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Workshop Implementation and Leadership Development for Linking Six Sigma with Business Strategy

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Abstract- The presence of a Six Sigma system when integrating strategic factors into a Six Sigma activity improves the probability of successful implementation. However, few systematic studies have investigated the relationship between business strategy and Six Sigma. This paper presents a framework for linking Six Sigma with business strategy for the purpose of obtaining competitive advantage. To examine the conditions that are conducive to Six Sigma long-term success, we conducted workshop consensus activities and carried out Six Sigma strategy development. Using these workshop consensus activities, we integrated business strategy development into a Six Sigma implementation framework that allocates organizational resources to meet core customer requirements.

Keywords: *six sigma, business strategy.*

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Workshop Implementation and Leadership Development for Linking Six Sigma with Business Strategy

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Abstract- The presence of a Six Sigma system when integrating strategic factors into a Six Sigma activity improves the probability of successful implementation. However, few systematic studies have investigated the relationship between business strategy and Six Sigma. This paper presents a framework for linking Six Sigma with business strategy for the purpose of obtaining competitive advantage. To examine the conditions that are conducive to Six Sigma long-term success, we conducted workshop consensus activities and carried out Six Sigma strategy development. Using these workshop consensus activities, we integrated business strategy development into a Six Sigma implementation framework that allocates organizational resources to meet core customer requirements.

The value of this paper lies in its observation that the factors of workshop consensus activities affect the link between Six Sigma and business strategy. As a strategic-oriented initiative, Six Sigma must be adapted and modified to fit an organizational strategy. To ensure Six Sigma successfully to fitting organizational strategy, it is essential to promote the workshop consensus activities as necessary.

Keywords: six sigma, business strategy.

I. Introduction

Six Sigma provides business leaders and executives with the strategy, methods, tools, and techniques for changing their organizations. The long-term goals of Six Sigma are to develop and implement processes within management activities via organizational change. The Six Sigma approach that seeks to identify and eliminate defects, mistakes or failures in business systems by focusing on key process performances that are of critical importance to customers, thus, Six Sigma is central to the company's strategic drive. However, as a strategic-oriented initiative, Six Sigma activities need to be adapted and modified to fit an organization's strategy.

As a strategic-oriented initiative, Six Sigma is not just a systematic methodology but is also a business strategy that leads to breakthroughs in profitability through quantum gains in quality, customer satisfaction and productivity. However, the integration of Six Sigma within business strategy has not been systematically and widely studied. What is the nature of the integration of Six Sigma within a business strategy framework? What is the flow chart of integrating Six Sigma with business strategy? What are the necessary preliminarily conditions are necessary to successfully implement a Six Sigma business strategy? This research seeks to address these critical questions, and, in so doing, an exploratory framework will be constructed.

The first recommendation is that senior leadership should articulate a clear vision and take a leadership's intervention stance concerning Six Sigma development, through workshop consensus activities. The second recommendation is that Six Sigma needs to include business strategy principles.

II. Integrating Six Sigma with Business Strategy

Harry and Schroeder (2000) recognized Six Sigma as a competitive philosophy by which provide better products at a lower cost than those of competitors. For a successful Six Sigma system, Six Sigma initiatives must be strategy-driven, process - focused and project-enabled. The strategy-driven nature of Six Sigma initiatives requires adherence to a whole management philosophy rather than just to the deployment of quality management tools and techniques. As a competitive organizational strategy, Six Sigma requires rigorous education and training, managerial commitment from top leaders and total employee involvement (TEI). Hoerl, Rodebaugh and Snee (2003) summarized that the successful deployment of Six Sigma needs organizational change, which includes leadership commitment, top talent in Six Sigma roles and an appropriate supporting infrastructure.

Six Sigma development aims to optimize overall business results by balancing cost, quality, features and availability considerations for products and their production into an best business strategy (Pearson, 2001 ; Snee, 2001). It is natural for Six Sigma to link business priorities to reflect Six Sigma strategic development and project management. The key success factor in implementing Six Sigma is determining how to overcome the fear of individuals within an organization. There are two basic fears among

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individuals: fear of change and fear of not meeting new standards. If an organization does not address individual fears, successful implementation of Six Sigma is impossible. To overcome these fears during the process of organizational change, individuals must be aware of the requirement for the Six Sigma business strategy system, why Six Sigma is important and how it work.

We suggest that implementing an initiative of Six Sigma workshop activities may be seen as a means of overcoming the fear of change within an organization. For the facilitating of organizational change, workshop consensus activities use communication and dialogue at the management level to attain consistent thinking and the understanding of concepts. Workshop consensus activities should contain a Six Sigma course on changes for refining organizational concepts and organization culture and build a common language of integrating Six Sigma with business strategy (Trompenaars and Hampden-Turner, 1998).

III. Workshop Consensus Activities Development

Workshop consensus activities development is designed to reinforce Six Sigma strategy developments; it includes workshop consensus activities and Six Sigma strategy development (Figure 1).

