in order to consistently facilitate the project team's cohesion. Strategies such as Value Management, Constructability and Total Quality Management can be leveraged into the project environment via the design team due to its strategic position at the nucleus of the organizational interfaces of a typical building project.

The results of the questionnaire do indicate that consultants' relationships have improved over the last few years (68.42% agree). This response, compared to the view in the industry as far back as thirty years ago, supports the notion that relationships within teams for building projects merit special attention. Managers on building projects, on average, still experience a sense of duality regarding their role within the project organization. On the one hand they feel that they have to drive the process to deliver products to certain standards, on time and within cost budgets. On the other hand, they are captaining a problem solving effort involving creative ideas and group behavior (15.8% more respondents see theirs as a captaining role, rather than driving the production of deliverables). The management of design processes in building projects requires the marriage of these approaches.

Practitioners further report that contractors have a very low influence (7.63%) in decision making regarding design. This result does not display an acceptance of the standard Partnering goals at project organization level, however, the practitioners confirm that the design team, proportionately, asserts a powerful influence (48.95%) in the decision making processes regarding the project design. This makes sense, since most of the project information, from conceptual ideas to technical documentation, throughout the various project stages are trafficked through the team.

3.3 Formal Structures

Standard contracts and agreements confirm the design team's obligations and responsibilities and position the principal agent or consultant in a management and leadership role. The Project Manager, who is often the principal agent, is in a position to advise the client on the strategic choice of a contracting system. It is this 'system' that formally superimposes Human Resources over the Scopes of Work. The competencies of the design team members are thus allocated to often interlocking areas of responsibility. The project manager is empowered to fulfill, not only a management, but also a leadership role through aspects of the Partnering approach, such as alternative dispute resolution, agreement on mutual objectives and the Partnering techniques.

The results of the questionnaire reveal that about three quarters of the respondents settle for traditional contract strategies, as opposed to Design and Build or Management systems. Corresponding with the above, almost 74% of the respondents prefer the separate appointment of professional consultants, primarily due to an aversion to risk, thereby forfeiting the enhanced benefits of team cohesion created by mutual accountability. 45% of the practitioners confirmed that they do experience some conflict of interest in relation to the rights of the consultant versus their employer. The findings support the perception that the traditional, 'fragmented' contracting systems harbour a lack of relational trust, as well as adversarial attitudes. It is particularly in relation to this fact that strong moral leadership is required from Project Managers.

3.4 The Design Team

The literature review confirms that design teams are multi-disciplinary work groups involved in investigating, planning and design to creatively secure a specific output. Linear analytical methods are combined with lateral, creative thinking processes. The Project Manager is challenged to guide the creative process through inherent communication problems into a synergistic effort using creative thinking methodology and techniques that cater for the group dynamic.

Obtaining integrated and coordinated information necessitates the use of systematic methods, such as detailed checklists, to coordinate the specialists' efforts, but the facilitation of creative harmony between the variable personalities involved also require team building skills and leadership from the Project Manager. Consultants should be inspired to buy into the vision for the project. The processes in the Partnering approach, such as to reach agreement on mutual objectives, enables the Project Manager to pro-actively unlock this creative synergy.

The results from the questionnaire reveal that specialized creative thinking techniques, particularly Brainstorming and Value Engineering, are indeed utilized by project management practitioners in the exploration of design options. It also confirms that architects and engineers solve problems in different ways and it is acknowledged that the differing approaches are rooted in their background and training. 71% of the respondents indicated that the pre-construction stages (40, 5% of this was, specifically, indicated for the concept and design development stages) provide the greatest challenge in terms of information coordination. This fact supports the notion that the fostering of synergy between the creative, lateral and analytical, linear methodologies in the combined design effort presents a unique management challenge.

3.5 The Partnering Approach

Bennett & Jayes (1995:2) define the approach as follows: "Partnering is a management approach used by two or more organizations to achieve specific business objectives by maximising the effectiveness of each participant's resources. The approach is based on mutual objectives, an agreed method of problem resolution and an active search for continuous measurable improvements." The

literature review revealed that specific project goals can be realized via a system of relationships based on these agreements. Concepts such as Total Quality Management, Constructability and Value Management can be effectively implemented on the platform of relationships arranged through Partnering. Critical performance indicators such as quality, efficiency, speed and cost are measurably enhanced and team spirit becomes a realizable asset due to the approach. The two levels of Partnering, project Partnering and strategic Partnering, both require the thorough evaluation of potential partners, since there are costs and risks involved. Project Partnering seems suitable for any type of relationship and procurement route. Benefits are delivered in all scenarios, but strategic, longer term Partnering allows such benefits to develop into full fruition.

