

## APPLICATION of PROJECT MANAGEMENT MATURITY MODEL for CONSTRUCTION

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**ABSTRACT** : Construction company includes contractor desires to achieve maturity and excellence in project management. Unfortunately, few construction companies recognize that the timeframe to achieve excellence can be accelerated by performing strategic planning for project management. The simply use of project management, even for an extended period of time, does not necessarily lead to excellence. However, there are models that can be used to assist corporations in performing strategic planning for project management and achieving maturity and excellence in a reasonable period of time. One of the models is the Project Management Maturity Model (PM3). This paper is conducted to define the extent of maturity of the project management on contractors and to compare the maturity in project management of contractor working at Jakarta and Yogyakarta. The instruments used in this study adopted from Kerzner (2000) consisted of eight components of the body of knowledge with 80 questions developed by Project Management Institution (PMI). Questionnaires were distributed to project manager working in major contractors from Yogyakarta and Jakarta. Result shows that the project managers from Jakarta have better knowledge of project management than those from Yogyakarta. However, the highest score provided from the respondents is only half the maximum score. Finally, the paper also proposes the ways for achieving excellence in project management for contractors and further study.

**KEYWORDS:** Project Management Maturity Model (PM3), project management, strategic management, Indonesia.

### 1 INTRODUCTION

All companies desire to achieve maturity and excellence in project management. Unfortunately, not all companies recognize that the timeframe can be accelerated by performing strategic planning for project management. The simple use of project management, even for an extended period of time, does not necessarily lead to excellence. Instead, it can result in repetitive mistakes and, what's worse, learning from its own mistakes rather than from the mistakes of others.

Strategic planning for project management is unlike other forms of strategic planning in that it is most often performed at the middle-management, rather than executive-management. Executive level management is still involved, mostly in a supporting role, and provides finding together with employee release time for the effort. Executive involvement will not result in unwanted changes to the corporate culture (see Kerzner, 2001).

Organizations tend to perform strategic planning for new products and services by laying out a well-thought-out plan and then executing the plan precisely. Unfortunately, strategic planning for project management, if performed at all, is done by trial-by-fire basis. However, there are models that can be used to assist corporations in performing strategic planning for project management and achieving maturity and excellence in a reasonable period of time.

The foundation for achieving excellence in project management can best be described as the project management maturity model (PM3), which is comprised of five levels. The PM3 describes the project-related activities within key process areas that contribute to achieving a successful project outcome. In this study, we only discussed only first level or Level 1- Common Language. In this level, the organization recognizes the importance of project management and the need for a good understanding of the basic knowledge on project management and the accompanying language/terminology.

The objectives of this study are: 1) to analyzes the implementation of Project Management Maturity Model for contractors from both Jakarta and Yogyakarta; and 2) to compare the maturity of project management between the contractors both from Jakarta and Yogyakarta.

## 2 LITERATURE REVIEW

### 2.1 Definition of Project

Organizations perform work. Work generally involves either operations or project, although the two may overlap. Operations and projects share many characteristics, for example, they are:

1. Performed by people.
2. Constrained by limited resources.
3. Planned, executed, and controlled.

Projects are often implemented as a means of achieving an organization's strategic plans. Operations and projects differ primarily in that operations are ongoing and repetitive while projects are temporary and unique. A project can thus be defined in terms of distinctive characteristics-a project is a temporary endeavor undertaken to create a unique product or service. Temporary means that every project has a definitive beginning and a definitive end. The end is reached when the project's objectives have been achieved, or when it becomes clear that the project objectives will not or cannot be met, or the need for project no longer exists and the project is terminated. Unique means projects involve doing something that has not been done before. Progressive elaboration is a characteristic of projects that integrates the concept of temporary and unique. (See Kerzner, 2001)

Similar to Kerzner, Duncan (2000) defined that project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirement. Project management is accomplished through the use of processes such as: initiating, planning, executing, controlling, and closing. The project team manages the work of the projects and the work typically involves:

1. Competing demands for: scope, cost, time, risk and quality.
2. Stakeholders with differing needs and expectations.
3. Identified requirements.

The term project management is sometimes used to describe an organizational approach to the management of ongoing operations. This approach, more properly called management by project, treats many aspects of ongoing operations as project management techniques to them.