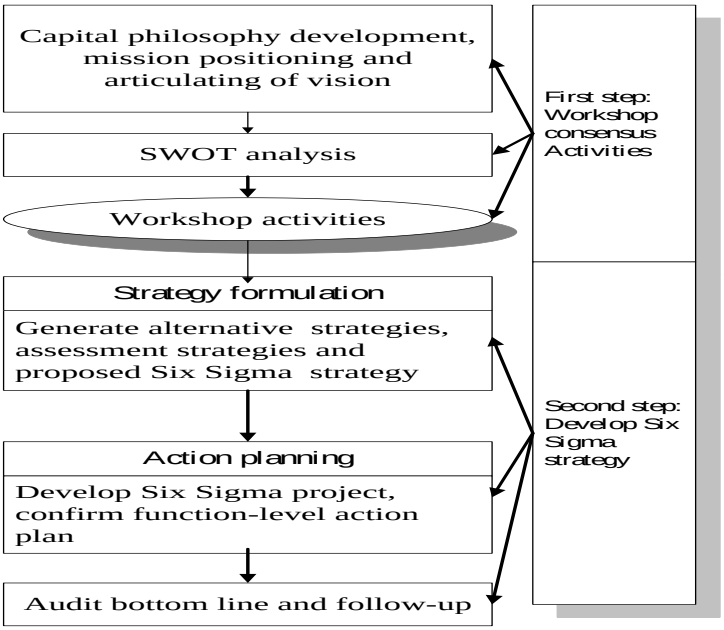

Figure 1: Workshop consensus activities

a) Workshop consensus activities

Eckes (2002) found that workshop consensus activities are used to communicate and share the language of business philosophy, organizational mission and articulation of vision (Table1). Via workshop consensus activities, participants are able to discuss how strategy initiative can help their organization meet business goals, allocate business resources, and determine the priorities of Six Sigma strategy. Such workshop consensus activities exist not only to meet business goals, but also to create thorough knowledge of a firm's strategic needs.

Table 1: Topic of communication and sharing during workshop consensus activities

Items		Idea generation
Infrastructure base	Vision articulation	
	Management Commitment	
	Mission positioning	
	Value philosophy	
Business philosophy		

The most important aspect of workshop consensus activities is that they are able to exert a personal impact, so that employees are prepared to realize a sharing understanding of Six Sigma strategy development because they will comprehend why the organization is implementing it.

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Workshop consensus activities require preparatory activities at the start of every process. Three such steps are described below.

i. *First step: The transformation of participating employees' ideology*

The transformation of participating employees' ideology occurs by communicating and discussing the risk management of the business environment. The approaches of ideology transformation are team interaction and brainstorming, which can bring together teams and build mutual trust. Via ideology transformation, employees can understand the reasons for organizational change and enjoy a common language to push Six Sigma forward.

ii. *Second step: The formulation of Strategy*

The second step is to construct strategy formulation for organizational development. The strategy formulation must reflect the core of the philosophy, mission and vision which as articulated in the consensus in the first phase. Preliminary action planning is also discussed in this step.

iii. *Third step: The Confirmation of the consensus process*

The preliminary action planning is repeatedly checked. Participating employees share their thoughts about the workshop's consensus activities. The organization is thus able to construct common values, set corporate culture and form a shared ideology.

Workshop consensus activities regarding organizational change fall in to three phases (Figure 2). The first phase is to refreeze the current organizational culture (Sensibility process). New organizational cultures and values are integrated in the second phase (Rationality process), and in the third phase, using a situational building approach, a new paradigm of organizational culture is frozen.

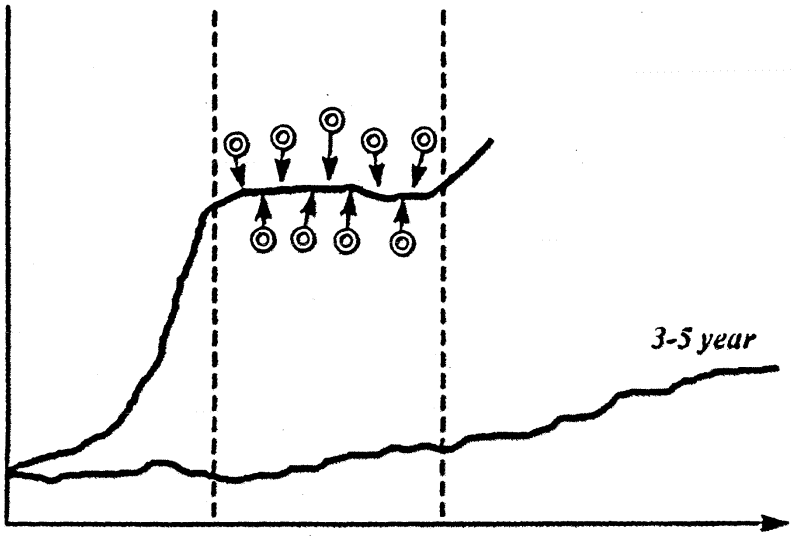

Figure 2: The formulation process of corporate culture

b) Develop Six Sigma Strategy

Six Sigma initiatives must be strategy-driven, process-focused and project -enabled. Six Sigma strategy deployment models enable organizations to implement Six Sigma at a pace at which employees can digest the methodology and reap its benefits. After the Six Sigma initiative becomes strategy-driven and the full methodology and discipline are in operation, the foundation of strategy formulation is in place to achieve the maximum success from each Six Sigma project (Sophronia and Sheila, 2005). Overall alternative strategies are analyzed through diagnosis by external and internal chains of the business organization in the context of its suppliers, customers, goods and services (SWOT analysis, Table 2). Following the project, Six Sigma strategy is formulated through generating alternative strategies, developing tactical planning and confirming function-level action planning (Table 3).