The process through which Partnering is phased into the project life cycle can be described in stages. In the inception and pre-project stage the Partnering decision, selection, team building and formalization of the arrangement in a charter is mainly completed in an initial workshop. The implementation stage involves continuous monitoring with follow-up workshops to maintain the Partnering goals. The completion stage involves feedback in a 'lessons learnt' type of evaluation which can inform further strategic Partnering. It is clear that the Project Manager, as the 'king pin' in the network of relationships in the project organization, should be the key instigator of the Partnering approach in the realm of the day to day project processes.

The results of the questionnaire reveal that the approach has not yet found general application in the South African building industry (42.86% of the respondents indicated that they have encountered explicit Partnering agreements beyond target costs, only on up to 10% of their projects in the last five years). The practitioners did however, rank issues pertaining to commitment to improvement and mutual objectives the highest with relation to criteria for potential partners. These issues, with the willingness to change attitudes, all have to do with reaching project objectives mutually, thereby indicating support for the ethos and goals of Partnering.

In another question regarding agendas for Partnering workshops, SWOT analysis and team building received the highest ranking. Within the context of that question the result confirms the general view that the design team members are a valuable strategic resource and that group cohesion merits the application of special measures. Practitioners are prepared to apply methodologies such as Value Engineering and Constructability within cohesive design teams. Alternative conflict resolution received a low ranking in more than one of the questions, perhaps indicating the hope that if just some of the aspects highlighted in the Partnering approach receive adequate attention, conflict would become less of an issue.

Although explicit and complete Partnering arrangements have not yet found general application in South Africa, the results seem to indicate that Project Management practitioners are hopeful that the strategies and techniques contemplated in the Approach could indeed enhance performance through the system of the network of relationships.

3.6 The Approach in Practice

The literature review confirms that the Partnering arrangement practically manifests in terms of working toward mutual objectives, a commitment to and the monitoring of continuous improvement, as well as problem resolution in terms of the agreement. In the reaching of mutual objectives, specific techniques are utilized to help the parties see each other's point of view, on for example quality, efficient use of time, profit and service delivery. Agreement on the method of problem resolution includes a process through which permanent, practical solutions are sought. The involved members work together to solve the problem at the lowest possible level, as soon as possible. Progressive, measurable improvement of project performance within the Partnering

arrangement also targets key subjects such as quality, time, value and internal efficiency. Specific processes are proposed in the best practice guides studied to ensure momentum in this regard.

On the ground, teamwork is facilitated in a series of customized workshops. Through best practice, methodologies have been developed that result in specific agendas for these sequential workshops. An external facilitator is often involved to assist with issues such as team building and communication. The initial workshop includes the processes that lead to agreement on mutual objectives and a problem resolution process. The final resolve is documented on a project charter which acts as the 'manifesto' for the Partnering agreement. The follow-up workshops are regularly scheduled and follow the same pattern as the initial workshop, but evaluation of the project process and the team's effectiveness are the main concerns. Continuous improvement is prompted and sustained at these workshops. The final workshop includes a formal review of the project performance which is facilitated through a process that ensures objective analysis of pertinent issues. Long-term improvement of all the involved parties is at the heart of this process.

Many typical barriers to effective team building are addressed through the processes inherent in Partnering. Guiding the project team through the shift from more traditional, individualistic behavior to the changed attitudes geared towards collective achievement committed to in the Partnering agreement, becomes the main challenge for the Project Manager. Specific techniques for dealing with behavior that inhibits synergistic work dynamics have been successfully applied in practice. Project team leaders should take cognizance of the identifiable stages through which team cohesion develops in order to apply the appropriate techniques and leadership style. Contingency or situational leadership models hold that the appropriate leadership style is a function of the specific project circumstances and / or team members. Consultants on design teams are highly educated and skilled professionals and are prone to respond favorably to a participating or delegating management style. This requires the Project Manager to shift from high task-oriented behavior to high relations-oriented behavior. The Partnering approach, as it is appropriated in practice, supports the structured implementation of a participative management style.

The results of the questionnaire confirm that adversarial attitudes influence the values that guide priorities in the building project environment. Agreement on problem resolution, as a prerequisite for project performance, received a 16.5% higher ranking than the next issue. The current situation in South Africa is in need of management approaches such as Partnering, which has developed methodologies to simplify its implementation by Project Managers. Practitioners confirm that synergy in the design process can be promoted through Partnering workshops at project level, where issues like 'cooperative decision making' can be addressed. More than 50% of the results indicated that the Project Manager does have a leadership role in relation to the design team. Group cohesion and synergy in the design team's effort can be facilitated practically through the processes and techniques of Partnering. The Project Manager would effectively fulfill his leadership responsibilities by applying the Partnering approach in the management of the team.