Kerzner developed the PM3 describing the project-related activities within key process areas that contribute to achieving a successful project outcome. The PM3 recognizes not only the project management activities being carried out at the individual project level, but also those activities within an organisation that provide focus and help sustain effort to build a project infrastructure of effective project approaches and management practices. In the absence of an organisation-wide project infrastructure, repeatable results depend entirely on the availability of specific individuals with a proven track record and this does not necessarily provide the basis for long-term project success and continuous improvement throughout the organisation. (Project Management Maturity Model, OGC Release Version 5.0, 2002)

### 2.2 Understanding Project Management

The Project Management areas describe project management knowledge and practice in terms of their component processes. These processes have been organized into nine knowledge areas, as follow: Project Integration Management; Project Scope Management; Project Time Management; Project Cost Management; Project Quality Management; Project Human Resource Management; Project Communications Management; Project Risk Management; and Project Procurement Management (see Duncan, 2000). In application of PM3 for service companies, Kerznars introduced 5 level model of the Project Management Maturity Model (PM3). Each level represents a different degree of maturity of the project management.

1. Level 1 - Common Language: the level in which the organization first recognizes the importance of project management.
2. Level 2 - Common Processes: organizations recognizes that common processes need to be defined and developed to achieve success in every projects.

3. Level 3 - Singular Methodology: organizations recognize the synergistic effect of combining all corporate methodologies into a singular methodology, which would make process control easier.
4. Level 4 - Benchmarking: the recognition that process improvement is necessary to maintain a competitive advantage.
5. Level 5 - Continuous Improvement: The organization evaluates the information obtained through benchmarking and must then decide whether or not this information will enhance the singular methodology.

Since the study only limited to level 1, the following explanation would be at the level only, others level can be obtained from Kerzner (2001). Natawijaya (2002) conducted a study in assessing of project management maturity on construction firms in the level 2. While Sugianto (2006) conducted a study in the topic of strategic planning using project management maturity model in all level (one to five) of a leading contractor at Jakarta, Indonesia. Interested readers to the topics can trace the references.

### **2.3 Project Management Maturity Model Level 1: Common Language.**

Level 1 is the level in which the organization first recognizes the importance of project management. The organization may have some knowledge of project management or simply no knowledge at all. There are certain characteristics of Level 1, as shown in Figure 2.2 (Kerzner, 2001)

1. If the organization is using project management at all, the use is sporadic. Both senior management and middle-level management provide meaningless or “lip service” support in the use of project management. Executive-level support is nonexistent.
2. There may exist small “pockets” of interest in project management, with most of the interest existing in the project-driven areas of the firm.
3. No attempt is made to recognize the benefits of project management. Managers are worried more about their own empires, power, and authority, and appear threatened by any new approach to management.
4. Decision making is based upon what is in the best interest of the decision-maker, either than the firm as a whole.
5. There exists no investment or support for project management training and education for fear that this new knowledge may alter the status quo.

In Level 1, project management is recognized, as in all companies but not fully supported. There is resistance to change and some companies never get beyond this level. The starting point to overcome the characteristics of Level 1 is a sound, basic knowledge of the principles of project management. Education is the “name of the game” to complete Level 1. Educational programs on project management cover the principles of project management, advantages (and disadvantage) of project management methodologies, and the basic language of project management.

## **3 METHODOLOGY**

### **3.1 Data Collection and Method**

The study was carried out using questionnaire distributing to project managers working on the projects at Yogyakarta and Jakarta. Yogyakarta represented local and Jakarta central business in Indonesia.

Instrument used in this study was adopted from questionnaire developed by Kerzner (2002). For Level 1 of the instrument, there are 80 questions, which is categorized to eight subcategories; Scope Management, Time Management, Cost Management, Human Resources Management, Procurement Management, Risk Management, Quality Management, and Communication Management.

A model is presented to define the maturity of project management which consists of five levels that had been discussed above. There are special grading systems in each level. And each level is interrelated.

### 3.2 Grading System

For Level 1, each question has only one answer and for each correct answer will obtain ten (10) point. The grading are explained below.

1. If the score is 60 or more points in each of the eight categories, then the respondent has a reasonable knowledge of the basic principles of project management.
2. If the score is 60 or more points in all but one or two categories, it's possible that the respondents still possess all the knowledge of basic principles.
3. If the score is less than 60 in any category, a deficiency exists.
4. If the score is less than 30 in any category, rigorous training programs on basic principles appear necessary. The respondent appears highly immature in project management.
5. A total score on all categories of 600 or more would indicate that the the respondent appears well positioned to begin work on Level 2 of the PM3.
6. If the total scores less than 600 points, there may exist pockets of project management.

