THE APPLICATION OF EARNED VALUE MANAGEMENT IN EVENT
PROJECT MANAGEMENT INDUSTRY

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ABSTRACT

This thesis is aimed to study on the application of earned value management in event project management industry. Earned value management is commonly exercised to monitor and coordinate the status of a project and forecast the future performance through the presentation of cost and time. The objectives of the study are, to identify the implementation level of earned value management in event project management industry and to determine the factors that manipulating the implementation of the earned value management in event project management industry. The method being used to collect the data is through the distribution of questionnaires to the targeted respondents. Based on feedbacks from the respondents, they had agreed that the application of earned value management did enhance the project performance. The implementation level of earned value management practice in project environment is positioned in a moderate level. The future researcher is advised to carry out more study on scenario of application of earned value management in event project management industry in order to produce more supportive and adequate journals or academic articles for the study on earned value management performance of project. The diversification of earned value management application in project management could be endorsed and published if the future researcher takes initiative to conduct and carry out more related studies.

ABSTRAK

Tesis ini adalah bertujuan untuk mengkaji atas pengunna Pengurusan Nilai Diperolehi dalam industri pengurusan projek acara. Teknik ini biasanya dilaksanakan bagi memantau dan menyelaras status projek dan meramal prestasi masa hadapan melalui pembentangan kos dan masa. Objektif kajian ini adalah untuk mengenal pastikan tahap pelaksanaan Pengurusan Nilai Diperolehi dalam pengurusan projek acara dan juga untuk menentukan faktor-faktor yang memanipulasi Pengurusan Nilai Diperolehi dalam pengurusan projek acara. Teknik yang digunakan untuk mengumpul data adalah melalui pengedaran borang soal selidik kepada responden yang disasarkan. Berdasarkan maklum balas daripada responden, mereka bersetuju bahawa aplikasi pengurusan nilai diperolehi telah meningkatkan prestasi projek. Di samping itu, tahap pelaksanaan amalan pengurusan nilai diperolehi dalam persekitaran projek diletakkan di tahap yang sederhana. Para penyelidik masa depan dinasihatkan untuk menjalankan kajian lanjut mengenai senario aplikasi pengurusan nilai diperolehi dalam pengurusan projek acara. Tujuan demikian adalah untuk menghasilkan jurnal atau artikel akademik yang lebih untuk menyokongkan dan mencukupi untuk kajian dalam prestasi Pengurusan Nilai Diperolehi. Kepelbagaian memperoleh aplikasi pengurusan nilai dalam pengurusan projek boleh diendorskan dan diterbitkan jika penyelidik akan datang mengambil inisiatif untuk menlaksanakan dan menjalankan kajian yang lebih berkaitan.

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α-value   Cronbach's Alpha coefficient value

CHAPTER 1

INTRODUCTION

1.1   INTRODUCTION

This research is aimed to study on the application of earned value management in event project management industry. This chapter generally introduces and emphasizes on the general idea of this study along with the background of the study, problem statements, research objectives, research questions, the scope of the study, and significance of the study, expected results, and limitation of the study.

1.2   BACKGROUND OF STUDY

PMBOK Guide 5th Edition (2013) defined project is as a temporary endeavour undertaken to create a unique product, service or result. The temporary nature of projects indicates that a project has a definite beginning and end. The end is reached when the project's objectives have been accomplished or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists.

According to Oxford English Dictionaries (2007), an event is an occurrence happening at a determinable time and place, with or without the participation of human

agents. Events can be described and managed in more or less generic development phases, often starting with idea generation, research and a feasibility study, continuing with design, conceptualisation, development, planning, production, and finishing with delegation, follow-up and evaluation.