Table 2: SWOT Analyzing

Strengths of internal organization	Weaknesses of internal organization
Opportunities of external organization	Threats of external organization

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Table 3: Alternative strategies, objectives and tactical planning

Alternative Strategies	Objectives	Tactical Planning
1.		
2.		
3.		
4…		

IV. Integration of Six Sigma within a Business Strategy Framework

Figure 3 demonstrates the process of integrating Six Sigma activities within a business strategy framework. The contexts of the process flow model are as follows:

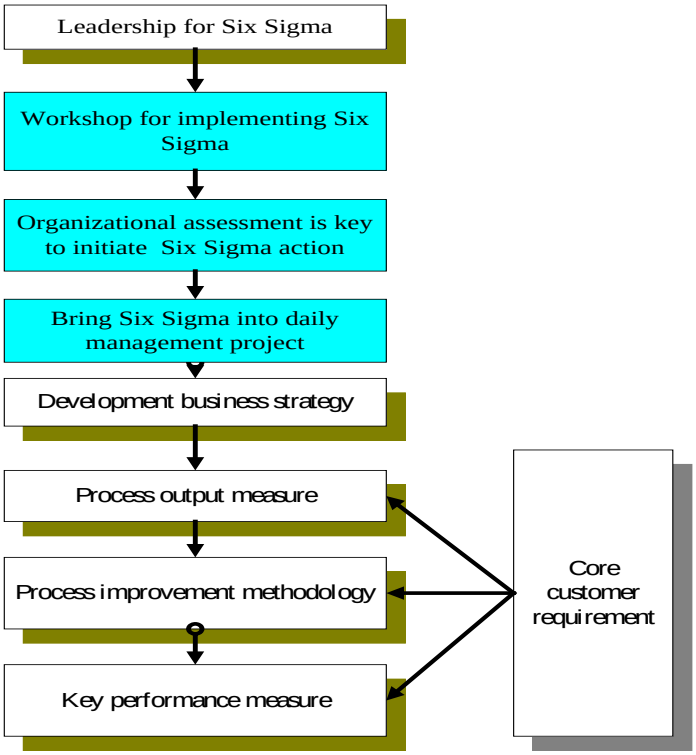

Figure 3: Integrating Six Sigma with business strategy framework

a) Leadership for Six Sigma

Six Sigma leadership means a leadership-driven process that inspires employees to be willing to change and learn new skills. Six Sigma is more a management philosophy than just a few tools and techniques. As such, the success of a Six Sigma initiative depends on top-management involvement, extensive training, tracking progress, and relevant incentives. Top management here means that it is typically a CEO or top executive who adopts Six Sigma principles and implements Six Sigma. When such management embarks on a Six Sigma project, it should develop an explicit change of leadership strategy in seeking to use the project as a vehicle for reengineering the business. The force for integrating Six Sigma into a corporate culture must come from top management if

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business organization is to be restructured and employees' attitude are to be changed

b) Developing a business strategy

A Six-Sigma steering committee audits and confirms the business strategy in the framework of the Six Sigma system. Diagnosis and auditing of the core business process lead to the generation and proposal of alternative strategies; it then the follows the development of the goals of the Six Sigma business strategy and the Six Sigma project is finally implemented.

c) Process improvement methodology

Regarding the development of business strategy, the key element, the process improvement methodology, identifies the core business process. The core business process improvement team confirms the key competences of critical customer requirements; TEI (Total employee's involvement) then develops an improvement schedule. In actualizing the Six Sigma improvement project, the improvement teams implement the DMAIC methodology to improve the efficiency of core business process.

d) Key performance measures

Six Sigma improvements is a customer-driven recognition that confirms key performance measure. The Six Sigma project management is closely tied to an organization's business goals or objectives. The Six Sigma project and action must be founded on key performance measures, which take into account marketing, quality, finance, accounting, and human resources.

Six Sigma project management based on key performance measures is considered to offer a solution schedule that integrates planning, management, and accountability, with the ability to select, prioritize, and remove barriers to Six Sigma projects. Key performance measures are also powerful ways to integrate organizational resources to solve critical business problems that may already be known to exist.

e) Process output measurement

Process output measurement relies on statistical tools and specifically designs processes-related methodologies to achieve measurable goals. Process output measurement is connected to the key performance measure and directly linked to core customer requirements. A list of measurable process outputs has been developed to provide targets for measurement results, including process time, standard time, time based issues critical to human factors, and performance metrics that are critical to cost and quality. The list also defines a sequence of work.

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