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## SPM 3<sup>rd</sup> Annual Seminar



The seminar is one of the annual highlights of the Society. It was held on Friday, 10 September 2004 at the Carlton Hall of the York Hotel.

The atmosphere was very lively as participants numbering above 120 gathered at the registration table. As they signed in, each was given a lovely folder containing the seminar materials. Some participants who came early were engaged in quick updates with their friends and contacts while having coffee or tea. The seminar was organized in two sessions, each on either side of a sumptuous lunch.

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## SPM 8<sup>th</sup> Annual General Meeting

The Society of Project Managers held its 8<sup>th</sup> Annual General Meeting on 28 June 2004 at the Singapore Recreation Club, Lounge 1883. It was preceded by a lunch for members.

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## SPM 9<sup>th</sup> Annual Dinner 2004



On September 11, 2004, the Society of Project Managers held its 9<sup>th</sup> Annual Dinner at The Regent Hotel. We were privileged to have Mr Cedric Foo Chee Keng, Minister of State for Defence and National Development as the Guest-of-Honour to grace the occasion.

There were about 500 members and guests in the dinner best decking the Pavillion Ballroom. Among

the distinguished guests were speakers at our Annual Seminar, which was held just the day before. Two of them were Mr Chen Guo Chai from China and Mr Hiroshi (Hiro) Tanaka, PMP from Japan.

After the formality of speeches by our President, Mr Chang Meng Teng and our Guest-of-Honour, Mr Cedric Foo, guests and members mingled freely between dinner meal courses in a cordial and relax atmosphere. The mood was generally more upbeat in view of an economic upturn.

Two Book Prizes awards were presented to the best post-graduate students from NUS and NTU.

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## Our President Speaks



Chang Meng Teng  
President, SPM

Mr. Cedric Foo, Minister of State for National Development and Defence has reminded us at our Annual Dinner on 11 September 2004, that we are now operating in a densely built-up environment. The Project Manager's responsibility is no longer confined to meeting deadline and budget. He should now also take on the corporate social responsibility to the public as well as meeting the demands of other stakeholders. Project Manager should continue to consider and adopt new technology and systems to improve the buildability of projects with minimum noise and dust pollution emitting from construction sites. Mr. Foo said that a realistically planned construction period, will allow Project Managers to plan more flexibly and adopt a holistic approach, which could balance costs, speed, quality, safety and protection of the environment.

In this regard, Mr. Foo also announced that the BCA had requested the SPM to lead a study on the contract period of construction project in Singapore. The objective is to examine whether construction period in Singapore are reasonable and comparable to other developed urban cities. This study is timely at the early recovery of the industry and the choice of SPM to play the lead role is appropriate because our membership represents the majority of the stakeholders. All members are invited to submit to SPM their views on this issue. We will work closely with BCA and request the active participation and input from all members of the Construction Industry Joint Committee to recommend guidelines on realistic construction periods and improve the management of construction projects. [✉](#)

## Featuring our working committees:

### Social Events Committee

Committee :

Chairman: Jimmy Loon  
Vice Chairman: Bernard Ho  
Members: Ruby Lai  
Goh Swee Yee  
Kelly Tan  
Patrick Too  
Jimmy Koh



The primary objectives of the Social Events Committee are :

- Facilitating the interaction and networking of members within the Society
- Publicising the Student of the Year Awards
- Publicising of the Project Manager of the Year Award

In realizing these objectives, the Committee has been involved in the organizing of the Society's Annual Dinner all these years. Some of the tasks involved for the Annual Dinner would be the sourcing of a suitable Hotel venue, approaching firms for support in the reservation of tables and sponsorships in taking up advertisement pages in the Dinner Magazine, and selection of appropriate entertainers for the Dinner.

Other social activities that could be taken up by the Committee in the future may include :

- Mini Golf Tournaments
- Year End Christmas Gathering [✉](#)

### Professional Practice and Education Committee

Committee:

Chairperson: Pauline Sim  
Deputy Chairperson: Yuen Mun Wye  
Members: Arthur Soh  
Dennis Chee  
Felix Yeung  
Lim Hong Leong  
Seah Kok Hong  
Teresa Ee



The continuing professional development of all members is the main function of the Professional Practice and Education Committee. Through activities, members will develop and broaden their core competencies and knowledge as project managers. Continuous development will enable them to be more effective in project management.

The activities will consist mainly of:

- Seminars lasting half day or more to provide in-depth knowledge of particular aspects of project management.
- Visits by prominent practitioners to provide a global perspective.

- Talks by practising project managers sharing their experiences and strategies.
- Presentations by competent speakers on fringe skills needed in project management.

The main avenues to develop knowledge are usually carried out via:

- Having three to four lunch time Technical Talks held every year.
- At least one seminar or conference staged as the highlight of activities.
- Recording and compiling Credit Professional Development Points (CPD points) for members to allow them to keep tab of their professional development.

The activities carried out or planned this year are:

- Technical Talk on 17 March, 16 June and 15 December 2004.
- Annual seminar entitled "Global Trends in Project Management Services" by four eminent practitioners; namely, Professor Zhang Qing Lin, Mr Hiroshi Tanaka, Professor Wong Yui Cheong and Mr Sim Wee Meng on 10 Sept 2004.
- Consolidate all CPD points for all members.

There will be more Technical Talks planned for Year 2005. [✉](#)

## 9<sup>th</sup> ANNUAL DINNER, 11 SEPTEMBER 2004

### Speech by Mr Cedric Foo, Minister of State for National Development and Defence



I am pleased to join you this evening for the Society's 9th Annual Dinner. Although the Society itself does not have a long history, Project Managers, as key members in the construction industry, have long been playing an important role

in the national development of Singapore. The brisk pace, at which our physical landscape has developed, has transformed the environment in which you operate. There are important challenges in operating in a densely built-up environment. There is also strong pressure to perform in a keenly competitive industry that has consolidated substantially in the past few years.