Event management is one of the forms of project management to the creation and development of festival, conferences, exhibition, and etc. Event project is similar like general project. As derived from project management, the event management generally comprised the project life cycle as well. According to the PMBOK Guide 5th Edition (Project Management Institute, 2013), the project life cycle included the series of phases that a project passes through from its initiation to its closure.
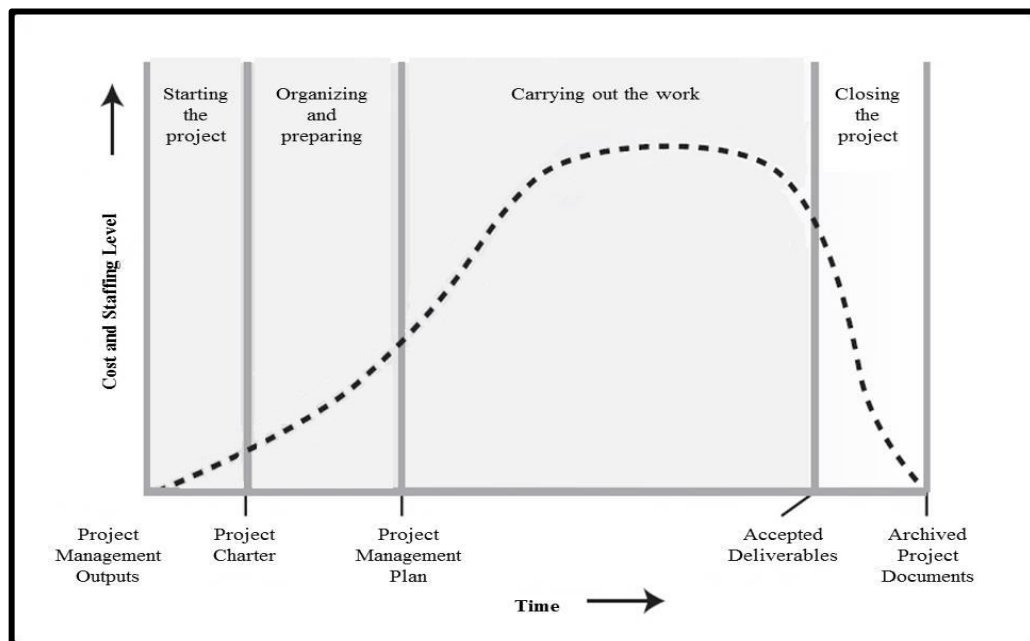
Figure 1.1: Project life cycle

Adapted from: Project Management Institute (2013)

According to statistical data from the Ministry of Tourism and Culture Malaysia (2013), contribution from events in the revenue of the nations is getting more and more significance compared to decades before. Due to the potential of generating wealth for the nations, the government of Malaysia is now allocating efforts in building up various events in Malaysia such as Kuala Lumpur International Motors Show and Putrajaya International Hot Air Balloon Fiesta (Economic Planning Unit, 2010).

Earned Value Management is a project management technique used to track the progress and status of a project and forecast the likely future performance of the project. It integrates the scope, schedule and cost of a project (Project Management Institute, 2011). Earned value management technique can be used to show past performance of the project, the current performance of the project and predict the future performance of the project by use of statistical techniques.

Taylor (2007) found that the adoption and application of earned value management in an event project will enhance the probability of success. By applying earned value management in the event project, the project manager is able to examine the past performance of the project and predict the future performance of the project by use of statistical techniques. PMBOK Guide 5th Edition (2013) stated that earned value management is also capable of providing early warning signs to the project manager on the performance of an event project either it is in optimum level or pessimistic circumstances.

In conclusion, earned value management is one of the effective project management applications which aid the project manager in managing the project. By applying earned value management in the project, the project manager is able to manage the project in the maximum level of effectiveness and efficiencies (Patil et al., 2012). The applications of earned value management provide efficient techniques, schedule variances and cost variances, allowed the project manager to forecast the project's trend as well as the performance of the project.

1.3   PROBLEM STATEMENT

Nowadays, various tools and techniques of project management were widely adopted and applied in managing projects by various industries around the world. One of the popular techniques of project management is Earned Value Management. This technique is commonly exercised to monitor and coordinate the status of a project and forecast the future performance, both in terms of time and cost (Vandevoorde and Vanhoucke, 2006). Implementing the earned value management in a project will enhance the project performance in both costing and duration aspects (Taylor, 2007).

There are plenty of definitions about what is an event management by various scholars from different events in the industry. Among the available definitions, Solaris (2007) defined that event management is the co-ordination, running and planning of all the people, teams and features that come together to create every kind of event. Goetz and Dennis (2004) described that event management can be understood as three main actions: the event initiation, the population administration, and the population/event management. An event could be divided into phases in order for the ease of management and oversee by the manager.

As the sum up, the event management comprised initiation, planning and executing. The initiation may involve but no limit to the activities such as event registration, event classification, content preparation, and identification of the anticipated action. Besides that, planning in an event management involved the determination of a population to the message and provisioning where the information, access, and functionality needed will be provided in order to initiate a resolution of the event. Lastly, the execution can involve messaging, workflow, event management, and analysis processes.