4 CONCLUSIONS, PRACTICAL IMPLICATIONS AND VALUE

The process engaged in as a result of the research design will be briefly summarized herein, recapitulating key results, thereby confirming the proper context in which the conclusions are drawn. As set out in the research methodology and with reference to Figure 1, the diagram for the research design, both literature and empirical surveys were launched into broad-spectrum environmental and strategic influences and then channeled into increasingly pragmatic operational realities.

The external environment in which design teams operate is defined in terms of the construction industry's culture, building projects per se and the formal structures of the involved organizations. In this environment strategic thinking would demand an acknowledgement that the culture of the construction industry in South Africa is indeed influenced by adversarial attitudes, mostly lacking the group cohesion that allows synergistic working relationships. As stated, the design team, at a nodal point in terms of the interface between parties could be utilized to introduce the more harmonious Partnering approach into the culture.

Strategic thinking would further demand the realization that a typical building project has a unique character, partly a purchasing transaction and partly the delivery of services, complicated further by it being completed in stages. Traditional procurement systems have had a detrimental effect on project team cohesion and performance. It is also acknowledged by stakeholders in construction that this problem is largely due to the management of multiple organizations and / or disciplines in construction projects and that strong leadership is required in this regard. The design team is strategically positioned to act as a platform, if effectively secured by Partnering, for the implementation of management strategies such as, Value Management, Constructability and Total Quality Management.

Utilizing the contracting system best suited to the project is a strategic decision. It structures the relationships in the project organization to procure the best results by allocating and securing the available human resources to execute a specific scope of works. The Project Manager is hereby often formally positioned at the helm of the design team, where the greatest variety of competencies, as well as the most inter organizational interfaces are found. The Partnering approach provides alternative dispute resolution, a basis for the formulation of trusting relationships, and empowers the Project Manager to lead the team towards mutually agreed objectives.

The organization of a project team that would ensure a strategic advantage in the construction industry necessitates attention to the nature of the multi-organizational and multi-disciplinary design team. The Partnering approach provides a methodology through which the internal network of the project team can be effectively harmonized. It provides a normative basis for that network of relationships. The Project Manager should utilize creative thinking techniques to synthesize the linear, analytical methods and the lateral, creative processes of the various disciplines involved in the design and planning endeavor. Integrated and coordinated project information is an indication of effective leadership regarding this combined effort. The project leader can facilitate the realization of specific performance goals through the application of the Partnering approach, because it hinges on agreed mutual objectives and makes room for agreement on alternative problem resolution. Efficiency is expedited because a Partnering agreement is, in a sense, driven by a mutual commitment to continuous improvement.

In *Trusting the Team*, Bennett & Jayes (1995:50) relate that their Engineering and Physical Sciences Research Council studies identified long term relationships that provide substantial benefits between design consultants, “ – for example between architect and engineer – and between designers and specialist contractors especially for highly engineered elements such as structure, cladding and engineering services.” Although the full benefits are realized in strategic Partnering involving multiple projects, case studies have also shown a substantial increase in project performance on single projects. Even strategic Partnering agreements are formed on the basis of progressive individual projects and are often formed on the back of a successful project.

Applying the Partnering approach in practice, in the project environment, entails the systematic utilization of Partnering methodology and techniques in a series of customized workshops. But strong leadership is also required to guide the design team into synergistic working relationships, formed in accordance with an agreement based on trust. Synergy is vital, because in the project environment and particularly in the operation of the design team, almost everything relates to everything else. The Project Manager's leadership, the design team's performance and the way that the Partnering arrangement evolves, are all locked into causal and reciprocal relationships. Partnering provides a practical way to change the juxtaposition between 'soft' work group realities and structural systems organization into a synergistic team dynamic, weaving Human Resource management into the systematic, technical methodology typical of building projects.

The results of the questionnaire reveal that Project Management practitioners are in agreement with the Partnering goals, but the Approach has not yet found complete and general application in the South African building industry. In light of the current scenario, the impressions from the practitioners convey a confidence that the Partnering approach to management could measurably enhance the performance of design teams for building projects in South Africa. This study adds to the body of knowledge which informs and guides Project Managers and other professionals who seek to embrace the challenge to provide leadership that develops project team spirit as an essential catalyst to competitive project performance.

It is recommended that the Partnering approach to management is promoted in the construction industry in South Africa through the formal CPD (Continuous Professional Development) courses of the various consultants' professional institutes, whereby an exponential impact in the prevalent culture can be leveraged through the design and management professionals. In this way the proven benefits of Partnering as a management approach will become clear in an academic environment, without the handicap of pre-conceived ideas regarding the costs involved.

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