#### Role of Project Managers in Construction Projects


As Project Managers, you face the challenge of balancing costs and time on the one hand, against quality, safety and environmental aspects of construction projects on the other. In a small and urbanised island state like Singapore, balancing the competing demands of all the stakeholders is increasingly complex. Project management is no longer just about meeting deadlines and budgets. You have now to consider corporate social responsibility to the public as well as meeting the demands of other stakeholders. In our densely built environment, the public is prone to be disturbed by construction activities in their surroundings. Noise pollution from construction sites is among the top 3 complaints received by

the National Environment Agency. To lower noise levels and enable construction to progress faster, the industry should continue to adopt dry construction methods and improve the buildability of projects. The industry could also consider limiting the operating hours in construction sites to minimise noise and dust pollution. Understandably, contractual obligations need to be met. However, realistically planned construction periods, will allow project managers to plan more flexibly and adopt a holistic approach, which balances costs, speed, quality, safety and protection of the environment.

#### Study on Contract Periods of Construction Projects

BCA has approached the Society of Project Managers to lead a study on the contract periods of construction projects in Singapore. The aim of the study is to examine whether construction periods here are reasonable and comparable to other developed urban cities. This will help establish guidelines on realistic construction periods for different project types. I note that the study will recommend measures to improve the management of construction projects and explore the feasibility of limiting work days and restricting the hours of activity at construction sites. The recommendations that will be put forth by the study team will be of interest to all stakeholders, including the public at large. I look forward to the study report.

#### Continuing Education & Raising Standards

Your Society has also been organising continuing education programmes for members to share their experiences and best practices. This will help improve service standards to meet the rising expectations of your clients. I am also heartened to note the Society's collaborations with your counterparts around the world to establish a Global Performance-Based Standard For Project Management Practice. This will be beneficial in raising the standards and productivity of the industry. Lastly, I commend your unstinting efforts to upgrade and improve. In time, Project Managers in Singapore will make their mark here and beyond. 

### SPM President's Speech



We have heard encouraging news about recovery of the world economy. Prime Minister Lee Hsien Loong had also forecasted Singapore could achieve an economic growth of 7% for this year. Unfortunately, the Building Construction Industry is yet to follow this upward trend. The Singapore economy has

been restructured to meet the challenges brought about by the forces of globalization. We in the SPM, as a member in the value-chain of the Building Construction Industry will need to keep pace with the changes in technology and market expectation to remain relevant in the industry. The building construction industry is under scrutiny at the moment. I hope we can learn some lessons in the process so that we can be more professional and competent in our delivery of services and products.

In fact, construction processes and practices all over the world are under scrutiny. Changing markets, new technology and rising Client expectation are stimulating radical reviews of how the industry can be re-engineered to further enhance its performance.

At the last annual dinner, I had suggested that the various players in the building industry seriously review our respective roles on how we could improve the delivery of our various services and products to the end-user. This year, I would suggest that we get together to discuss on an industry-wide basis to examine the value we could derive from the construction industry for its various key stakeholders so that we could create value for all the stakeholders in the industry.

Yesterday, we held our 3<sup>rd</sup> Annual Seminar on "Global Trends In Project Management Services", I wish to thank all the speakers for sharing their expertise and experience with us. SPM has continued with the series of lunch-talk to enable the sharing of knowledge and experiences among our members. Currently, the society is working in collaboration with the project management organizations of the Asia Pacific Forum for Project Management (APFPM) and of China, Japan and Europe to create a Global Performance Based Standards for Project Management Practice. This will ensure an internationally established and accepted standard of practice based on a common body of knowledge used for the training, standard certification and practice of project management. We hope that this standard will result in a consistent delivery of good quality services and products, to create value for all the stakeholders in the building construction industry. 

## 3<sup>rd</sup> Annual Seminar Global Trends In Project Management Services

Altogether four papers were presented, and the essence of the presentations is provided in the following. An abridged version of their papers will be featured in future issues of the newsletter. So watch out for them. A time of question and answer followed each session with lively discourses between participants and speakers. At the end everyone was satisfied with a day well spent.

### Turn Key Project Management – The Road to the Globalization of China's Project Management by Professor Zhang Qinglin



Professor Zhang Qinglin is the Chairman of the Construction Project Management, Ministry of Construction, China. His paper was presented by Mr. Chen Guo Chai, the Chairman and Managing Director of China Construction Private Limited, in the absence of Professor Zhang, who was not able to attend the seminar due to a last minute change to his flight schedule.

The traditional view of the contractor in the engineering project construction would not suffice as China takes her place in the global market. The solution expounded by Professor Zhang was the increasing use of Turn Key Project Management for large scale and well established construction enterprises. There were three patterns to such management, each increasing in complexity and management sophistication. For example, Pattern 2 proposed to connect the design and construction through shop drawings. Having such drawings would bring China more inline with international practices resulting in superior quality, cost reduction and accelerated progress in the project. Due to the size of China's appetite of construction material, any form of savings would have a significant effect on the national economy. The third pattern would try to reform the government-sponsored engineering projects through the application of the construction agent system.

Indeed the government had begun legislation towards this Turnkey Project Management. The construction agent system would eventually cause a revolutionary change to the following three categories of management of nonprofit government sponsored projects; socialization, technicalization and commercialization. This system was still in its infancy and much research would be carried out to develop it.

### Managing Railway Infrastructure Projects by Mr. Sim Wee Meng



Mr. Sim Wee Meng is a Project Director of the Land Transport Authority. His presentation was largely derived from his experience with the North East Line (NEL) project, elaborating on the complexity of the project. He began by briefly explaining the steps and procedures used to ensure quality and safety of the completed project in the long run. Every aspect of the project was benchmarked against standards accepted worldwide. Certification and payment, the lifeline of the contractors and vendors was not neglected. The project team had to examine any new technologies before implementation. Everything new had to be carefully scrutinized, understood and examined for fit to the system before it could be accepted. Pertinent issues with respect to various aspects of the project were also presented, including system procurement strategies, project life cycle, managing technical risk area, and key success factors of the project. A rather complicated and new Integrated Supervisory Control System was another focus of the paper. Time and time again the human factor was emphasized as one of the key elements of any project. It was the professionalism of the project management team and the dedication of the contractor and vendors that saw through the successful completion of the project.

