

## COMPLETION REPORT

### [Research Summary]

#### **Subject of Research Project: Application and Effectiveness of Japanese Project Management Methods (P2M/KPM): A Field Study**

A critical review between the existing PMBOK and P2M/KPM was conducted. PMBOK is referred and studied as it is the most established and popular project management principles. A summarization on the comparative studies is shown in the table below.

	Scope	Managerial approach	Problem-solving methods
P2M/KPM	<ul style="list-style-type: none"> <li>-Handles programs and projects</li> <li>-Broader in scope</li> <li>-Evaluations based on the entire mission.</li> <li>-Collectivism</li> </ul>	<ul style="list-style-type: none"> <li>- Concurrent development and integration management</li> <li>-Lifelong employment and loyalty</li> <li>- Do not practice layoff system in conventional model</li> <li>-Partially adopts the layoff system</li> </ul>	<ul style="list-style-type: none"> <li>-Flexibility approach</li> <li>-Mission-oriented: Focus on not only clients' goals, but also how they are achieved, taking into account opinions and suggestions.</li> <li>-Ambiguous, uncertain</li> <li>-Decision making outcomes favor inter-human relations</li> </ul>
PMBOK	<ul style="list-style-type: none"> <li>-Deals mainly with project level</li> <li>-Narrower in scope.</li> <li>-Evaluations made on specific missions.</li> <li>-Individualism</li> </ul>	<ul style="list-style-type: none"> <li>- Phased development concept</li> <li>-Practice layoff system</li> </ul>	<ul style="list-style-type: none"> <li>- Fixed approach on schedule, cost and quality</li> <li>-Goal-oriented: Focus on delivering whatever is required by clients without considering other factors as long as the result is achieved.</li> <li>-Definiteness, clarity.</li> <li>- Decision making outcomes favor performance oriented and recognition of effort</li> </ul>

To identify the application and effectiveness of P2M/KPM from the view of Japanese organizations in Japan and Malaysia, interviews with project managers and questionnaire survey were conducted. Based on the findings through interviews with project managers, and research through literature review, a comprehensive questionnaire was designed. This questionnaire was proofread by the P2M founder, Professor Ohara, and also 2 other senior project managers (a Malaysian and a Japanese). With the random sampling method, a total of 700 over questionnaire forms were posted out via email, postal mail and self administrated online survey. 50 valid feedbacks from each country were analyzed with advanced statistical analysis using SPSS. The Cronbach's alpha coefficients for Malaysia and Japan were 0.92 and 0.87, respectively. Both values were much higher than the threshold value of 0.70, which indicates that the scale used for measuring the application is internally consistent and reliable. Alpha coefficient is used to describe the reliability of factors extracted from multi-point formatted questionnaire. The higher the score, the more reliable the generated scale is, and based on several studies, 0.7 is an acceptable reliability coefficient. The results of the cross-countries field study indicated that Japanese organizations both in Malaysia and Japan often apply P2M/KPM methods when managing their projects. Managing a project basically has four phases, namely initiating, design, progress and handover. All four phases showed a mean value range of 3.5 to 3.9 of the five-point Likert scale for both countries. The five-point Likert scale used in the questionnaire is defined as 1: never practice, 3: practice sometimes, and 5: very often/always practice. The mean value of both countries showed the highest in Phase 3 of implementation/progress, where factors such as teamwork, mutual trust, adapting to environmental changes, target management, concurrent engineering, innovation and *kaizen* ideology

were emphasized. In Malaysia, the top factor turned out to be emphasis on drawing up an action plan to realize targets, placing weightage on teamwork and achieving group goals. The least was practicing lay-offs. In Japan, the top factor also emphasizes on drawing up the action plan, followed by emphasis on teamwork. Practicing lay-offs came out last as well. This is quite common as Japanese organizations encourage loyalty. Both countries held unanimous perceptions on the rankings of these factors. To test whether there is any similar substantial agreement between Malaysia and Japan, a Spearman's rank correlation analysis was done. The correlation coefficient was 0.687 with a significance level of 0.000. With the correlation significant level at 0.05, we can conclude that there was a strong, positive correlation between Malaysia and Japan. This shows that both countries are applying P2M/KPM. Also, Mann-Whitney test was adopted to examine if there were any significant differences in the median values on the two countries. Results did not detect a large variation in the median values and the actual calculated *p*-value for most of the factors was more than the prescribed significance level of 0.05. This result has reinforced that both countries do not show a significant difference in their management perceptions. By applying the management methods, 26% and 30% respondents from Malaysia and Japan, respectively, showed a similar success rate of 80%. The study signifies that P2M/KPM is quite an effective method, and is practiced in Japanese organizations both in Malaysia and Japan.

#### **Publication of the Results of Research Project:**

Verbal Presentation (Date, Venue, Name of Conference, Title of Presentation, Presenter, etc.)

- (1) **Date** : July 5<sup>th</sup> -7<sup>th</sup>, 2011  
**Venue**: Kuala Lumpur, Malaysia  
**Name of Conference**: The 6<sup>th</sup> International Conference on Construction in the 21<sup>st</sup> Century (CITC-VI)  
Construction Challenges in the New Decade.  
**Title of Presentation**: Approach of Japanese Project Management; A comparison between PMBOK and P2M/KPM in construction industry.  
**Presenter**: Low Foon Siang
- (2) **Date** : July 1<sup>st</sup> -3<sup>rd</sup>, 2012  
**Venue**: Genting Highlands, Malaysia  
**Name of Conference**: The 8<sup>th</sup> International Conference on Asia Pacific Business Innovation and Technology Management.  
**Title of Presentation**: A comparative approach of Japanese Project Management in Construction, Manufacturing and IT Industries.  
**Presenter**: Low Foon Siang
- (3) **Date** : Nov 2<sup>nd</sup> -6<sup>th</sup>, 2012  
**Venue**: Kaohsiung, Taiwan  
**Name of Conference**: The 2<sup>nd</sup> International Conference on Engineering and Technology Innovation.  
**Title of Presentation**: A critical review into the evolution of Japanese Project Management: A Comparative Approach  
**Presenter**: Low Foon Siang

(4) **Date** : May 19<sup>th</sup>-20<sup>th</sup> , 2013 (In submission)

**Venue**: Copenhagen, Denmark

**Name of Conference**: The 3<sup>rd</sup> International Conference on Management and Service Science – ICMSS 2013

**Title of Presentation**: Identifying key features of the innovated Japanese Project Management: A critical review on its philosophy

**Presenter**: Low Foon Siang

Thesis (Name of Journal and its Date, Title and Author of Thesis, etc.)

(1) **Name of Journal**: Procedia Social and Behavioral Sciences (Scopus and ScienceDirect indexes)

**Date**: Accepted /In press

**Title**: A Comparative Approach of Japanese Project Management in Construction, Manufacturing and IT Industries.

**Author**: Low Foon Siang, Chong Heap Yih

(2) **Name of Journal**: Trends and Development in Management Studies

**Date**: In submission

**Title**: A review towards the new Japanese Project Management: P2M and KPM

**Author**: Low Foon Siang, Chong Heap Yih

- There are others in preparation.

Book (Publisher and Date of the Book, Title and Author of the Book, etc.)