Event Business Academy (2011) stated that even in times of economic recession, the management of the event remains invaluable to companies as an assured way to build up the brand reputation, drive the consumer confidence and give people

experiences to be remembered. Both Solaris and Event Business Academy agreed that the event management is a fast-paced, varied, and highly employable field. Generally, based on the definitions by the scholars, the event management could be defined as a set of principles and practices of planning, managing and staging events in the perspectives of staging, logistics, marketing, human resource management, control and budgeting, risk management, impacts, evaluation and reporting.

According to the study by Taylor (2007), the implementation of earned value management will enhance the project performance where the goals will be achieved. This is because earned value management shows past performance of the project, the current performance of the project and predict the future performance of the project by use of statistical techniques (Gray and Larson, 2008). According to Project Management Institute (2011), when properly applied, earned value management provides an early warning of performance problems. With the right mitigation plan and action on the issues and problems by the project managers, the overall project performance would be greatly enhanced.

Based on the findings by Taylor (2007) and Gray and Larson (2008) concerning the implementation of earned value management, their research concluded that earned value management actually played significant roles in enhancing the performance of a project. This study attempts to research about the implementation level of earned value management in event management industry. By doing this, the current implementation level of earned value management in the event management industry within the federal territories of Malaysia could be identified. Besides that, this study also will determine the factors that manipulating the implementation level of the earned value management in the project performance of the event project.

1.4   RESEARCH OBJECTIVE

The objectives of this research were study about the event stage of projects. The objectives of this study are:

1:     To identify the implementation level of earned value management in event project management industry

2:     To determine the factors that manipulating the implementation of the earned value management in event project management industry

1.5   RESEARCH QUESTION

The research question of this study is as follows:

1:     What is the current implementation level of earned value management and its effect toward the project performance in event project?

2:     What are the primary factors that manipulating the implementation of earned value management in event project?

1.6   SCOPE OF STUDY

The scope of this research is emphasis on the implementation level of earned value management in event project. After identified the implementation level, the next step is to determine the primary factors that manipulating the implementation of earned value management in event project. Hence, the scope of the study focused on Event Project Management organizations in Kuala Lumpur, Malaysia. The respondent which

will involve in this study will be made up by a group of event project managers from various event project management organizations.

1.7   SIGNIFICANCE OF STUDY

One of the significances of this study is to determine the contribution of earned value management in event project management industry. In order to increase the usability of earned value management in event project management industry, the event project manager shall first understand about the effectiveness and efficiency of earned value management in event project management industry. This study will provide the overview of the effectiveness of the application of earned value management in event project management industry.

Besides that, by determining the primary factors that manipulating the implementation of earned value management in event project, it is able to aid the event manager to realize about the focus point on which to tackle the issue with an appropriate solution. The application of earned value management in event project management industry will enhance the performance of the project. Therefore, the acceptance of the project by the project client can be greatly improved.

This study also provides the future researcher a source of reference. This study may provide some related useful information and data, especially in the research regarding the relationship between earned value management and project performance for the interested parties for their study.

1.8   EXPECTED RESULTS

This study expected to provide a sufficient insight into the current implementation level of earned value management in event project management

industry. Besides that, the primary factors that manipulating the implementation of earned value management in event project also will be expected from this study. The assessment of this study will be done through a survey of groups of participants from event project management industry.

1.9   SUMMARY

This chapter broadly described about the procedures to conduct this study. The purpose of this study is to study on the application of earned value management event project management industry. The objectives of the study will be the elements for the entire study.

CHAPTER 2

LITERATURE REVIEWS

2.1   INTRODUCTION

This chapter consists of the review of the previous literatures that related to this proposed study. The topics being discussed are the variables involved in the study, which are earned value, earned value management, event management industry, project performance, and the relationship between these elements.

2.2   EARNED VALUE MANAGEMENT

Base of the survey from the Deltek (2008), most of the project manager or financial analyst agreed that the expenditure is not an accurate assessment of the amount of the completed works or tasks. Thus, a common techniques and tools which are looking at the completed percentage of a project have been implemented in the event management industry.