### Project Scenarios in a Mixed PM Culture, the Japanese Case by Mr Hiroshi Tanaka



Mr. Hiroshi Tanaka is the Founder and National President of the Japan Project Management Forum (JPMF). The presentation began with a historical perspective of the seeming success of Japanese construction companies envied by many others. The story of the project manager in Japan as a profession started not too long ago. Construction companies usually relied on its organizational strength rather than on available professional project management awareness. It was not until 1995 that the profession began to be recognized. In a short time, five main associations based on the background of the profession were formed. As of this year, there were more than 30,000 (from about 5,000 in 1995) who identified themselves as project managers. In the aftermath of the economic shakeup of the Japanese business, Japan Inc. began to regain confidence using new strategies and tools. From two traditional project management strengths, new uses were found for many industrial sectors. This division was the origin of the five existing project management associations. Mr. Tanaka discussed their characteristics and subsequent project management certification. There were many examples of how project management was used differently by various industrial sectors successfully and winning many awards globally. The growth of the project management service as a contributor to all major

sectors of business had been a painful and slow process. Mr. Tanaka proposed some solutions to improve the use of project management services. He showed clearly the areas where project management services could be used in the near future. With project management as a new economic infrastructure, Japanese businesses could be more effective, thus furthering the course of project management.

### Pitfalls in Project Management by Professor Wong Yui Cheong



Professor Wong Yui Cheong is an Adjunct Professor with the Nanyang Technological University's School of Civil and Environmental Engineering. His paper was a very practical call to be wary of pitfalls in all stages of project management. He went through every stage in the life cycle of a typical building development project: land-acquisition/ project conceiving stage, hiring of professional consultants stage, design and pre-contract-award stage, construction stage, and post-construction stage. For each stage he articulated the possible thinking and activities of the owner/developer, bringing up every conceivable scenario based on his knowledge and experience, and giving some typical events that could happen, their possible causes and their dire consequences. Project managers were not left in a lurch. Professor Wong also gave his advice on what actions could be taken to avert the pitfalls. 📌

## SPM Book Prize Awards

Every year, the Society of Project Managers present book prizes to the outstanding students from the National University of Singapore and the Nanyang Technological University. The book prizes are awarded to postgraduate students undergoing the project management and construction management courses in NUS and NTU.

The 2004 book prizes were awarded at the 9<sup>th</sup> SPM Annual Dinner on 11 Sep 2004.

a) The SPM Book Prize for Best Student from NUS MSc (Project Management) Course was awarded to Ms Lim Chen Yee. Ms Lim graduated from the University of Malaya with a Bachelor of Science (Architecture) in 2000, and is now working as an Assistant Project Manager in Chuan Lim Construction Pte Ltd.



Ms Lim Chen Yee (NUS) and Ms Lee Yuh Fang (NTU) with Mr Cedric Foo, Mr Chang Meng Teng and Ms Goh Swee Yee (extreme left)

b) The SPM Book Prize for Best Student from NTU MSc (International Construction Management Course) was given to Ms Lee Yuh Fang. Ms Lee graduated from NTU with a Degree in Civil and Structural Engineering in 2000, and is currently working with Sam Choon Builders Pte Ltd as an engineer on a site at North Buona Vista Road. 📌

## A Walk in the Park ...

... is a euphemism for the minefield which a developer or project manager has to tread through upon the issuance of Temporary Occupation Permit (TOP).



Sim Bock Eng  
Partner  
Litigation, Arbitration and ADR  
Department  
WongPartnership

She spoke on this subject at a SPM Lunch Technical Talk

In recent times, it would seem that the issuance of the TOP signifies the beginning of the most challenging period for the management of the project: defects lists are getting longer, purchasers are more demanding and harder to please, and threats of litigation are more urgent and frequent.

There is also this growing trend of “group action” by purchasers seeking to influence developers and project managers with the force of numbers and consequences of publicity, both in the media and over the internet.

It is easy for purchasers to (and they frequently do) present their dispute with the developers as the biblical battle between David and Goliath, inviting empathies, including those of the judges, to their case. Most people (including judges), at one point or other, would have purchased a property and it is easy to empathise with the frustration of the purchasers with the “defects” in their major asset.

Developers must thus be aware of the dynamics of the situation and the conventional stereotyping of the players in the dispute, which generally results in their being in a weaker position in the courtroom. These have to be borne in mind in the conduct and management of the case and the gathering and presentation of evidence.

For instance, in the strategy and focus of the case, is the traditional approach of defending the purchasers’ claim and in turn making a claim against the consultants or contractors still pertinent? The underlying basis of this approach is that the developer was only the middleman who appointed and relied on the expertise of the consultants and contractors. Any liability should ultimately fall to the latter. This approach however, is less attractive in recent times, given the importance of public image and relations, the need of the developer to appear as responsible to all its stakeholders, including the purchaser and the consultants, as well as the public.

It may also be tempting to give in to the demands of the purchasers and rectify the complaints. This may however, be to the prejudice of the consultants and contractors, and in the long run, may affect the developers’ reputation in the industry or lead to higher costs for future developments.

A strategy which worked to the benefit of the developers in Westwood Park was the presentation of a “united front” to the purchasers. The developers and consultants co-operated in the defence of the claim by the purchasers. Whilst there were initial concerns that the “Goliath” may appear bigger given the inclusion of the contractors in their forces, this was outweighed by the show of confidence in the quality of the work. More importantly, evidence gathering was more complete and easier with this co-operation, and the financial commitment of both developers and contractors were reduced.

