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Construction Project Partnering – A Case Study In Hong Kong

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Abstract

Relationships in the construction industry in Hong Kong have been described as adversarial in nature and characterized by confrontation and mutual suspicion. Plagued by declining profit margins, corruption scandals, increases in formal litigation and arbitration, concerns over quality standards of works, increases in administrative overheads and an erosion of general competitiveness, the high-powered Construction Industry Review Committee commissioned by the Chief Executive recommends Partnering in its 2001 report as one of the many measures to revamp and overhaul the local construction industry. Partnering was first introduced in America with ample examples of success and later promoted in UK by Sir John Egan in his report "Rethinking Construction". A number of enterprising public organizations and government agencies in Hong Kong have begun to experiment with Partnering in a few of their building and engineering projects amid conventional constraints. This paper attempts to evaluate the perceived successes and drawbacks with a housing construction project where a Project Partnering approach was introduced at the commencement of construction. Findings from this case study may help to shed light on the viability of Partnering as a feasible approach for enhancing construction quality and efficiency in Hong Kong.

Keywords: Partnering, Construction, Building, Hong Kong

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"I would only admit that our partnering efforts have been successful when end-users are truly satisfied with the ultimate quality of our products."

1.0 INTRODUCTION

Traditionally, relationships in the construction industry have been adversarial in nature, characterized by confrontation and mutual suspicion (Littlefield, 1999). Business interacted on a position-based approach and government contracts incorporated the win-lose assumptions (Cole, 1993). The construction scene in Hong Kong is no exception though possibly begotten with a few more shortcomings. The Construction Industry Review Committee (CIRC) commissioned by the Chief Executive of the Hong Kong Special Administrative Region in April 2000 identified comprehensively a scenario of *"Local construction activities are labour-intensive, dangerous and polluting. Built products are seldom defect-free. Construction costs are comparatively high. The industry is very fragmented and is beset with an adversarial culture. Many industry participants adopt a short-term view on business development with little interest in enhancing their long-term*

competitiveness. There is a tendency to award contracts to the lowest bidders and delivery programmes are often unrealistically compressed. Accountability is undermined by the prevalence of non-value adding multi-layered subcontracting and lax supervision. An inadequately trained workforce also impairs the industry's ability to adopt new technologies and to cope with new challenges.” (CIRC, 2001). Punitive and regulatory measures have proven to be non-solutions. A need for alternative approaches and strategies to construction as distinct from traditional practices is eminently necessary and vital for the industry's survival, sustainable improvement and growth (Hunt & Yeung, 2001).

After nine months of intensive and wide-ranging consultation with both the industry and concerned government bureaux and departments, CIRC reported its advocacy for an integrated approach to construction with an emphasis on teamwork. Wider adoption of a partnering arrangement in local construction was recommended amid observations that local application of Partnering in both the public and the private sectors had been fairly limited. Based on positive experience reported in UK and Australia, CIRC affirmed the potential benefits of Partnering and the effectiveness of structured teamwork in resolving site problems (CIRC, *ibid*). The Hong Kong Housing Authority, the biggest housing provider in Hong Kong, last year issued a housing reform document where Partnering was proposed as one of the five measures for improving the quality of future housing unit constructions (HKHA, 2000). The Hong Kong Construction Association, a long-established body incorporate representing all major Hong Kong contractors, launched a public declaration later the same year committing its members to quality and safety improvements and to Partnering with Employers and Consultants in its efforts to uphold industry integrity and to restore public confidence. The Hong Kong Institute of Architects went as far as to request the Hong Kong Housing Authority to implement strategic partnering with consistent top performing contractors (HKIA, 2001).

Partnering is a management approach used by two or more organizations to achieve specific business objectives by maximizing the effectiveness of each participant's resources. The approach is based on mutual objectives, an agreed method of problem solution, and an active search for continuous measurable improvement (Bennett & Jayes, 1995). With construction, Project Partnering is about fostering a close working relationship among different parties in a construction project and it is expected that a synergistic effect can be obtained by working closely together. It is a philosophy of teamwork and cooperation, and it is one of the pillars of Total Quality Management (Kanji & Wong, 1998). It is with the view to share a particular partnering experience gained from a housing construction project commenced back in early 2000 that this paper sets out to trace the implementation of a project partnering arrangement and to examine its impacts on the project's stakeholders and members of the project team. All data in this paper were obtained from team members and management of the Employer. Names of stakeholders are not revealed as the project has yet to reach final completion.