PMBOK Guide 5th Edition (2011) defined that earned value management is a methodology that combines scope, schedule, and resource measurements to assess project performance and progress. It is a commonly used method of performance measurement of projects. It integrates the scope baseline with the cost baseline, along with the schedule baseline, to form the performance baseline, which helps the project management team assess and measure project performance and progress. The following table, Table 2.1 shown the earned value management progress timelines:

Table 2.1: Earned value management progress timeline

Year	Event
1967	Cost / Schedule Control System Criteria (C / SCSC) introduced by the U.S. Department of Defence (DOD)
1972	First C / SCSC Joint Implementation Guide issued to ensure consistency among military departments
1991	DOD Instruction 5000.2 – Defence Acquisition Management Policies and Procedures issued reaffirming the use of earned value management
1996	DODR 5000.2 R – Mandatory Procedures for Major Defence Acquisition Program and Major Automated Information System Acquisition Programs issued. Draft industry guidelines accepted by Under Secretary of Defence and C / SCSC revised from 35 to 32 criteria
1998	America National Standard Institute / Electronic Industries Alliance published industry guidelines for earned value management Systems (EVMS; ANSI / EIA – 748-98 for)
1999	Under Secretary of Defence adopts ANSI / EIA – 748-98 for DOD acquisition
2000	Simplified earned value management Terminology, published by Project Management Institute
2005	*Practice Standard for Earned Value Management* published by the Project Management Institute

Source: Young and Anbari, F, T (2010)

The invention history of earned value management is unidentified as there are no one official proofs or records about it. The earliest record in the history is around 1967.

During that year, the U.S. federal government introduced earned value management as an integral part of the Cost/Schedule Control System Criteria (C/SCSC).

The purpose of introducing earned value management is to understand the financial aspects of the project and as a methodology to measure the real cost performance. The manager could anticipate and foreseen the future project performance by analysis current financial status. By comparing the current and upcoming performance, the manager is able to evaluate the needs of change and alteration on resources. With the aids from earned value management, the manager would be able to employ the right resolution to overcome the issue which may distract the performance of a project.

2.2.1   DEFINITION OF EARNED VALUE

Earned Value is the value of performed work. It expressed in term of the given budget which has assigned to that work for a schedule activity or work breakdown structure component (Project Management Institute, 2011). Or in simple, earned value is described as the calculation of completion of a project. It is also referred to as the budgeted cost of work performed (BCWP). Earned value is the foundation of earned value management which evaluate accomplished work (Deltek, 2008). It is the work actually implemented in terms of the budget for the project.

Earned value can be measured by predefined earning used, which is used Planned Value (PV) and Actual Cost (AC) of a project. It is an essential element in predicting successful delivery. The strength of earned value management enables to predict the cost and time to delivery project rather than other tools which aim to improve on how effectively to deliver the project.
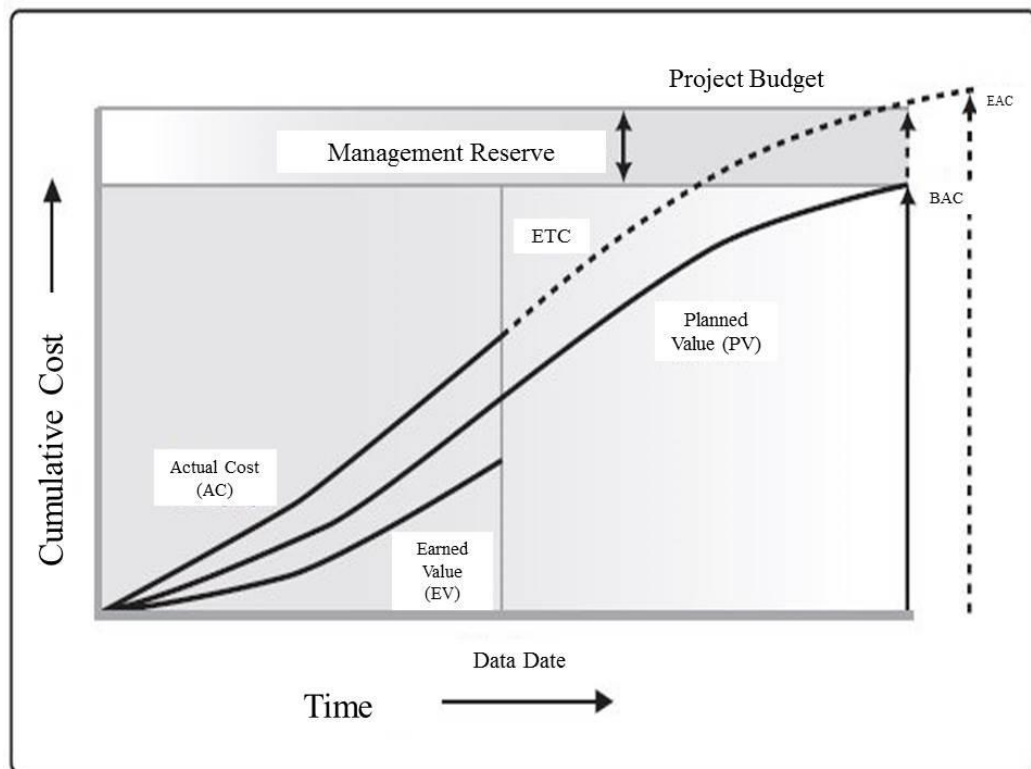
Figure 2.1: Earned value, planned value, and actual costs

