



# Integrating buildability in ISO 9000 quality management systems: case study of a condominium project

Low Sui Pheng<sup>a,\*</sup>, Belinda Abeyegoonasekera<sup>b</sup>

<sup>a</sup>*School of Building and Real Estate, National University of Singapore, 10 Kent Ridge Crescent, 119260, Singapore*

<sup>b</sup>*APCO Architects and Town Planners, 23 Duxton Hill, 089606 Singapore*

Received 13 April 1999; received in revised form 5 July 1999; accepted 26 November 1999

## Abstract

Productivity and quality are two inter-related issues of utmost importance in the construction industry. The buildability concept and ISO 9000 quality management systems are used to help raise productivity and quality standards in construction. However, both buildability principles and ISO 9000 quality system elements are frequently considered separately in many consulting and construction firms. Many of these firms have also developed and implemented ISO 9000 quality management systems in their organisations. To achieve synergy, this paper argues by means of a case study of a private condominium project that buildability principles can be integrated within ISO 9000 quality management systems. © 2000 Elsevier Science Ltd. All rights reserved.

*Keywords:* Buildability; ISO 9000; Quality; Productivity; Integration; Synergy

## 1. Introduction

With the need for better buildable designs, the implementation of ISO 9000 quality management systems can help to enhance the buildability of a project. The ISO 9000 standard establishes the policies and procedures that require proper documentation for a minimum level of management commitment to quality. Hence, with documented procedures which consider and ensure conformity of buildability in building processes, as well as encourage buildability reviews and corrective actions, firms can be made more aware of buildability principles which will, in turn, lead to improved buildability of a project. With improved internal communications, feedback and training, the ISO 9000 standard can help to enhance a company's confidence in its ability to consistently deliver buildable designs and construction methods.

This paper does not suggest that the linkage between

quality and productivity is an entirely new consideration. The linkage was already considered to synergise the relationship between quality and productivity in a generic sense [10,15]. Buildability, which can help to raise both productivity and quality standards, deals however with separate, albeit closely related, issues. It is believed that the integration of buildable concepts with ISO 9000 quality system elements is dealt with for the first time in this paper.

As more consulting and construction firms obtain certification to meet the ISO 9000 standard, this paper proposes that the ISO 9000 quality management system can serve as an important working platform for achieving buildability. The thrust of this proposition is shown in Fig. 1. There is currently no study on the application of ISO 9000 on buildability nor any research work which evaluates the effectiveness of using ISO 9000 quality management systems in enhancing the buildability of a project. While the buildability concept is now slowly making an inroad into the construction industry, there is still a lack of understanding of this concept and its underlying principles. While more and

\* Corresponding author.

more firms are being certified to meet the ISO 9000 standard, many are still blissfully unaware of the usefulness and effectiveness of ISO 9000 quality management systems in achieving and enhancing the buildability of a project. The objectives of this paper are therefore:

1. To briefly present the buildability concept.

2. To briefly highlight the application of ISO 9000 quality management systems in the construction industry.

3. By means of a case study, to examine the relevance of using ISO 9000 quality management systems for integrating buildability principles at the design and construction stage of a project.

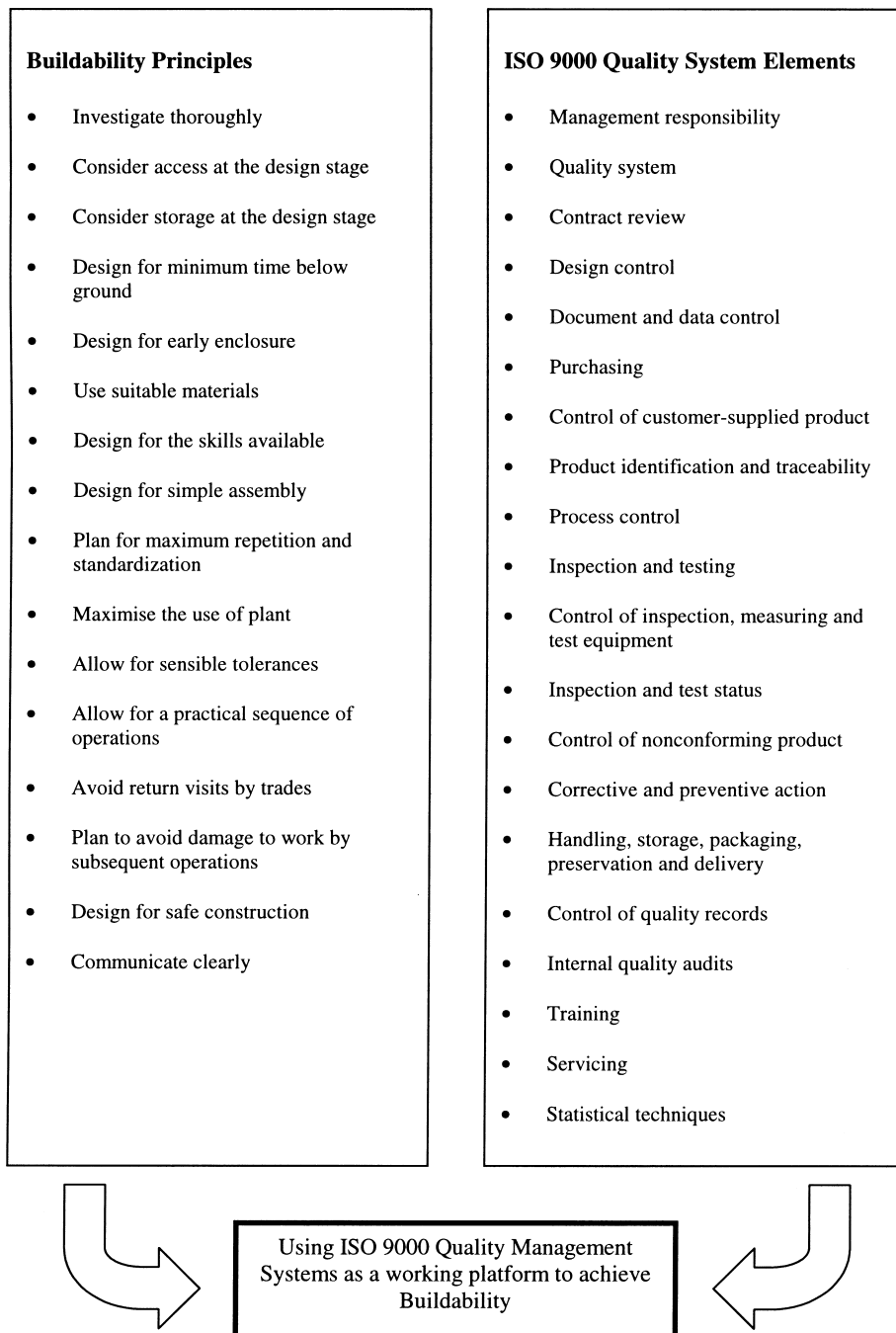


Fig. 1. Theme of paper.

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات