A Case Study on Implementation of Prince2 Methodology in Automotive Industry in Malaysia (A Preliminary Study)

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Abstract - Operations & Management division is the backbone of any corporate organization and it is the key factor to improve the performance of the industry. Global competition of automotive industry required well-organized project management in each area for satisfaction of customer and quality. The new approach of Project Management is Project Management PRINCE2 (PMP2), is the generic framework, which is design to suit every type of project in industry. Therefore, the aim of this research is to investigate the impact of project management prince2 methodology in Malaysian automotive industry. PRINCE2 is a structured method for effective project management. PRINCE2 has established in UK as generic, process based approach to project management. In view of the fact that its emphasis on, the dividing the project into manageable and controllable stages. This research will encourage the implementation of Prince2 methodology in automotive industry of Malaysia. Additionally, it will encourage the prospect utilizations of PMP2, which ultimately improve the human performance in automotive industry.

Index Term -- automotive industry, Prince2 methodology, project management.

1 INTRODUCTION

Organizational project management is the systematic management of projects, programs, and portfolios in alignment with the accomplishment of strategic goals. The concept of organizational Project Management is based on the idea that there is a correlation between an organization's capabilities in Project Management, Program Management, and Portfolio Management, and the organization's in implementing effectiveness strategy.

As businesses change at a faster rate, it is becoming increasingly important to execute on projects. [1] Additionally, due to the broad nature of much of the change, projects are affecting larger parts of the organization. Therefore, just as the need to perform projects is increasing, the complexity in executing them is also increasing. Organizational Project Management draws from the broad base of project management and organizational design applications to understand the organizational processes that affect the ability to manage the delivery of projects.

Manufacturing companies are under increasingly diverse and mounting pressure due to more sophisticated markets, changing customer choice, and global competition. With globalization broadening the marketplace and increasing competition, customers are placing greater demands on manufacturers to increase quality and flexibility while maintaining or decreasing costs (Dangayach and Deshmukh 2003).

Manufacturing is no more concentrated in one country, but rather spread over distant locations across the globe. In such a competitive scenario, companies have to search for new processes, materials, suppliers/vendors, manufacturing facilities locations, and delivery channels for their products and services at a competitive price. The advanced/new manufacturing technologies have harnessed a wide range of benefits, including reduced costs, increased productivity, greater flexibility, and higher quality, enabling companies to improve their competitive position. By adopting an appropriate manufacturing strategy, companies can achieve excellent manufacturing status and compete effectively in global markets.

Operations & Management division is the backbone of any corporate organization, more so in this era ever advancing technology. Management of project or task is very essential in daily routine work. Organizations have to organize and schedule their work by using the project / task management to achieve their task successfully.

The uncertainly associated with the project failure has forced organizations to adopt a structured and process based approach to project management. Bellis, (2003) suggested that the structured project management means managing the projects in a logical organized way, following defined steps. A structured project management method is the written description of this logical, organized approach.

Egginton, (1996) further argued that an effective process based approach can be defined as 'the one which brings together the most fundamental principles of project management in a way that overcomes differences and altogether maximizes the operational effectiveness of the organization, measured in terms of delivery to time, within the budget, to specification and within maximum customer satisfaction'.

Researchers, like Bellis, (2003) argue that the structured process based approach contributes to a better understanding of the ultimate goal and output of the projects, provides a common language to all the stakeholders involved in the project, provides flexible decision points, generic framework and methodology to reduce the uncertainties associated with the projects and encourages formal recognition of responsibilities within the project.

2 AUTOMOTIVE INDUSTRY IN MALAYSIA

The automotive industry in Malaysia has developed since the establishment of Proton in 1985, followed by Perodua in 1993 as a part of the National Car Project. The introduction of the National Car Project has given a boost to the development of components and parts manufacturing in Malaysia. Currently, there are four local vehicle manufacturers including Proton, Perodua, Naza, and Modenas. In addition, there are nine motor vehicle assemblers and 343 components–parts manufacturers in Malaysia [12]. Despite fluctuation in automotive production, the vehicle production in Malaysia tends to increase due to the rapid increase in domestic sales. The total vehicle production in 2007 is 441,678 vehicles as compared to 360,105 vehicles in 2000. From January to March 2008, the total number of vehicles production is 132,744.