Adapted from: Project Management Institute (2013)

2.2.2 DEFINITION OF EARNED VALUE MANAGEMENT

Earned value management has proven itself to be one of the most effective performance measurement and feedback tools for managing projects (Mosaic, 2013). Timely and targeted feedback can enable project managers to identify problems early and make appropriate decision making in adjustments that can keep a project on time and within the assigned budget. However, the unit of the value does not have to be in monetary form, working hours or any other convenient metric maybe used.

PMBOK Guide 5th Edition (2013) defines earned value management as a project management methodology for integrating scope, schedule, and resources, and for objectively measuring project performance and progress. The project performance and progress could be anticipated and foreseen by comparing the current indexes with the

predefined indexes of the project. The project performance is measured by determining the budgeted cost of work performed (BCWP) and comparing it to the actual cost of work performed (ACWP). The indexes that used as the calculation elements may include but not limit to project budget, project schedule, and assigned resources. Based on the definition by Project Management Institute (2013), the baselines of earned value management are scope, schedule, and resources.

Deltek (2008) stated that Earned Value Management is a significant project management methodology for measuring financial and project performance. Financial aspect is one of the significances factor to the project. Over budget tends to terminate the project from accomplish the desired goals. If the project is under expected performance, the completion date might be affected. If the project manager attempts to narrow down the gaps, additional resources might require which caused the increase in cost and budget of the project. Nowadays, earned value management is a necessary in various business environments such as event management industry. This is because there is a needed to determine the project performance and plan for future performance trends.

2.3   PROJECT-BASED ORGANIZATION

Kodama (2007) defined that a project-based organization incorporates the meaning of an organizational structure specially formed for a temporary period to enable a project-based organization execute a specific task. Project-based organizations often undertake several projects simultaneously. The typical example is a consulting firm. It is an organization to identify is permanent, but its mode if production is dominated by projects (Rasli, 2005).

Project-based organization had received rising interest in recent years as an emerging organizational form to integrate diverse and specialized intellectual resources and expertise to accomplish specific tasks and to increase flexibility (Verteramo and Carolis, 2009). The objective of the organization is to generate results in response to specific client demands by structuring projects around temporary assemblies of either

in-house or outsourcing, or in a hybrid way, specialist staffs and executing business within a fixed time limit. Figure 2.2 presents the projectized organization
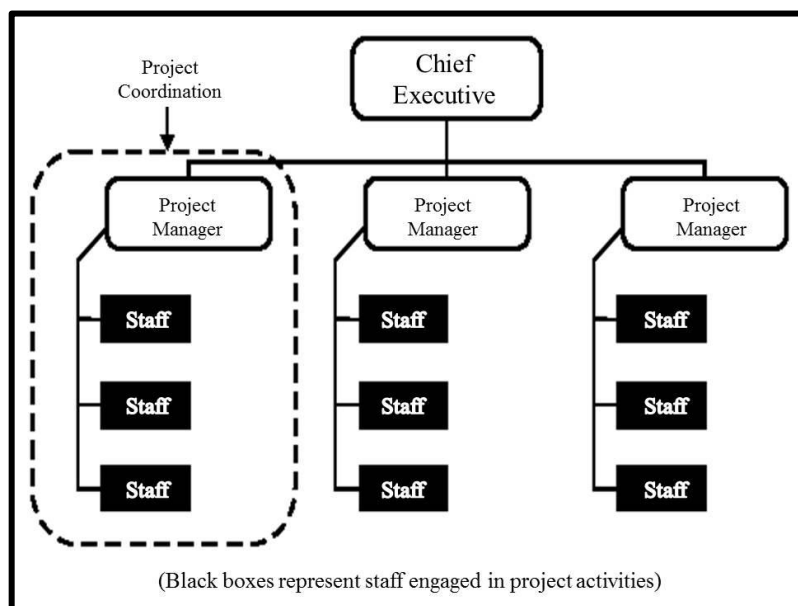

Figure 2.1: The projectized organization

Adapted from: Project Management Institute (2013)

2.4 EVENT MANAGEMENT ORGANIZATION

Event management organization is one of the project-based organizations (Rasli, 2005). The objective of the organization is to accomplish defined goals in response to respective project client demands by structuring projects around temporary assemblies of expertise and executing the project within a given time limit. Like other project-based organizations, event management organization tends to undertake several projects simultaneously in a same period of time.