In order to compare the maturity of project management between the contractors at Jakarta and Yogyakarta, Independent Sample T test was applied to distinguish if the maturity of project management of both contractors from the cities were significantly different. Points distribution in each category, and the distributed points in each category are shown in Table 3.1. While the answer key for the questionnaire is shown in Table 3.2.

Table 3.1 Points Distribution in Each Category

| Category                   | Number Distribution          | Points     |
|----------------------------|------------------------------|------------|
| Scope Management           | 1,16,21,27,32,38,41,45,41,68 | 100        |
| Time Management            | 2,17,24,31,33,48,51,58,63,71 | 100        |
| Cost Management            | 4,10,18,26,37,44,50,61,73,80 | 100        |
| Human Resources Management | 5,9,15,19,28,46,52,55,57,66  | 100        |
| Procurement Management     | 6,13,23,34,40,49,59,67,69,77 | 100        |
| Quality Management         | 8,12,22,36,43,54,62,68,74,78 | 100        |
| Risk Management            | 7,14,25,29,39,42,53,65,72,76 | 100        |
| Communication Management   | 3,11,20,30,35,56,64,70,75,79 | 100        |
| <b>TOTAL</b>               |                              | <b>800</b> |

Table 3.2 Answer Key for Questionnaire (Kerzner, 2001)

| No | Answer | No | Answer | No | Answer | No | Answer |
|----|--------|----|--------|----|--------|----|--------|
| 1  | A      | 21 | C      | 41 | D      | 61 | C      |
| 2  | A      | 22 | E      | 42 | A      | 62 | E      |
| 3  | B      | 23 | B      | 43 | B      | 63 | A      |
| 4  | A      | 24 | C      | 44 | A      | 64 | B      |
| 5  | D      | 25 | E      | 45 | C      | 65 | B      |
| 6  | A      | 26 | C      | 46 | D      | 66 | C      |
| 7  | B      | 27 | B      | 47 | D      | 67 | E      |
| 8  | D      | 28 | A      | 48 | D      | 68 | B      |
| 9  | A      | 29 | D      | 49 | B      | 69 | A      |
| 10 | E      | 30 | B      | 50 | A      | 70 | A      |
| 11 | D      | 31 | C      | 51 | B      | 71 | A      |
| 12 | A      | 32 | A      | 52 | B      | 72 | D      |
| 13 | A      | 33 | A      | 53 | C      | 73 | C      |
| 14 | A      | 34 | A      | 54 | E      | 74 | E      |
| 15 | C      | 35 | B      | 55 | A      | 75 | E      |
| 16 | C      | 36 | B      | 56 | B      | 76 | B      |
| 17 | C      | 37 | D      | 57 | B      | 77 | C      |
| 18 | A      | 38 | C      | 58 | B      | 78 | D      |
| 19 | A      | 39 | A      | 59 | A      | 79 | C      |
| 20 | C      | 40 | B      | 60 | D      | 80 | E      |

### 3.3 Statistical Calculation

By applying independent sample t-test using SPSS program, means value for each of eight categories (Table 3.1) between two samples, that is Jakarta and Yogyakarta were compared. Then by calculating the significance value, the data from those two samples can be determined if they have a difference.

## 4 DATA ANALYSIS

### 4.1 Respondent Characteristics

In this study, twenty seven project management were participated, and there were all Indonesian citizens as shown in Table 4.1. There are 20 respondents hold bachelor degree, four master degree, two diploma degree and one high school.

Table 4.1 Respondent's Educational Background

| <b>Educational Background</b> | <b>City</b> | <b>Frequency</b> | <b>Percentage (%)</b> |
|-------------------------------|-------------|------------------|-----------------------|
| High School                   | Jakarta     | 0                | 0                     |
|                               | Yogyakarta  | 1                | 3.7                   |
|                               | Total       | 1                | 3.7                   |
| Diploma (D3)                  | Jakarta     | 2                | 7.4                   |
|                               | Yogyakarta  | 0                | 0                     |
|                               | Total       | 2                | 7.4                   |
| Bachelor (S1)                 | Jakarta     | 13               | 48.2                  |
|                               | Yogyakarta  | 7                | 25.9                  |
|                               | Total       | 20               | 74.1                  |
| Master (S2)                   | Jakarta     | 1                | 3.7                   |
|                               | Yogyakarta  | 3                | 11.1                  |
|                               | Total       | 4                | 14.8                  |
| Grand Total                   |             | 27               | 100.0                 |