The number of vehicle sold in the domestic market is 487,176 in 2007 as compared to 343,173 vehicles in the year 2000. In 2008, it is forecasted that the number of vehicles sales will grow by more than 5%. The total industry sales are predicted to achieve 580,000 vehicles in 2012. Most of the vehicle sales in Malaysia are dominated by the local manufacturers. Perodua has the highest market share at 33.3% with total sales of 162,152 vehicles in 2007. Proton has the second biggest market share in 2007 with total sales of 118,134 vehicles or 24.2% market share. This is followed by Toyota with 81,993 vehicles (16.8%), Honda 28,478 vehicles (5.8%), Naza 20,286 vehicles (4.2%), Nissan 18,569 vehicles (3.8%), Inokom 9874 vehicles (2.0%), followed by Daihatsu, Mitsubishi, Mercedes, Hyundai, BMW, Kia, Isuzu, Ford, and Suzuki (less than 1% each) [12].

3 THE PRINCE2 METHODOLOGY

Project management PRINCE2 is a structured method for effective project management. PRINCE2 has established in UK as generic, process based approach to project management. It is a de facto standard used extensively by UK government and it has started to recognized and used in the private sector, in UK. PRINCE2 the method is in the public domain, offering non-proprietarily best practice guidance on project management and it is start emerging internationally. [8]

Hall, (2003) suggest that PRINCE 2 provides an easily tailored and scalable method for the management of all types of projects. Uncertainty and change are the important factors that underpin the adoption of PRINCE2 methodology by the organizations. There are always many changes during the life of the project, people change their mind, and requirements change. These affect what the project is doing. PRINCE2 has a technique of controlling the way changes impact on the project in order to prevent the project going off in the wrong direction.

PRINCE2 is derived from an earlier method called PROMPTII and from PRINCE project management method, which was initially developed in 1989 by the Central Computer and Telecommunications Agency (CCTA) as a UK Government standard for information systems (IT) project management; however, it soon became regularly applied outside the purely IT environment. PRINCE2 was released in 1996 as a generic project management method. PRINCE2 has become increasingly popular and is now a de facto standard for project management in the UK. Its use has spread beyond the UK, Holland, Denmark, Australia and other countries.

Since 2006, the method has been revised and launched as "PRINCE2:2009 Refresh" in 2009. The name "PRINCE2" (instead of "PRINCE3" or similar) is kept to indicate that the method remains faithful to its principles. Nevertheless, it is a fundamental revision of the method from 1996 to adapt it to the changed business environment, to make the method simpler and "lighter", to address current weaknesses or misunderstandings, and to better integrate it with other methods.

Following Case Studies of implementation of PMP2 for excellence in Human performance

- A project case study different from the other case studies which describe an organisation's use of PRINCE2 in that it is a project manager's description of the use of PRINCE2 on a specific project. The Registers of Scotland provided it. [9]
- The Cheshire Constabulary Case on 2002, Senior level commitment to PRINCE2 ~ Strong business focus of IT projects ~Implementing a project mentality Electricity Supply Board Ireland is the national electricity utility in the Republic of Ireland.[9]

- In April 2002 Business process re-engineering using PRINCE2 ~ Achieving business goals with PRINCE2 ~ Converting to the euro using PRINCE2

- Use of PRINCE2 processes, components and techniques on the Enterprise ~ Risk Management Project ~ A PID template ~ Sample Highlight Report including Resource Usage Summary, Project Deliverables list and Checkpoint Report Sample End Stage Report including Risk Log and Quality Log .

- The Getronics PRINCE2 - PMI/PMBOK Combination Case Study in 2003

  PRINCE2 - PMI/PMBOK Combination Case Study based on material supplied by Getronics. Brief summary of the two approaches, Current perceptions of relative positioning. Getronics view of combining the two approaches and the complementary benefits. Max Wideman's detailed comparison

4 PROBLEM STATEMENT

Automotive companies all over the world are under increasingly diverse and mounting pressure due to markets that are more sophisticated, changing customer choice, and global competition. Global competition of automotive industry required well-organized project management in each area for satisfaction of customer and quality. Implementation of fresh project management process based approach "Prince2 methodology" for increasing of human performance in automotive industry.