In an event management organization, team members are frequently co-located; most of the resources are involved in project works and tasks. Usually the project manager has a great deal of independence and authority comparable to the other staffs. Figure 2.3 presents an example of event management organization.
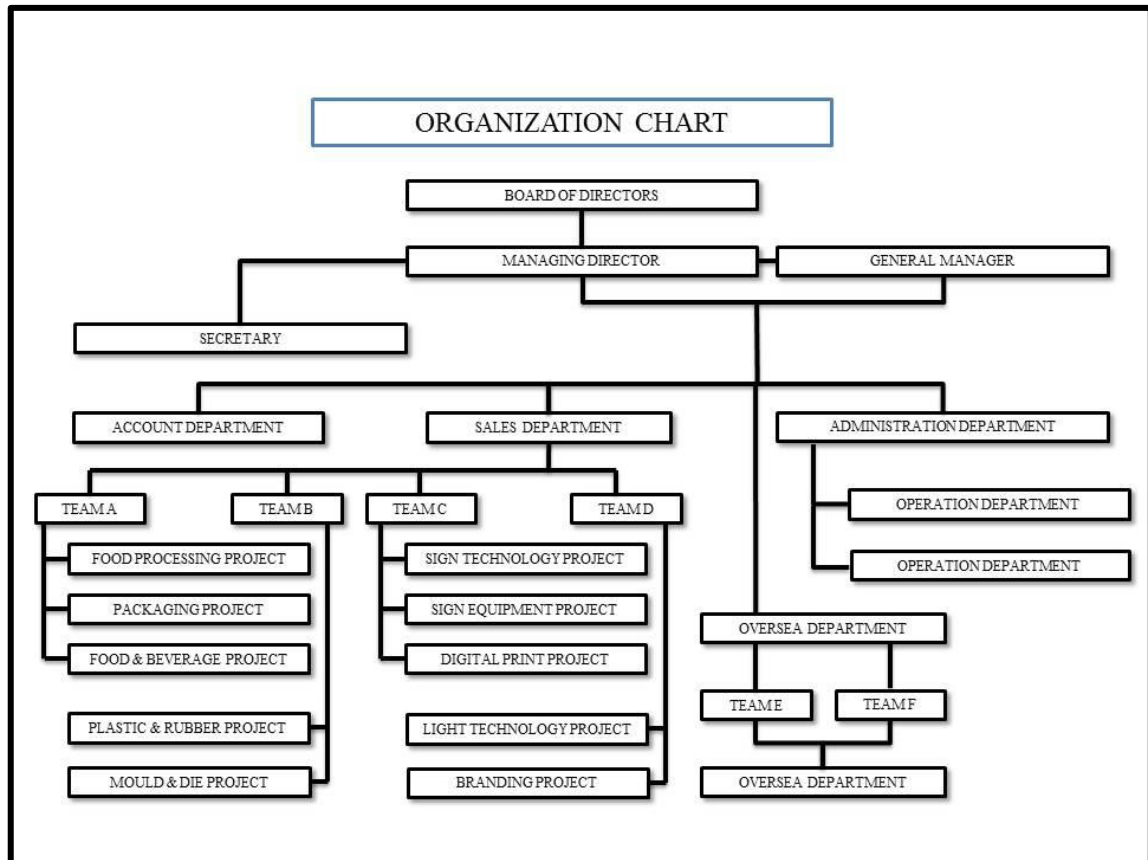
Figure 2.2: Event management organization

Adapted from: ES Event Management Sdn Bhd (2014)

Base on the Figure 2.2, the project personnel are specifically assigned to the project and report directly to the project manager. The project manager is responsible for the performance appraisal and career progression of all project team members while on the project. This leads to increased project loyalty. Complete line authority over project efforts affords the project manager strong project controls and centralized lines of communication. This leads to rapid reaction time and improved responsiveness. Moreover, project personnel are retained on an exclusive rather than shared or part-time basis. Project teams develop a strong sense of project identification and ownership, with deep loyalty efforts to the project and a good understanding of the nature of project's activities, mission, or goals.