Another major aspect in the management of such “group action” by purchasers is the management of their expectation, the approach in the developers’ dealings with the purchasers and the record of relevant events.

Purchasers tended to paint the picture of a “Big Bad Developer” oppressing purchasers who have spent their life savings in acquiring the property. On the legal aspects, in addition to having representatives well trained not to make improper representation, it is essential to manage the expectation of the purchasers with the appropriate qualifications and caveats relating to any impressions of their acquisition as depicted in show flats, brochures or models.

Given the stereotyping, it is not only necessary for the “Big Bad Developer” to be more than reasonable with the purchasers, the developer must also ensure that such reasonableness is captured in a form which can be presented as evidence to the court or the media. Such reasonableness goes a long way to removing the sting in the purchasers’ complaints that they were oppressed.

For instance, developers generally find it difficult to obtain access to the purchasers’ premises to inspect the extent of the damage or to conduct tests as to the possible causes of a problem. An application to court to obtain access may be necessary. The courts have however, in instances, viewed this access as an intrusion and were reluctant to grant access unless it can be shown to be absolutely necessary.


It would go a long way to negating any stereotyping of the developer (or even portray the purchasers as unreasonable) if polite written requests were made to the purchasers explaining the purpose for the access, the methodology involved, providing the purchasers with alternative dates for access to suit their schedule, and giving the purchasers sufficient time to respond.

Such and other similar reasonable conduct will also provide the means to persuade the courts, the media and the public that the developer is indeed reputable and responsible in respect of its projects. This in turn will negate any effects of the “Big Bad Developer” stereotype.

Whilst managing the purchasers, the developers should also be aware of their rights and obligations.

In the Westwood Park case, the learned District Judge Mr Ng Peng Hong, affirmed by the honourable Justice Kan Ting Chiu in the High Court on appeal, has blunted the sword of Damocles which the purchasers frequently waved over the developers’ head. The courts clearly ruled that (1) the purchasers may only deduct the actual costs of rectification incurred by the purchasers from the amount held by the stakeholders and (2) only if the purchasers have notified the developers of the defects during the defects liability period, given the developers one month to rectify the defects, given the developers 14 days notice of the purchasers’ intention to rectify the defects and provided the developers with estimates of the costs of such intended rectification; and carried out the rectification works.

In the event of wrongful deduction by the purchasers, the developers would be entitled to claim against the purchasers for losses so suffered by the developers.

From our walk through the Westwood Park case, it is clear that disputes with purchasers relating to defects in developments, has progressed beyond the traditional boundary of the courtroom and could no longer be dealt within the ambit of litigation. To fight an effective battle, litigation can no longer be limited to knowing the law. Psychology of the players and public relations are also essential in the formulation and execution of the strategy for the conduct and management of the case. 

## Beyond boundary, linking the world A new challenge in Project Management



Mr Tan Kheng Soon, Senior Manager of Suzhou PM Link Co Ltd, presented this paper at the CIOB Forum held in Chongqing, China on 25 to 27 May 2004. The theme of the international conference was "Development of International Construction Management". There were about 200 participants from Singapore, UK, South Africa, Malaysia, Hong Kong and Australia.

### 1. INTRODUCTION

Globalization has led to more open markets worldwide. With advancement in communication technologies, the world is rapidly becoming one common market place.

In the area of building and infrastructure development, there is greater scope for formation of international teams for design and construction. Developers, architects, engineers, quantity surveyors, contractors, and suppliers from different countries/regions are joining hands to contribute their expertise to develop project.

Managing such projects is a challenge in many more dimensions as illustrated below.

### 2. NEW DIMENSION IN PROJECT MANAGEMENT

#### 2.1 Managing project team with different cultural backgrounds

Being a global player means dealing with international organizations and people. Project Managers in a global project have to deal with team members of diverse cultural background which may include ethnical, religion, tradition and historical differences. They carry with them different perspectives and approaches to how things are done. This calls for an experienced PM with understanding, diplomacy and much patience.

Besides balancing the competing demands of all team members in the project, the Project Manager has to be sensitive to different needs of the team members with different backgrounds and perspectives. The demands and intensity of interaction in the course of the project work can generate tremendous tension if not handled with care.

The project Manager must realize that there is a need to help all stakeholders to understand the "environment" they are in to avoid unnecessary conflicts and stress due to different backgrounds. Being a facilitator, he has to serve as a buffer between the different parties to facilitate decision making. He must be clear in his objective, and one of his strategies must be, to try always to strive for a win-win situation for the project and the parties involved.

#### 2.2 Managing team members who practise different norms and approaches

The project manager needs to manage consultants and contractors that practice different codes, norms and practices. It is important for him to be sufficiently knowledgeable in local norms and business practices for procurement and execution of the construction works.

Differences in norms and practices are the source of disputes, if they are not checked and explained. For example, the Contractor may want to use methods of construction acceptable in his culture but may contradict with the approaches of the

consultants from another culture. The Project Manager has to see things at a higher plane and be resourceful enough to mediate and solve site problems in consultation with the rest of the project team.

In this regard, the drafting of the tender document is a critical step. It has to ensure that tenderers and contractors understand the scope of works and be aware of any preference in term of norms and practices.

#### 2.3 Managing the local authorities

Planning and building authorities have to ensure suitable development of the region under their jurisdiction. Different planning and building authorities adopt different administrative frameworks to suit the local needs. The Project Manager needs to understand such administrative framework to aid his planning and execution of his overall programmes.

There is a strong tendency for the PM to follow the familiar sets of planning and building guidelines that he is used to in his country of practice. However, this may sometimes lead the project team in the wrong direction. It is necessary for the PM to grasp the principles behind the local administrative framework to ensure that the project is met with all necessary approvals and permits.

