ABSTRACT

The twenty-first century brings new challenges to businesses. Not only do organizations have to deal with more knowledgeable and demanding customers, the platform in which businesses are conducted is also changing rapidly with the swift advancement of the information and internet technology. To ensure survival and to stay constantly ahead of competition, companies need to continually improve and innovate themselves to overcome these challenges.

Six Sigma has been touted not only as a twenty-first century quality tool that can significantly improve an organization’s activities, products and services, it has also been promoted as a powerful management philosophy that enables management to make better decisions, drive companies towards perfection, earn greater profits and increase competitiveness. Evidences of the power of Six Sigma can be heard through success stories in multinational organizations such as AlliedSignal, Ford, General Electric, Honeywell and Motorola.

The Six Sigma concept has since been adapted and successfully implemented in other industries like human resource, healthcare, laboratory, service, etc. Yet, twenty years after Motorola first implemented Six Sigma, there has been no published evidence of successful Six Sigma implementation in organizations in the building and construction industry.

This study explores how Six Sigma can be implemented in the Singapore construction industry to raise the level of construction quality. It also suggests the use of a well-recognized local construction quality measurement system, CONQUAS 21, as a
starting point for successful implementation of Six Sigma in companies in the building and construction industry of Singapore.

The strategic vision of the Singapore construction industry (Construction 21 report, BCA, 1999) is to be a “world-class builder in the knowledge age”. It is, therefore, imperative that Singapore finds a way to increase its competitiveness by improving construction quality in order to succeed in carving out a niche in the international construction market. The successful implementation of Six Sigma would aid Singapore in the attainment of this vision.