

## 5. CONCLUSION AND RECOMMENDATION

### 5.1 Conclusion

The result of this study confirms the possibility of introducing the EVM in Sri Lankan construction industry for performance reporting and evaluation. Further, results highlight that the importance and necessity of Earn Value Management to enhance the efficiency and effectiveness of Sri Lankan construction industry. The literature review collected the basic facts regarding, what EVM is, Its' benefits and limitations, problems in implementation, causes for low applicability, effect of construction projects characteristics and finally the limitations of existing practice in use in Sri Lanka. The questionnaire survey mainly focus on the industry's perception on existing practices, usage of existing Practice and possibility of EVM implementation.

The conclusion of the research as follows,

- Earn Value Management is a globally accepted and well established integrated planning and control methodology that combines the measurement of cost, schedule and technical performance. It enables early detection of performance issues and allows corrective actions to be implemented in a timely manner.
- In Sri Lanka Time Schedule has become a common technique for representing the phases and activities of a project baseline, so they can be understood by a wide audience in the construction field.
- The effectiveness of the ICTAD document to the industry is high. The level of acceptance is significant; the responses show that 64% of respondents accept the Time Schedule as an effective tool and 37.3% submit it on-time for all projects to fulfil the ICTAD requirement. Further they make utilize of the Time Schedule by reviewing weekly or monthly to measure the performance.
- Sri Lankan construction industry doesn't have a proper understanding and knowledge about the use of Time Schedule and its limitations. The lack of

knowledge about the technique hinders the getting appropriate use of the technique. However, respondents believe effective performance measuring technique should not have these limitations.

- The results clearly indicate that the Time Schedule is well established within the Industry as a performance measuring technique. 61.5% use Time Schedule for all projects to evaluate the performance of the projects. In most projects there's a Planning Engineer to develop Time Schedule and MS Project software is widely use for this purpose.
- More than 60% of the respondents have at least knowledge about the concept of EVM. Further, 18.4% of the respondents have experience on EVM, this indicates EVM is practicing within the Industry up to certain extent.
- The majority of respondents believe the most important aspect of the EVM is, it helps projects to be completed within time and cost constraints compared to other benefits. Giving early warnings was selected as the second most important benefit and allows informed decision making and corrective actions was selected to the third place.
- The survey results illustrate that more than 80% of respondents believe Sri Lankan construction industry need EVM concept for effective and accurate performance management. The cost performance management is the primary concern of the Industry.
- The Industry's perception on possibility of EVM implementation is satisfactory. The respondents are confident on the capability of professionals in the process of implementing the practice. However, the financial availability to implement the EVM is uncertain at earlier stage. Availability of Critical Success Factors of the implementation of EVM is in a high rank. More than 65% of respondents agree that all four Critical Success Factors are available within the industry.

## 5.2 Recommendation

By this study it was found some areas need more attention in the process of introducing EVM as an ICTAD condition and in enhancing the industry's standard in performance management aspect.

- The construction industry has to pay more attention on performance management of projects. The knowledge about the tools and techniques use in this regard should be enhanced by training to get maximum use of the technique.
- The industry need more time to adjust to an advanced mechanism like EVM to get the real value of this technique.
- With the competitiveness of the construction industry, it will be difficult to make resource allocations for new practice like EVM which needs more resources for better implementation. However, by properly conveying the benefits of this method and giving proper understanding about the how the method works, will increase the use.

## 5.3 Further Research

In Sri Lankan context, this research can be further expanded into the following areas as well.

- Develop a practice standard to suit the Sri Lankan construction industry.
- Study the applicability with different project characteristics.