Project Managers with international exposure and the ability to offer international perspectives based on their experience are often appreciated by the local authorities. The PM must help various parties in the project to understand the local authorities' needs and convey to the local authorities the design and construction needs of his team members. He needs to be a good communicator or have one in his team to put forward the issues and inject balanced views to facilitate decision making by local authorities.

#### 2.4 Managing the Technology and Resources at Hand

Project Managers who used to operate in developed countries would tend to rely heavily on technological facilities to get things done. However, some of the developing countries may not be able to provide such facilities.

Time and labour seem to be aplenty in developing countries. Project Manager would have to capitalize on these resources to deliver the project in a different manner. He also needs to convince consultants from more developed countries to tailor their design to allow for use of more manual work than offsite fabrication in controlled environment. The balance is then to require the contractor to have a quality assurance regime that controls the quality of the finished product assembled on site.

There is a need to balance between technology and use of human resources. The Project Manager has to weigh the environment he is in and make appropriate choice of tool or technique to be used for the work at hand.

### 3. THE SUZHOU INTERNATIONAL EXPO CENTRE

The **Suzhou International EXPO Centre** project which is currently under construction is a good example to illustrate the enhanced role of project management of large, complicated projects involving international players.

#### 3.1 Development Data

When completed, the Suzhou International Expo Centre will be the second largest Expo Centre in China. Developed by the

Suzhou Industrial Park Housing and Development (SIPHAD), the EXPO centre covers an impressive expanse of 326,000 sq meter and is set to be the landmark facility within the bustling hub of Suzhou City.

Costing 2.2 billion RMB, The proposed two-storey EXPO centre is to be built on a trapezoidal shaped site bounded by Xian Dai Boulevard (现代大道) on the north and Jin Ji Lake (金鸡湖) on the south. It consists of a series of five interconnected halls radiate into a fan shape fronting the lake. The centre is designed and to be built to World class standards.

The project will be completed in two phases:  
Phase 1 is to complete 3 of the 5 exhibition halls within 306 days (by 20 September 04);  
Phase 2 is to complete the remaining project by a date yet to be fixed.

The project is managed by Suzhou PMLink Pte Ltd, a subsidiary of Singapore CPG Corporation (新加坡工程集团). Designed by the famous American Architect Skidmore, Owings & Merrill LLP (SOM), partnered with the local Suzhou Institute of Architectural Design Co., Ltd. (苏州市设计院). It is to be constructed by Shanghai Baoye Construction Company (上海宝冶建设), and Supervised by Shanghai Research Institute of Building Sciences (上海建筑与科学研究院). Sub-contractors and material suppliers come from all over China and other countries.

3.2 The Challenges

The construction of the Suzhou EXPO Centre kicked off on 27 September 03 shortly after the submission of the schematic designed by SOM. Main tender was called on 23 Oct 03 based on schematic drawings and awarded on 23 Nov 2003. Most of the big tenders such as faAade and roofing were called shortly after which based also on schematic drawings. Amongst the challenges for the Project Manager are:

- Super-fast track



The client wanted the building to be up and running by 20 September 04 on time to house the International Expo on 20 Oct 2004. The construction duration is only 306 days from the contract award date of 23 Nov 2003. Within which,

many activities such as detailed design, tender preparation, calling and award, material procurement, steel fabrication, delivery and construction are taking place. Such short timeframe calls for an enlarged project team involvement and long working hours.

- Design, procure and build concurrently



This is atypical (三边工程), where design, procurement and construction are done concurrently. This calls for high level of coordination among all team players to ensure the smooth running of the project.

While the detailed drawings by the design consultants could only be ready by 8 Mar 04, tender preparation and calling started as early as September 03 to maximize the limited construction time. Tenders were based on schematic drawings with a lot of provisions to address uncertainties in order to minimize variations along the way.

Besides main tender, there were altogether 24 tenders, for façade, roofing, ID, and many M&E packages to be called in quick succession.

- Coordination among team members  
The principal consultant **SOM** is based in Chicago, America. Coordination among project team members required proper planning and coordination. With the aid of IT, teleconferences were carried out at regular intervals to trash out planning and design issues. A FTP site was also set up for the sharing and transferring of drawings and design information among SOM, Suzhou Institute of Architectural Design Co., Ltd. (苏州市设计院), the project managers and the client. This is supplemented by emails for the day to day communication. All these are put in place in addition to the conventional site meetings. Visits at critical points were also planned for all parties to come together to resolve design and site issues to ensure smooth running of the project.



Installation of exhibition hall aircon ducts

- Large scale procurement, fabrication, importation, transportation

The quantities of materials used in this project are huge. For example, the steel tonnage is about 50,000 tonnes, façade covers an area of 160,000sqm, roofing covers an area of 140,000 sqm. Most of the M&E services such as lifts and escalators are specially designed which would require them to be imported. Procurement and fabrication therefore require long lead time. Timely delivery becomes critical for this project given its fast track nature. Proper scheduling is needed to ensure tenders were called timely to allow contractors/suppliers sufficient time to procure, fabricate and deliver the equipment on time. Factory visits at regular intervals are important to check and verify work quality and progress.

4. THINK GLOBALLY, ACT LOCALLY

The challenge faced by Project Managers in global projects is to continue to build up the experience and knowledge to leverage the full potential of each country across the value chain. He must be able to think globally while acting locally.

Project Managers need greater experience and exposures to enable him to cope with all the different and often conflicting demands. In the process of project management, the overview of creating a building or an environment that would improve the quality of life of that society in general must be the passion of the Project Manager. ☒

Phase 1 of the Suzhou Expo Centre was successfully completed on 30 Sep 04, over a 12-month period for construction. The first exhibition, eMEX was launched at the Expo-Centre on 20 Oct 04.