2.0 THE PROJECT

The case project is a subsidized housing development for middle-income families in a densely populated commercial/residential site in Hong Kong. The substructure comprising two levels of basement for 250 parking bays and resting on bore-piled foundations had earlier been completed in early 1999. Tenders for the construction and completion of the superstructure were called from a selected shortlist of six general contractors in mid-1999 based on a competitive lump-sum price with bills of quantities. The main contract was awarded to the lowest tenderer and works were officially commenced on 3rd January 2000 for one 26-storey and one 33-storey residential tower totaling 472 flats resting on a 2-storey commercial podium occupying the full site area with a landscaped garden and recreational facilities on top.

3.0 IMPLEMENTATION

Being a public organization answerable to lawmakers, regulators and the general public, the Employer's freedom to develop long-standing strategic partnerships with private organizations had altogether been eliminated (Gransberg et al, 1999). Having been constrained by competitive tendering requirements (Loraine & Williams, 1997), Partnering was only contemplated and implemented after contract award and was focused only on creating an atmosphere conducive to enhancing communication and minimizing disputes (Schriener, 1991). Whereas Partnering was usually initiated within the client organization (Loraine & Williams, *ibid*), yet the intention to introduce a partnering arrangement in this particular incidence was first raised by the Main Contractor though readily supported by the Employer on account of a mutual observation that construction in Hong Kong was under extreme pressure caused in part by lack of communication and adversarial contractual approaches. Although both parties agreed to experiment and to embrace a concept which was new to Hong Kong, the potential benefits reputed elsewhere were never assured in view of the scarcity of recorded local successes. Only after twenty months into the partnering processes did the Main Contractor admit that Partnering was merely initiated as a pretext to formalize informal dialogues with the Employer as well as a means to combat likely adversarial contractual approaches by Consultants and contract administrators. The admission was obviously quite contrary to its more flamboyant wish proclaimed at the partnering workshop of leading a change in its own corporate culture to one that embraced the concept of working together to eliminate wasteful practices.

3.1 Partnering Workshop

To formally launch the partnering concept and practice, a two-day workshop was conducted three weeks after contract commencement in end-January 2000 in an exclusive private club led by an independent facilitator commissioned by the Main Contractor. Forty-eight participants in total attended the workshop. Half of the participants were senior and resident staff from Consultants and major nominated and domestic subcontractors; while the remaining half were management staff from the Employer and the Main Contractor ranging from the top echelon to site personnel. An observer from the Independent Commission Against Corruption was also present at the invitation of the Employer. Directors from both the Employer and The Main Contractor openly pledged support and commitment to the partnering process and to the improvement in the way construction contracts were to be carried out. A Partnering Charter, comprising a pledge and three supporting levels of shared objective statements, strategies and action plans was produced and signed by all participants towards the end of the workshop with the explicit understanding that it was not a contract but rather a symbol of the commitment of the whole group. What was not made clear at the time was that provisions of the non-binding Charter, though expressed not to affect the terms of the building contract, might be taken into account by an arbitrator or a court in making a decision concerning the opening up or reviewing of a certificate under the building contract (CIC, 2000).

The workshop opened with pledged support and commitment speeches by top managements of both the Employer and the Main Contractor followed by overviews of the project by participating Consultants. The independent facilitator then introduced the concept of Partnering and the partnering process that resulted in the participants being divided into eight sub-groups to work on:

- i) *“What is important” to each participant or group;*
- ii) *Strengths which individuals and the organizations possess;*
- iii) *Potential “obstacles” to project success;*
- iv) *Ideas as to how to “overcome the obstacles”.*

The workshop was conducted in Chinese. Worksheets and the Charter were generally written in Chinese in recognition of the fact that Chinese was the predominant form of communication at site level. A general observation was that the confidence level of the sub-groups and all the individuals generally grew in stature as the Partnering Workshop progressed.