From 27 respondents, two respondents have less than 5 years working in construction industry, 4 respondents have been working in construction industry for 5-10 years, 18 respondents have been working in construction industry for 10-20 years and 3 respondents have more than 20 years working in the construction industry (see Table 4.2)

Table 4.2 Years in Construction Industry

| <b>Years in Construction Industry</b> | <b>City</b> | <b>Frequency</b> | <b>Percentage (%)</b> |
|---------------------------------------|-------------|------------------|-----------------------|
| < 5 Years                             | Jakarta     | 2                | 7.4                   |
|                                       | Yogyakarta  | 0                | 0                     |
|                                       | Total       | 2                | 7.4                   |
| 5-10 Years                            | Jakarta     | 1                | 3.7                   |
|                                       | Yogyakarta  | 3                | 11.1                  |
|                                       | Total       | 4                | 14.8                  |
| 10-15 Years                           | Jakarta     | 15               | 55.6                  |
|                                       | Yogyakarta  | 3                | 11.1                  |
|                                       | Total       | 18               | 66.7                  |
| >20 Years                             | Jakarta     | 0                | 0                     |
|                                       | Yogyakarta  | 3                | 11.1                  |
|                                       | Total       | 3                | 11.1                  |
| Grand Total                           |             | 27               | 100.0                 |

The experience of respondents is shown also by the number of projects that have been performed. There are 3 respondents have done less than 2 projects, 13 respondents have experience with 2-5 projects, 7 respondents have experience with 5-10 projects and 4 respondents have experience more than 10 projects.

Table 4.3 Number of the Projects

| Number of Projects | City       | Frequency | Percentage (%) |
|--------------------|------------|-----------|----------------|
| < 2 Projects       | Jakarta    | 3         | 11.1           |
|                    | Yogyakarta | 0         | 0              |
|                    | Total      | 3         | 11.1           |
| 2-5 Projects       | Jakarta    | 9         | 33.4           |
|                    | Yogyakarta | 4         | 14.8           |
|                    | Total      | 13        | 48.2           |
| 5-10 Projects      | Jakarta    | 4         | 14.8           |
|                    | Yogyakarta | 3         | 11.1           |
|                    | Total      | 7         | 25.9           |
| >10 Projects       | Jakarta    | 0         | 0              |
|                    | Yogyakarta | 4         | 14.8           |
|                    | Total      | 4         | 14.8           |
| Grand Total        |            | 27        | 100.0          |

#### 4.2 The Extend of Maturity of the Project Management in Jakarta and Yogyakarta

In this study, there were 16 respondents representing the Jakarta construction. Data which has been collected can be seen in Table 4.4. In the table, it shows that the score of each respondent in each category of project management aspects and explained as followed.

Table 4.4 Scores of Jakarta's Respondent.

| Respondent number | Score in each category |     |       |       |       |       |      |       | Total scores |
|-------------------|------------------------|-----|-------|-------|-------|-------|------|-------|--------------|
|                   | A                      | B   | C     | D     | E     | F     | G    | H     |              |
| 1                 | 50                     | 30  | 20    | 50    | 40    | 60    | 40   | 40    | 330          |
| 2                 | 50                     | 40  | 40    | 50    | 60    | 60    | 30   | 40    | 370          |
| 3                 | 50                     | 50  | 40    | 60    | 50    | 40    | 30   | 30    | 350          |
| 4                 | 60                     | 50  | 20    | 70    | 40    | 50    | 40   | 30    | 360          |
| 5                 | 40                     | 60  | 10    | 50    | 30    | 40    | 50   | 40    | 320          |
| 6                 | 40                     | 60  | 40    | 50    | 20    | 40    | 20   | 30    | 300          |
| 7                 | 40                     | 60  | 60    | 50    | 50    | 60    | 40   | 40    | 400          |
| 8                 | 30                     | 60  | 50    | 40    | 50    | 50    | 50   | 20    | 340          |
| 9                 | 60                     | 60  | 10    | 50    | 40    | 50    | 20   | 40    | 340          |
| 10                | 30                     | 50  | 50    | 50    | 40    | 40    | 30   | 50    | 340          |
| 11                | 20                     | 60  | 30    | 70    | 50    | 50    | 40   | 40    | 360          |
| 12                | 60                     | 40  | 50    | 50    | 50    | 50    | 50   | 30    | 380          |
| 13                | 70                     | 30  | 40    | 10    | 40    | 40    | 30   | 30    | 290          |
| 14                | 50                     | 50  | 30    | 40    | 40    | 60    | 60   | 40    | 370          |
| 15                | 60                     | 50  | 30    | 50    | 30    | 70    | 30   | 30    | 350          |
| 16                | 50                     | 50  | 20    | 40    | 30    | 50    | 40   | 20    | 300          |
| Sum               | 760                    | 800 | 540   | 780   | 660   | 810   | 600  | 550   | 5500         |
| Mean              | 47,5                   | 50  | 33,75 | 48,75 | 41,25 | 50,63 | 37,5 | 34,38 | 343,75       |