5 JUSTIFICATION OF THE PROBLEM

The dynamic nature of the business environment has forced the organizations especially in process industries to experience extraordinary levels of change. Those organizations who fail to manage the inherent risk associated with change, innovation and management of projects often end up with high proportion of project failures. Change has become a way of life for organizations that need to remain effective and competitive in order to thrive (Rietveld, 2004). Those organizations who fail to manage the inherent risk associated with change, innovation and management of projects often end up with high proportion of projects failures.

The global automotive industry is a significant constituent of industrial and economic advancement, and its development has considered global competitiveness of leading industrialized economies. This industry is a reasonably developed one and involves huge investments in research and development and technology. It is also seen as an indicator of the economic progress of a country. [10, 11]

6 OBJECTIVES

- To analyse the existing project management problems associate with Malaysian automotive industry.
- To analyse the effectiveness of present project management system applicable in Malaysian Automotive industry.
- To implement and measure the value of PMP2 in automotive industry for achieving the excellence in human performance.

7 METHODOLOGY

This research will base on an extensive critical literature review of the project management principles, methodology and its practical implications in automotive industry. Methodology of prince2 consists of following important stages of the project, which are directing, starting, initiating, controlling, managing stage boundaries, closing and product delivery. However, most of the things are inter-related with each other as shown in following figure 1.

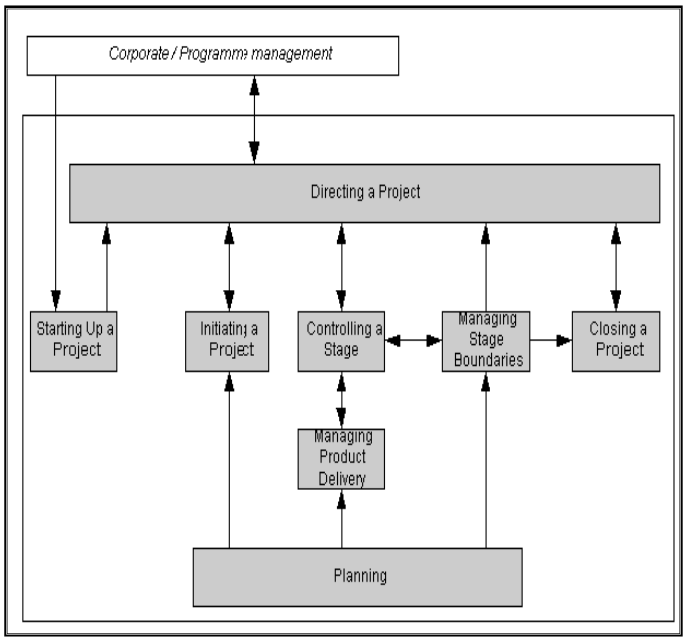

Figure1: Process model of PRINCE2 Project Management.

The theme of PRINCE2 methodology is the generic framework, which is designed to suit every type of project in any industry. PRINCE2 does not cover every aspect of project management tools and techniques. The techniques and tools will vary according to the project type and corporate environment.

The specialized aspects that are excluded from PRINCE2 are shown below:

- People management techniques such as motivation, delegation and team leadership.
- Generic planning techniques such as Gantt charts and critical path analysis.
- Risk management techniques.
- The creation and management of corporate quality management and quality assurance mechanisms.
- Business case management, budgetary control and earned value analysis.

The exclusion of specialized tools and techniques and a generic approach for every type of projects in automotive industry highlights important issues that needs to be investigated.

8 EXPECTED RESULTS

The research on prince2 methodology in automotive industry will provide a following expected result of the study

- The research will investigate and identify the problems associated with the automotive industry in Malaysia.
- Implementation of Prince2 methodology based on dividing the project into manageable and

controllable stages, which will help to increase the human performance in automotive industry.

- The research will promote the implementation of Prince2 methodology in the future.

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