3.2 The Charter

The Charter, in the regular “four level” form, was primarily written in Chinese. Level One was an over-arching, general statement of commitment or more commonly known as the Pledge. The sub-groups agreed and pledged to complete the project on time with the highest quality standards, the best water-proofing system and workmanship to the expectations and requirements of the end-users while committing to a spirit of teamwork, effective communication and positive cooperation as well as upholding at the same time the safety and other rights of the public and its workers.

Level Two of the Charter was a set of eight shared objectives or “How to” headings that the sub-groups identified such as “Create a safe working environment by___” and “Achieve quality expectations by ___”.

Level Three of the Charter was a further set of strategic statements for achieving the Level Two shared objectives whereas Level Four were action plans and working details which are not reproduced for presentation in this paper. The workshop emphasized how lack of communication amongst participants was itself a major potential obstacle whilst open communication was a primary weapon in countering problems.

3.3 Issue Elevation and Partnering Champions

The workshop developed an understanding that the lowest possible levels of authority should be empowered under Partnering to resolve issues at their own levels, thereby avoiding delays and unnecessary response time. The general rule agreed by the workshop was that the partners at each level should formally attempt to reach agreement on an issue twice before elevating it to the next level for resolution. Each level should handle any particular problem within a two-week period otherwise it must be elevated up the ladder. It was emphasized that the elevation of any issue should not be seen as an easy way out under an efficient partnering process where real commitment to the Charter was evident.

The workshop identified four Partnering Champions to act as a steering group to develop action plans and to collate individual evaluation forms for purposes of reviewing results and taking collectively necessary corrective measures. Of the champions identified, two were from the Employer and one each from the Main Contractor and the Architectural Consultant.

The additional role of the Partnering Champions was to lead those who either scored themselves low or who believed that the partnering process was not fulfilling the intended objectives when parties first signed the Charter. They were assigned also the responsibility to foster the partnering concept and to assist those who might slip back to their old ways.

3.4 Reinforcing Workshop

Construction reached a complex stage eleven months into the contract and senior managements of both the Employer and the Main Contractor felt that members of the partnering team had “forgotten” parts of their performance pledges. The issue elevation ladder appeared out-dated due to the departure of a significant number of the Main Contractor’s and the Subcontractors’ staff while the process of empowering the lowest supervisory level to resolve issues by then frustrated. The independent facilitator had to be called back to conduct a half-day reinforcing workshop as it was strongly felt that all parties would suffer in the event that Partnering should not ultimately achieve its objectives.

The half-day workshop again divided the participants into subgroups and each was required to produce a list of factors as to why the partnering score had declined since the middle of the year and to identify the major obstacles to success. The review showed that major obstacles were generally classified as complaints by or against one or several partners and it affirmed the view that the issue elevation ladder had in fact become out-dated.

The facilitator reinforced the “guidelines” and “problem solving” outlines presented in the first workshop and conducted a video enhanced Bushfire Survival Game as a team building exercise. The general tone of the workshop progressed from an “us and them” atmosphere to one where the issues were being discussed openly in a genuine attempt at resolutions. The one issue causing the greatest consternation was the lack of effective communication and participants debated openly how “approval submissions” and “sub-subcontractors” could be better handled by positive and collaborate communication.

The workshop resulted in the identification of three new Partnering Champions from the Main Contractor and the consulting team. Together with the two original champions from the Employer and the one from the Architectural Consultant, there were altogether six champions. New action plans were produced and new target dates agreed. The original pledge was redrawn and signed by all present and the workshop adjourned for a barbeque and refreshment.

4.0 PERFORMANCE MONITORING

Monitoring the arrangement is an essential part of the partnering process and it has the following objectives (Loraine & Williams, 2000):

- *Measurement of performance*
- *Identification of opportunities for improvement*
- *Encouragement of bottom-up involvement*
- *Reinforcement of top-down commitment*

Against the objectives of the Charter, the workshop agreed that it was critical to regularly monitor performance on a monthly basis. A monitoring matrix produced by the independent facilitator was adopted with each shared objective tabled adjacent to the recording of the relative score from zero (no positive progress) up to five (excellent performance). Individual measurement sheets were distributed to all participants every month and returned scores averaged by the Main Contractor’s Project Manager – one of the Partnering Champions nominated by the workshop. Open discussions on performance scores were conducted once every month at regular site meetings. Partnering Performance Monitoring Matrix plotted onto graphs same as Fig. 1 were distributed to all parties for information.

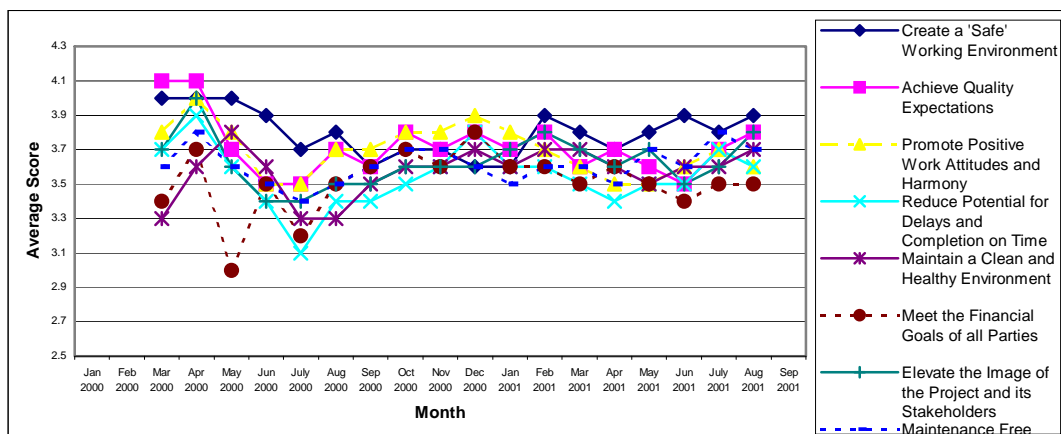


Fig. 1: Partnering Performance Monitoring Matrix

To cater for the fact that subcontractors of different trades commenced and finished their respective works at different stages of the construction period, an “Issue Resolution/Opportunity Realization” sheet was developed by the independent facilitator and agreed at the workshop to assist people and organizations new to Partnering to evaluate their own performance and the performance of their fellow partners. The “Issue Resolution/Opportunity Realization” sheet in Chinese was simply a summary sheet that captured the definitions of issues and opportunities, principles and processes in dealing with issues encountered and opportunities identified.

5.0 VALIDATION

Six months after signing the first Partnering Charter, the Employer initiated a validation examination into the effectiveness of the implementation of the pledges in the Charter introduced formally the first time in its entire development portfolio. The validation was conducted unilaterally by an entirely independent in-house validation team together with an audit on quality assurance and control procedures under the Employer’s stipulated Integrated Quality System at the same time. The examination took the form of interviews, site visits and attendance in quality meetings at site level in late July and early August 2000.

The validation examination revealed that in general, the Main Contractor had maintained the site in a condition to meet pledges under the Charter. Out of a total of 36 Level Four actions pledged in the Charter, 26 showed positive evidence of being implemented by partners on site. There was however insufficient evidence to show fulfillment of some areas in the shared objectives, in particular those actions to elevate the image of the project and its stakeholders. The validation report highlighted the lack of supervision by the Main Contractor and subcontractors on the quality of the works and the rectification of defects. Contrary to what was agreed in the Partnering Charter that required Subcontractors to supervise their own workers and to inspect the works when completed, quality supervision of the works instead relied heavily on the Employer’s supervisory staff on site.

The validation report was subsequently released to the Main Contractor and the Consultants and discussions on its findings ensued between top managements of the Employer and the Main Contractor that eventually lead to the enactment of the reinforcing workshop in December the same year.

In reciprocation to the seriousness of the Employer in validating the effectiveness of the implementation of the partnering pledges, the Main Contractor conducted two more validation examinations on its own accord by separate and independent task forces from within its own organization. The first validation was conducted towards the latter part of February in 2001 and the second in late July 2001. The method of both validations was again by interviewing project staff of the key partners, reviewing relevant documents and inspecting works on site with a view to compare prevailing practices against pledged actions.

The February 2001 validation concluded that the site, in general, had been maintained in conditions meeting pledged requirements in terms of health, safety and environmental issues. With regard to quality pledges it was found that subcontractors did not guide their workers to follow established work procedures and subcontractor supervision was either inadequate or reactive in identifying defects and following up on defect rectifications. Supervision still relied on site supervisors of the Employer despite the fact that the Main Contractor had increased its own site management resources. The principle of “Right the First Time” was not followed by subcontractors and workers though the Employer’s site representatives felt that partnering sessions were nonetheless good opportunities for them to communicate with the subcontractors and to understand their difficulties and problems. Nevertheless all partners still believed that honesty, clarity and open communication had generally been built

up on site in accordance with the partnering pledge requirements. There was however a stark difference in opinions between the Main Contractor's representatives and that of the Employer's and the Consultants'. While the former believed that most site activities and submissions identified in action plans could meet the target completion dates, the latter contended that all target completion dates could not be met as planned.

The validation exercise also examined the partners' concern identified in the reinforcing partnering workshop and consequently concluded that there was no drastic improvement in the speeding up of the site progress by actions agreed on better planning and programming and on earlier submissions and approvals of working drawings. Most milestone dates committed in the action plans could not be met.

By the time the second validation exercise was carried out by the Main Contractor in July 2001, the reinforced concrete superstructure had been topped out and finishing trades were in full swing. Deficiencies in site cleanliness and environmental awareness were detected. With over 400 workers of different trades working on a restrictive site every day at the same time, supervisions and quality problems became more acute. Workers hurried through with their own trades without checking on the correctness of previous works completed by other trades and supervision by subcontractors was still considered as grossly inadequate. Performance by subcontractor in achieving quality expectations and defect free construction was not satisfactory and co-ordination between the Main Contractor and the Specialist Subcontractors in meeting statutory submissions and inspection milestone dates by authorities was eminently insufficient. While the Employer was concerned with the last minute change of the Main Contractor's Site Agent, complaints were being levied on the Employer for setting the quality standards too high and for being too strict with the quality control.

The validation report observed that the project had reached its final completion stage where focus of the partners had been shifted to project realization such as completion on time, statutory inspections, works protection, defect rectification progress and the avoidance of potential major deficiencies in de-bonding tiles and leaking windows. The validation team reckoned that the unsatisfactory situation might have in some ways been linked to the aggressive site progress towards the completion stage and the declining relationship and communication between the partners.

The July 2001 validation report further admitted that at the final stage of completion, quality, safety and environmental awareness had proven to have all been sacrificed for on-time completion. Many new issues unanticipated earlier by Management emerged and there were numerous pressing tasks to be tackled all at the same time. The conclusion drawn was that it was the more essential for partnering sessions be held at project completion stage to monitor satisfaction levels and to provide opportunities for better communication, open discussion and site problem resolution among project participants. Partnering sessions helped to balance out time, cost, quality, safety and environmental constraints as well as to avoid unnecessary disputes and confrontations that might unwittingly jeopardize partner relationships.

6.0 EVALUATION

With the dates of the Partnering Workshops and validation examinations plotted onto the Partnering Performance Monitoring Matrix graph one can generally deduce from Fig. 2 that morale and partnering spirit of the participants were high immediately after the first Partnering Workshop. The perception of the potential benefits that Partnering could bring was in fact on the climb in the first three months immediately after the initial encounter. Participants' confidence however waned after further months of experimentation. The fact that the Employer conducted a validation examination by interviewing participants and attending meetings on site demonstrated the Employer's commitment to Partnering and had

in effect restored confidence and injected new impetus to the partnering team on site. The Employer's validation report, shared amongst top managements of the Employer, the Main Contractor and the Consultants, helped to bring in the reinforcing workshop that was not contemplated in the first instance. The reinforcing workshop and the Main Contractor's first validation contributed to maintaining the partnering momentum for about three months but then it started to slip again when construction activities reached their peaks and when many varied trades were being executed on site all at the same time. During this period of enhanced activities, partnering performance with regard to safety, quality, timely completion and general site conditions fluctuated quite a bit until the second validation input by the Main Contractor. For the time being the Main Contractor's second validation did appear to have helped towards demonstrating its determination to make Partnering work and there appeared to a positive indication that the trend of the performance matrix was back on its rising track.

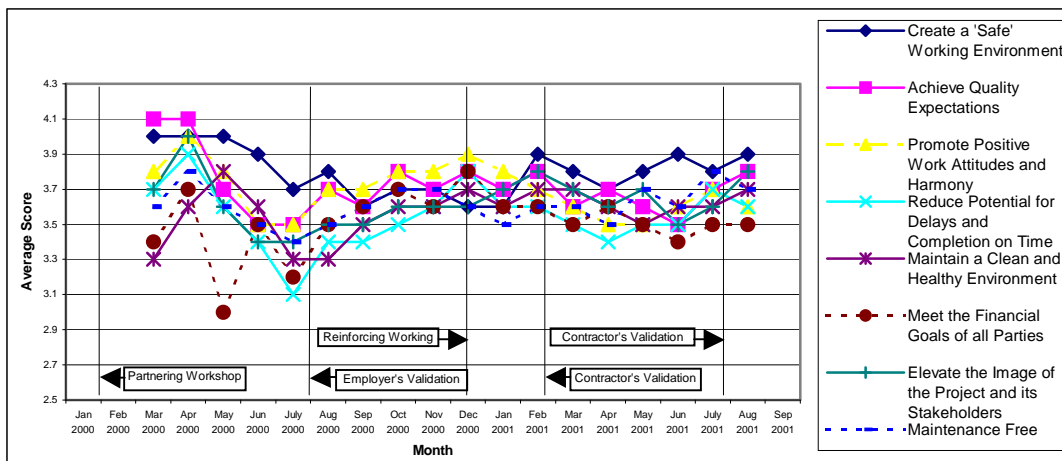


Fig. 2: Partnering Performance Monitoring Matrix
(With dates of major partnering events superimposed.)

Several squabbles on construction quality erupted throughout the construction period between the Employer and the Main Contractor as depicted in Fig. 3. The first and the most prolonged squabble on the quality of poured concrete appeared early two months after the Partnering Workshop. As it was the first incidence when the Employer and the Main Contractor were trying to align their quality expectations, the measured partnering performance index plunged for all shared objectives. The Main Contractor's targets on expected financial returns, timely completion and quality assurance appeared to have unduly been frustrated and many site issues were elevated to top managements of the respective partners. From Fig. 3 it appeared that partners' confidence was only restored after the expected completion was finally extended and a new construction programme agreed in early August 2000. The event coincided with the partnering validation initiated by the Employer and it surely illustrated the importance of the impact of open and frank communication on the morale and confidence of the partnering parties. With lessons learnt and experience gained from the first squabble on construction quality, a later squabble on qualities of aluminum windows in September 2000 did not appear to have affected adversely the performance of partnering. The ensuing dip in partnering performance seemingly resulting from the squabble on the quality of lime plasters could well have been the result of the fact that many new domestic subcontractors were gradually brought onto site before the topping out of the concrete superstructure in early March 2001. New comers to the partnering team might again be finding it difficult to align their quality expectations with that of the Employer's.

Contrary to open concerns expressed by the Employer, changes of the Main Contractor's key personnel, i.e. the Project Manager in November 2000 and the Site Agent in July 2001

respectively did not seem to have adversely affected the performance of Partnering as shown in Fig. 3. This could well be due to the fact that the two new incumbents were eager to gain acceptance into the partnering team upon learning well in advance the concerns and expectations of the Employer.