Legend: A = Scope Management, B = Time Management, C = Cost Management, D = Human Resources Management, E = Procurement Management, F = Quality Management, G = Risk Management, dan H = Communication Management.

Since the score does not exceed 60 or more points in each of the eight categories, then all of the respondents haven't a reasonable knowledge of the basic principles of project management, in fact only one respondent (respondent no.7) whom had scored 60 points or more in three categories, they are time management, scope management and quality management. Respondent no.13 and 16 seem to have deficiency in basic knowledge of project management, since they never get a total score more than 300. All of the respondents do not appear well positioned to begin work on Level 2 of the PM3 and there may exist pockets of project management, since the total scores for each respondent for all categories less than 600 points.

There are 11 respondents representing the Yogyakarta construction. Data for each respondent which has been collected can be seen in Table 4.5. In the table, the score of each respondent in each category of project management aspects is explained as followed.

Since the score does not exceed 60 or more points in each of the eight categories, then all of the respondents haven't a reasonable knowledge of the basic principles of project management. In fact not a single respondent whom had scored 60 points or more in any categories. All the respondent seem to have a deficiency in basic knowledge of project management, since they failed to score more than 60 points in any category at all. Generally, the entire respondent needs to have a rigorous training program on basic principle and they appear highly immature in project management. All of the respondents don't appear well positioned to begin work on Level 2 of the PM3 and there may exist pockets of project management, since the total scores for each respondent for all categories less than 600 points.

Table 4.5 Scores of Yogyakarta's Respondent.

| Respondent number | Score in each category |       |       |       |       |       |       |       | Total scores |
|-------------------|------------------------|-------|-------|-------|-------|-------|-------|-------|--------------|
|                   | A                      | B     | C     | D     | E     | F     | G     | H     |              |
| 1                 | 20                     | 10    | 10    | 30    | 10    | 0     | 10    | 20    | 110          |
| 2                 | 30                     | 50    | 10    | 50    | 30    | 20    | 20    | 20    | 230          |
| 3                 | 40                     | 0     | 10    | 10    | 20    | 40    | 0     | 10    | 130          |
| 4                 | 20                     | 20    | 20    | 10    | 30    | 20    | 20    | 10    | 150          |
| 5                 | 20                     | 20    | 30    | 30    | 10    | 10    | 0     | 20    | 140          |
| 6                 | 10                     | 40    | 20    | 40    | 40    | 20    | 30    | 40    | 240          |
| 7                 | 20                     | 30    | 30    | 20    | 20    | 20    | 0     | 30    | 170          |
| 8                 | 60                     | 10    | 30    | 30    | 20    | 10    | 20    | 40    | 220          |
| 9                 | 20                     | 0     | 30    | 40    | 20    | 10    | 30    | 10    | 160          |
| 10                | 10                     | 30    | 30    | 30    | 40    | 0     | 20    | 20    | 150          |
| 11                | 30                     | 20    | 30    | 30    | 30    | 20    | 20    | 10    | 190          |
| <b>Sum</b>        | 280                    | 230   | 250   | 320   | 270   | 170   | 170   | 230   | 1890         |
| <b>Mean</b>       | 25,45                  | 20,91 | 22,73 | 29,09 | 24,55 | 15,45 | 15,45 | 20,91 | 171,82       |

Legend: A = Scope Management, B = Time Management, C = Cost Management, D = Human Resources Management, E = Procurement Management, F = Quality Management, G = Risk Management, dan H = Communication Management.