# Learning From Past Experiences to Prevent Project Failures Due to Incidents



Dr David Chua  
Associate Professor  
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Engineering  
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Mr Goh Yang Miang  
Research Engineer  
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Projects can fail in diverse ways, and failures due to incidents<sup>1</sup>, especially those with fatalities, are perhaps the most devastating ones, at least from the humanitarian and reputation perspectives. Some examples include the recent Nicholl Highway accident and the widely-publicised Challenger accident. Consequently, safety can never be compromised and should always be a top priority for project managers.

There is usually a safety management system (SMS) in each project so that safety can be systematically managed. Based on the definition given in the British Standard BS 8800, SMS can be thought of as an interdependent set of preventive measures, which is targeted at maintaining and improving safety performance of an organization. Essentially, SMS is based on the risk management process comprising four interdependent components: hazard identification, risk analysis, risk control selection and risk control implementation and maintenance.

The SMS should be continually improved to ensure that safety performance is maintained at a desirable level. It can be achieved at two levels. Two loops in Figure 1 provide opportunity for continual improvement of an SMS. The first is the usual comprising risk control maintenance providing feedback based on pre-planned monitoring and inspection activities. The other is the less frequent feedback loop, activated only when some kind of physical failure or injury occurs (an incident).

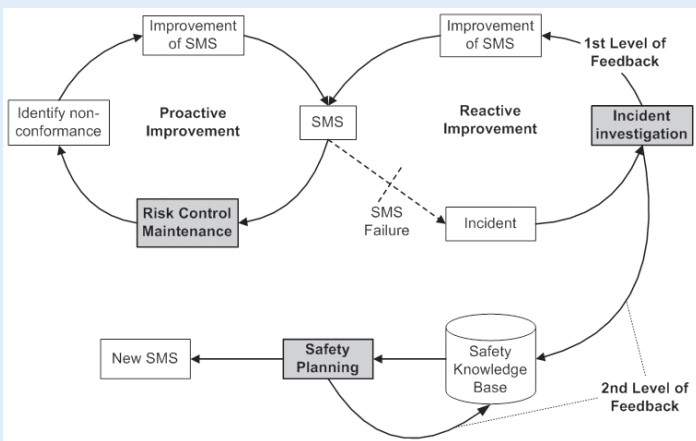


Figure 1 Feedback mechanisms to facilitate continual improvement

Due to the *ex post facto* nature of the information gathered during an investigation, incident investigation

information tends to be evidence-based. The knowledge that can be gleaned has tremendous value in facilitating improvement of the SMS of projects. To achieve this, the incident investigation system should be carefully planned so that it can facilitate feedback at two levels; firstly, feedback to the SMS that had failed causing the incident, and secondly, feedback to the safety planning of future projects (Figure 1).

The first level of feedback is within the same project and is more straightforward. The key is to ensure a thorough investigation that identifies the relevant SMS failures so that appropriate improvement to the SMS can be made.

The second level of feedback is not constrained within a single project and thus has the potential to improve safety in future projects. The challenge here is three fold: adequately represent the knowledge acquired in the incident investigation; retrieve the relevant safety knowledge from a knowledge base; and finally adapt and utilize the knowledge for safety planning of new projects. Safety planning relies heavily on the experience and competency of the safety planning team. The processes of identifying hazards, assigning appropriate level of risk and selecting the most efficient control, requires extensive field knowledge and experience. A valuable source of such experience resides in the investigation of past incidents and if it can be adequately exploited it can significantly augment the experience of the safety planning team. Another rich source of knowledge is the safety plans of past projects. Each safety plan contains possible hazards and proposed risk control measures that have been carefully considered so that if they can be stored in the safety knowledge base, they can be retrieved and adapted for future projects as well.

In a study by Henderson, most of the companies (across industries) view incident investigation as a stand alone process that is decoupled from risk management and other proactive measures. The study also shows a lack of computer-based system to manage incident investigation information. Consequently, companies as a whole are unable to carry out the two levels of feedback as proposed herein.

To achieve the two levels of feedback, a research in the National University of Singapore, Department of Civil Engineering, had developed a novel case-based reasoning (CBR) approach to risk assessment. CBR is a relatively new branch of AI, but in recent years there had been an increase adoption in CBR concepts. CBR has its root in psychological theory of human reasoning, which has the intuitive paradigm that humans solve new problems by recalling past experiences or cases. Referring to Figure 2, a CBR system (CBRS) has three key processes: (1) case representation and indexing, (2) retrieval of cases, and (3) case utilisation and adaptation. These have been articulated earlier as the challenge for the implementation the feedback process.

(...Con'td on pg10)

**(Footnotes)**

<sup>1</sup> Incidents refer to all unexpected events that cause or have the potential to cause losses. Accidents are incidents that resulted in physical harm to human beings.

# SPM 8<sup>th</sup> Annual General Meeting

Address of our President, Mr Chang Meng Teng at the AGM.

Fellow members of SPM,

My term as President has passed the half-way mark. What has been achieved by the SPM Council in the past 13 months? It appears little have been done. Despite this appearance the Council, with the assistance of many members, who volunteered to serve in the various Committees had committed many hours of their time and effort to grow the Society, which is still very small compared to other professional organizations in Singapore. To these members and the members who helped on an ad hoc basis, and the members in the Council, I would like to record a big personal thank you for your dedication and your support for the Society. As SPM is still a small and growing professional organization, we have to operate with a tight budget. Therefore, the active support in the activities of the SPM by more members is of paramount importance to the Society. Your support will definitely make a difference. On behalf of the Council and members of SPM, I would like to specially acknowledge Mr Khor Poh Hwa for his outstanding contribution and his continued support to allow SPM to use the facilities in CPG, and my special thanks to Carol of CPG in continuing to assist in the Secretariat of the SPM.

The activities of the SPM in the last year include:-

1. International linkage to promote learning and exchange of experiences and to establish accepted standards in the practice of the project management profession. SPM participated in:-
  - (i) The 17<sup>th</sup> World Congress On Project Management in Moscow, Russia from 4 – 6 June 2003.
  - (ii) Asia Pacific Federation Project Management Meeting and the Australia Institute of Project Management from 12 – 14 October 2003.
  - (iii) Global Performance Based Standards for Project Management Personnel Workshop from 16 – 18 October 2003 in Sydney, Australia.
  - (iv) The Third International Construction Project Management Summit Meeting from 15 – 18 May 2004. At this Summit Meeting, our member Mr Sim Wee Meng of LTA was awarded the Outstanding Project Manager of the Year.
  - (v) On 1 June 2004, we joined all member-organizations of CIJC to sign and renew the MOU to support C21 for another 3 years. SPM participated in the activities of

several C21 Committees and other Committees under the umbrella of BCA.


## 2. Member and Awareness of Project Management

We continue our effort to recruit new members. We have not had great success. We managed an increase of 15 new members in SPM in the last Council Year. Our Membership & Accreditation Committee has recommended to Council, the creation of a new grade of "ASSOCIATE" membership. The purpose of the "Associate" membership is to encourage practising professionals, particularly project managers to join the SPM so that the structured courses organized by SPM will help them to qualify for full voting membership within a year, so that they will be more effective as a project manager to contribute to better success of the projects they manage.

3. At our Council retreat, we had decided to concentrate our effort to forge closer relationship and collaboration with China and Australia because of the close similarity of their project management effort and the stage of development in project management. We believe the rapid development of the building construction industry in China could offer more business opportunities for our members.

4. The Professional Practice & Education Committee continued their popular lunch-talk series to share knowledge and experience. The last SPM Annual Seminar was held on 27 October 2003 and followed by our Annual Dinner. This year, the SPM Annual Seminar on Global Trend in Project Management is scheduled for 10 September 2004 to be followed by the SPM Annual Dinner on 11 September 2004. I hope members will actively help us to publicize and encourage participation by practising project managers.

5. In my considered opinion, the current structure of the works delivery in the value-chain of the building construction industry and the lack of acknowledgement and trust in the capability and value of the project managers in the project management profession, still remain the major obstacles to the acceptance of project management as a profession.

Notwithstanding this, the SPM will continue with its effort to upgrade our knowledge and experience to help evolve the generally accepted, fragmented building construction industry into one that is integrated to bring more benefits to the investors, professionals and the customer/end-users. 

(...Con'td from pg9 - Learning from Past Experiences)

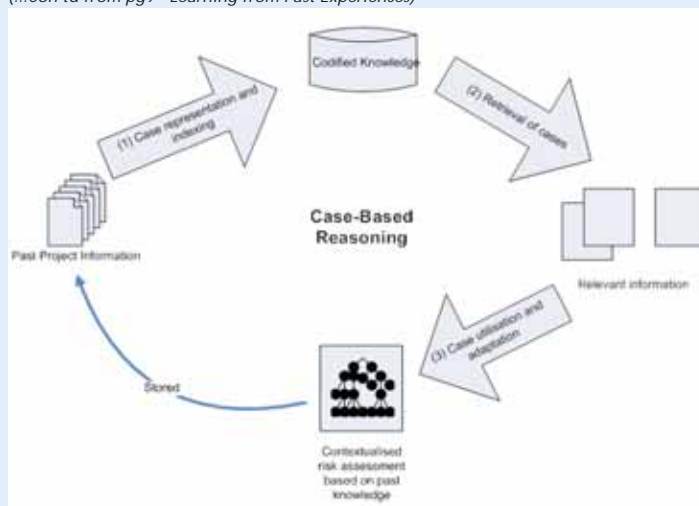



Figure 2 Case-based reasoning approach to risk assessment

The proposed CBR approach had been applied in a prototype system, known as the Safety Knowledge Management System (SKMS). It incorporates a generic incident causation model and a specific knowledge representation scheme for abstraction of safety knowledge (case representation and indexing). The retrieval process is based on an intelligence-based approach that automatically identifies and retrieves relevant knowledge. The retrieved knowledge is then adapted to increase its relevance in two stages: (a) hazard identification adaptation removing irrelevant portions of retrieved cases and integrating the relevant portions to form a complete risk assessment; and (b) risk analysis adaptation utilising a Poisson model of construction incident occurrence and Bayesian approach to integrate subjective and objective information to produce more realistic risk estimates. Risk contours of possible risk exposures can then be composed and appropriate resources and planning can be focused on the risk hazards identified. The CBR methodology is able to help companies produce risk assessments incorporating past project knowledge and hence facilitate continual improvement. 

## Innovative ideas from listening to the Customer

CapitaLand Commercial Project Management Pte Ltd (CCPM) has always taken the views and feedback of its customers as key ingredients in its rigorous ongoing process to constantly improve and innovate on its building design, layout and features. In recent years, a number of user-friendly and innovative features have been incorporated into the shopping malls that are designed or refurbished under the direction of CCPM.

### Electronic Payment and Carpark Guidance System

The electronic payment system was introduced in 2002 at Plaza Singapura, the first shopping mall and building in Singapore to be equipped with this system. This was subsequently installed a few months later in a number of other shopping malls such as Tampines Mall, Junction 8 and Funan The IT Mall. The system allows a seamless transition to and from the carpark without inconveniencing the motorist in having to wind down his side windows to make payments or to queue up at autopay stations. Inside, a carpark guidance system (which was also a pioneer feature for a shopping mall in Singapore at Plaza Singapura in 2003) helps motorists locate unoccupied carpark lots as well as to inform them of the number of available lots at each level and section so that they can navigate efficiently through the carpark.



Integrated Electronic Payment System with Carpark Parking Guidance system



Brightly lit carpark with parking guidance system to lead motorists to available lots

### Carpark lighting and safety

The lighting levels are designed to be above the minimum requirements in the building code of practice in response to shoppers' safety and experience. Brightly lit and colourful lift or escalator lobbies help shoppers locate it while the general carpark lighting is designed to make people feel safe and be able to orientate themselves. A recent survey on shoppers' feedback indicates that the overall public opinion of the malls, such as Tampines Mall, has significantly improved due to the upgrading works.