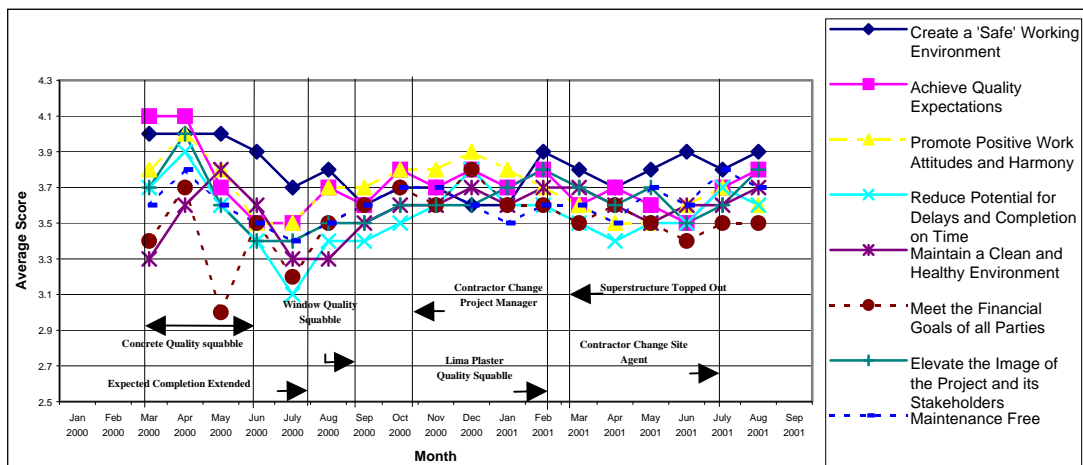


Fig. 3: Partnering Performance Monitoring Matrix
(With dates of significant site events superimposed.)

It is obviously not possible for this paper to delve too deeply into the impacts of each milestone event or each quality issue on partnering performance in respect of each of the shared objectives. It is however suffice to say that some of the major events on site did have measurable impacts on the summary performance of Partnering.

7.0 CONCLUSION

With a contracting economy in Hong Kong (CSD, 2001) and declining tender prices (L&B, 2001), i.e. keener competition in the new millennium, both the Employer and the Contractor have been actively seeking ways to raise construction quality and to reduce the high costs of contractual disputes. Based on potential benefits reported in other parts of the world, Partnering presents itself as a welcome remedy to the traditionally adversarial relationship in the construction industry in Hong Kong. Spurred by the influential report of the Construction Industry Review Committee and efforts of major public housing agencies and infrastructure corporations, more and more development projects have now adopted a partnering approach in the construction process - though more frequently after award of the construction contract.

Notwithstanding that it would take two more months to achieve total completion, the case under study has helped to shed light on some experiences gained and areas for improvement in the application of construction Project Partnering.

Subsequent reviews of validation reports prompted top managements of stakeholders to agree generally that the following factors are essential for Partnering to succeed:

1. Top management commitment coupled with frequent attention and regular review.
2. Continued maintenance and reinforcement of Partnering throughout the project.
3. Proper delegation of authorities and appropriate empowerment of management on site.
4. Enhanced promotion and cultivation of partnering spirit and effort to all nominated and domestic subcontractors.
5. Open, persistent and sustained communication between the partnering parties.
6. Consistent and shared objectives under constant monitoring.

Despite changes of key project staff in the middle of the construction period and different expectations on the achievable degree of shared objectives, it was observed that partnering

effort had been sustained by open communication and top management commitment. Unlike similar projects completed in the late Nineties by the same Employer which all experienced excessively prolonged completion, cost overrun, undesirable quality performance and contractual disputes, the case under study was within budget, achieved acceptable quality performance and was so far void of major contractual disputes though completion was slightly delayed. What was clearly identified by the three validation examinations was that subcontractors generally did not provide adequate supervision to their workers and this did affect generally the effectiveness of partnering performance. What was of importance was the necessary presence of a quality and partnering culture down to subcontractors and workers alike in order to bring about a truly successful project. As pointed out in no unclear terms by the Managing Director of the Main Contractor, “ I would only admit that our partnering efforts have been successful when end-users are truly satisfied with the ultimate quality of our products”.

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