#### 4.3 The Comparison Between Contractor at Jakarta and Yogyakarta

In this section we shall compare the result of the project management maturity model questionnaire, by applying t distribution method. Using Independent Samples T test, the result is shown in Table 4.6. The table displays the number of cases, mean value, standard deviation, for the test variable(s) within categories defined by the grouping variable. The mean values for the two groups are displayed in the Group.

In Table 4.6, it shows that the statistical test of different between the mean value (score) of each category. The significant value for the t test (typically less than 0.05) indicates that there is a significant different between the two group means. Since the significant value of t test for all the categories tested are less than 0.005, then we can conclude that all the data are normal and that there is a significant difference between two groups (Jakarta and Yogyakarta construction industry). Looking at mean value (See Table 4.6), Jakarta has bigger mean value than Yogyakarta, in each category. Hence the difference is that Jakarta construction industry seems to have a better understanding and reasonable knowledge of Project Management than those from the Yogyakarta construction industry. In other words, Jakarta construction industry recognized the importance of project management earlier than those from Yogyakarta. In this case the understanding of Project Management Level 1, which is Common Language with certain characteristics as mention previously. But they are not fully supported. There is resistance to change and some companies never get beyond this level. The necessary points on how to overcome the resistance and roadblocks to the completion of Level 1 and advancement to the next level was discussed in Prasoj (2005).

Table 4.6 The Eight Groups Statistics for t test

| Category | City       | N  | Mean  | Std. Deviation | Prob  |
|----------|------------|----|-------|----------------|-------|
| A        | Jakarta    | 16 | 47,5  | 12,58          | 0.000 |
|          | Yogyakarta | 11 | 25,45 | 14,4           |       |
| B        | Jakarta    | 16 | 50    | 10,33          | 0.000 |
|          | Yogyakarta | 11 | 20,91 | 15,78          |       |
| C        | Jakarta    | 16 | 33,75 | 15             | 0,039 |
|          | Yogyakarta | 11 | 22,73 | 9,05           |       |
| D        | Jakarta    | 16 | 48,75 | 13,6           | 0,001 |
|          | Yogyakarta | 11 | 29,09 | 12,21          |       |
| E        | Jakarta    | 16 | 41,25 | 10,25          | 0.000 |
|          | Yogyakarta | 11 | 24,55 | 10,36          |       |
| F        | Jakarta    | 16 | 50,63 | 9,29           | 0,000 |
|          | Yogyakarta | 11 | 15,45 | 11,28          |       |
| G        | Jakarta    | 16 | 37,5  | 11,25          | 0,000 |
|          | Yogyakarta | 11 | 15,45 | 11,28          |       |
| H        | Jakarta    | 16 | 34,38 | 8,14           | 0,001 |
|          | Yogyakarta | 11 | 20,91 | 11,36          |       |

Legend: A = Scope Management, B = Time Management, C = Cost Management, D = Human Resources Management, E = Procurement Management, F = Quality Management, G = Risk Management, dan H = Communication Management.

## 5 CONCLUSIONS AND SUGGESTIONS

### 5.1 Conclusions

Both Jakarta and Yogyakarta construction industry do not possess reasonable knowledge of the basic principles of project management (PM3 Level 1), implicating that both of them deficient in basic knowledge of project management. Thus they do not appear in well positioned to begin work on Level 2 of the PM3. Neither project manager from Jakarta or Yogyakarta has scored 600 points in all eight categories of project management (See Table 4.4 and 4.5)

On Table 4.6, we can see that Jakarta's respondent has higher score of mean value than the Yogyakarta's respondent. It indicates that Jakarta construction seems to have a better understanding and reasonable knowledge of Project Management than the Yogyakarta construction. In other words, Jakarta construction had better in recognizing the importance of project management, in this case the understanding of Project Management Level 1.

### 5.2 Suggestions

There are five key actions suggested for organization to complete Level 1 and advance to Level 2. They are:

1. Arrange for initial training and education in project management.
2. Encourage the training (or hiring) of certified project management professionals (PMPs).
3. Encourage employees to begin communicating in common project management language.
4. Recognize available project management tools.
5. Develop an understanding of the principles of project management body of knowledge (PMBOK).



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