Carpark escalator and lift lobby with eye-catching graphics to help shoppers locate them

### User Friendly Toilets

In recognition of the design improvement, the toilet at Tampines Mall had been conferred the "5 Star Toilet" award by the Restroom Association of Singapore and presented by the Minister of Environment Mr Lim Swee Say, in 2003. Shopper-friendly features include a mothers' room for nursing or changing nappies and fitted with power points for electronic nursing pumps, facility for placing and hanging shopping bags at basin counter, open grill basin counter to avoid collection of water, energy-efficient hand dryers, children's urinal in female toilet, ventilation systems and cubicle design for smell control and air-conditioning for comfort and cleanliness. Improved lighting levels and open concept entrances (without main doors) add a sense of security while maintaining privacy when using the toilets. Additionally, lively graphics at the toilets entrances portray the character of each mall.



Lively family-themed graphics at a mothers' room in the upgraded toilets



Graphics at toilet entrances add to the character of the mall



Toilets with user-friendly basin counters equipped with hooks for shopping bags, and energy saving hand dryer

### Communal and Recreational spaces

New external landscape areas are being introduced at shopping malls which incorporate communal spaces, children's playground with interactive play equipment, recreation and entertainment facilities for shoppers. Special environmental control mechanical equipment are integrated with the lush landscape to create a comfortable outdoor temperature and ambience to encourage shoppers to enjoy themselves and stay longer at the mall. 🏡

*This page is sponsored by CapitaLand Commercial Project Management Pte Ltd (CCPM).*

Launch of Chow Kok Fong's

## The Law and Practice of Construction Contracts 3<sup>rd</sup> Edition

On 13<sup>th</sup> August 2004, the Attorney General, the Honourable Mr Chan Sek Keong launched a leading work on Construction Law by an alumnus, Mr Chow Kok Fong. The work is the third edition of the book, *Law and Practice of Construction Contracts*. The launch was organized jointly by the Singapore Academy of Law and the publisher, Sweet & Maxwell Asia. Held at the City Hall Chambers in City Hall, the launch was attended by 120 guests including several High Court Judges, Members of Parliament, the Solicitor General and Senior Counsel.



In his foreword to the book, Justice Chao Hick Tin, the Judge of Appeal of the Supreme Court of Singapore describes the work as "one of the most comprehensive in the field" and noted that the author has "immense experience with both contracting and development sides of the industry".

The President of the Law Society, Mr Philip Jeyaratnam, SC in his review of the book wrote:

*"This book provides a dependable and well-organised platform for acquiring or updating understanding of this important subject. It is generally comprehensive, so that its door-stopping weight is justified by its being a one-stop reference...This is a book of high ambition, and, in general, it achieves its aims – readable yet thorough, practical yet grounded in legal theory, compendious yet insightful."* ☒

### Join SPM

Readers who are interested to join the Society of Project Managers can access our website <http://www.sprojm.org.sg/> for more information on membership information and application. Enquiry email to [spojm@yahoo.com](mailto:spojm@yahoo.com).

### Membership Listing in BCA Catalogue

The SPM membership list will be published in the next issue of BCA Catalogue 2005. Look out for it!

### Readers' Feedback

"The articles are relevant and useful. However, I think the presentation needs to be improved. The small font, the overall wordy impression and not-so-attractive layout could be made more user-friendly and enticing to read"

Poon H.K.

"Am impressed with the depth and coverage of the topics presented such as the *PM Conference Down Under* by Bernard Ho, *Managing the Refurbishment of an Operating Shopping Mall* by Toh Kim Sai and *Alternative Dispute Resolution* by Goh Phai Cheng. My suggestions for improvement are : i) To give a theme to each issue for a sense of focus, ii) more case studies and lessons learnt, iii) create a forum for opinions and interactions for readers interested in the featured articles, iv) leave the contacts of writers for readers who wish to engage the writer further."

Jon S.

## Editor's Note...

Dear Readers and Members

Instead of the usual 8 pages, this is a bonanza issue with 12 pages containing very recent happenings of the Annual Seminar and Dinner. It also includes a research feature and an international conference article. Congratulations to Mr Chow Kok Fong, our Fellow and founding President, for the successful launch of his new book. We have also started a Readers' Forum where we will post your discussions on articles featured or industry related insights and matters. All these should make very interesting reading. You will also notice a bigger font and a more readable layout being used which should make your reading more comfortable, thanks to the feedback from some members.

To defray the printing costs, we have introduced a sponsor scheme. For only \$1500, the sponsor gets a page advertisement and for \$800, half a page. Altogether, 800 copies are printed for each issue and these are circulated to members and PM-related organizations including some overseas. Recently we have included larger consulting, contracting and project management companies in our distribution list. In this regard, we would like to specially thank *CapitalLand* for their sponsorship of this issue. They have contributed it in the form of an article featuring some interesting project experiences, and this form of advertisement is very much encouraged.

### SPM Associate Membership

The Society of Project Managers has opened a new category of membership – *Associate Membership*. Application is now open to construction industry professionals.

Admission requires Project Management or related work experience as follows:

	Academic Qualification of Applicant	Min. PEX Score* Required
A	No professional Degree	100
B	Degree in relevant discipline	50
C	Masters in Project Management	30

\* PEX Score – Will be assessed by the Assessment Panel based on the Professional Experience (PEX) of the applicant.

The following will apply for Associate Membership once an applicant is admitted:

- i. Entrance Fee of \$100
- ii. Annual Membership Subscription Fee of \$50

Associate members can enjoy special rates for attendance at talks and seminars and other events organized by SPM.

Do not wait! Fill out a Membership Application Form and the Record of Practical Experience Form immediately!

Application form is available in the SPM Website site: <http://www.sprojm.org.sg/> under "Membership Information".