

ICQPPM09 paper presentation:
***Malaysian organization efficiency - Is Six Sigma
Plus a Solution?***

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18th November 2009

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EXECUTIVE RESEARCH SUMMARY

- **Research and study** the implementation of Six Sigma Plus methodologies in Malaysian Multinational Corporation (MNCs).
- **Identify** the Critical Success Factors (CSFs) these companies observe in their policy and working environment that ensures success of the method.
- **Publish** the research studies and envisage that this guideline will help local Malaysian SMEs companies.

Identifying Business requirements

EXECUTIVE RESEARCH SUMMARY

- The study **boundaries** will be within the job function MNCs based companies.
- The working **hypothesis** for this research:
Six Sigma Plus implementation success in Malaysia is directly impacted by the identified CSFs in the MNCs.

Define Project Scope & Deliverables

INTRODUCTION TO SIX SIGMA PLUS METHODOLOGY

INTRODUCTION

- Implementation of productivity or business improvement tools in multinational companies in ensuring successful business is well documented.
- Two fundamental methods used in productivity implementation tools in companies:
 - eliminate waste
 - reduce variations in their processes

Systematic approach to efficient business

Variation Reduction or Six Sigma Methodology

- Reduction in variations forms the core of all the tools in this methodology.
- Further interpreted, Six Sigma is a useful management philosophy and problem-solving methodology that is a direct extension of total quality management (TQM).

Dramatic reductions in the customer defined defect rates

3/8/2010

Waste Elimination or Lean Methodology

- Eliminating wastages in process, it is also known as Toyota Production system (TPS).
- The method became known as *Lean* due to its extended applications in non production based companies particularly in cost reduction mechanism.

Drive to eliminate process wastages and reducing execution time

Six Sigma *Plus* Is...

- A vision
 - Improve Quality and Speed
- A strategy
 - Accelerate Improvement
 - Reduce Cost of Poor Quality
- A methodology
 - Standard Approach
 - Tool Set
- A measurement

*Requires "Leadership Commitment"
to Thrive.*

Why Six Sigma *Plus* relevant to local SMEs...?

- Also known as Lean Six Sigma its a combinations of both the methodologies described to address waste eliminations and variation reduction.
- It helps organizations to rapidly perform improvement to processes while maintaining a very highly quality results.
- The advantage of combining these methods helps to reduce time and increase efficiency at the same time minimise variations.

***Requires “Leadership Commitment”
to Thrive.***

A Standard Approach...Six Sigma Plus

Waste Elimination

- **Producing**
 - **what is needed**
 - **when it is needed**
- **With the minimum amount of**
 - **Materials**
 - **Equipment**
 - **Labor**
 - **Space**

Variation Reduction

- **Methodologies of defect prevention**
- **Use of statistical tools ranging from**
 - **Process maps to**
 - **Process Capability**

RESEARCH DETAILS

Problem Statement

- The study seeks to review and understand how these MNCs with renowned working policy built around Six Sigma Plus methodologies apply them in Malaysia and what makes such practice works in their organization.
- As the globalization moves in, there is immediate necessity for local organization to apply such best practices in their organization to improve the deliverables.

Define Project Scope & Deliverables

Research Objective

- **The primary objective** of the research is to determine what makes Six Sigma Plus application in a MNC business a success and identify the CSFs required to achieve the sustainable success.
- To achieve the goal of the research , the following **guideline** is developed to ensure a clear path and idea flow are anchored to ensure of the research success.

Research Objective

- *Objectives defined:*
 - **Identify** pool of local operating MNC employing Six Sigma methodologies in its operations.
 - **Design** questionnaire and conduct exploratory survey on the Six Sigma Plus applications at the MNCs.
 - **Utilize** the results of the questionnaire findings to define CSFs that makes the Six Sigma implementation a sustainability success in these companies.
 - **Publish** the findings to ensure the awareness level of the tools reach a wider local audience, fellow researchers and academics.

Research Design

- Research method :
 - **Exploratory study** with email correspondences and website survey method .
- Why Exploratory method?
 - ability to **explore and interpret** the known problem in this research for which a **clear and precise statement** will be required.
- Question format:
 - The company profile such as duration of operation , percentage of local content within its operations etc.
 - Questions related the implementations of Six Sigma Plus application in the this companies.

Research Design

- The survey responds were fitted into a MSE tool to refine the questionnaire and provide calibrated and benchmarked results of the survey.
- Several key interviews with the relevant practitioners in chosen MNC will be done to ensure baseline reference in coupled into the questionnaire.

Research design framework

- Five (5) known input variable which by previous researches has been identified as CSFs for a successful Six Sigma Plus implementation as below:
 - **Management commitment** involvement
 - The workforce **understanding** of the Six Sigma Plus methodology , tools and technique.
 - Six Sigma level of **absorption** into the organization i.e. departments , clients and supplier involvements.
 - **Assessment** process of all Six Sigma projects within the organizations. i.e. Project management and selection , reviews , tracking and after completion monitoring.
 - **Training** structure for continuous awareness.

Research design framework

- The conclusion of this research in identifying the significant of these CSFs will be used as reference for local implementation reference.

Data analysis

- The survey findings were statistically test using MINITAB to determine:
 - Correlation between the CSFs and survey respondents.
 - Assessment agreement between the respondents.
 - Assessment agreement between respondents and standards.
- The survey was conducted among all known MNCs in Malaysia and some local practicing companies.

Preliminary findings

- The survey returned a 90% reply , more than 2/3 of the actual population size.
- The initial findings:
 - Management commitment 89% importance
 - Tools understanding 94% importance
 - Absorption 94% importance
 - Project/Process Assessment 100% importance
 - Training & awareness 100% importance
- Our draft findings of this research survey indicates that the working Null hypothesis of :
 - Ho: **Six Sigma Plus implementation success in Malaysia is directly impacted by the above identified CSFs.**is true.

THANK YOU