SUMMARY

The Singapore construction industry in the last decade has witnessed the gradual permeation of quality management systems to improve efficiency, quality of construction and consistency in project deliverables. Quality management systems such as ISO 9000 and Total Quality Management (TQM) which have found much success in the manufacturing industry have now become part and parcel of the daily operations in most construction related companies. Nevertheless, while ISO 9000 and TQM have been found to be effective management systems, they fall short in providing an adequate platform for project delivery based on satisfying customer needs or requirements. This gap has prompted the evolution of a new and powerful management tool in the form of Quality Function Deployment (QFD) to improve the effectiveness of the construction process and the functional requirements of its product. QFD is a quality improvement technique that deals with quality problems right from the outset of the product design and development stage and assures that customers' requirements are translated into appropriate technical requirements and actions accurately (Low, 1998). Whereas the traditional procurement method has been found to be in need of QFD techniques (Londe et. al, 1997), a Design and Build contract which bears both design and construction responsibilities would find the QFD methodology to be even more useful. In view of the above, this dissertation looks into the awareness and applicability of QFD methodology in Design and Build contracts. The research looks into the benefits, relevance and problems in the application of QFD in Design and Build contracts. To achieve this, a quantitative approach in the form of
in-depth interviews with experienced contractors involved in Design and Build contracts was carried out.

The research had found the awareness of QFD methodology was extremely low among practitioners in the industry. It had also identified the need for QFD to serve as an appropriate quality management system that would provide a platform which integrates design philosophy and construction process to the core customer requirements. The implementation of QFD was found to be largely influenced by three major players within the construction industry, namely, the Client, the Design and Build Contractor and BCA. Lastly, the research proposes several suggestions for the application of QFD in Design and Build contracts and recommends further research in the areas of IT applications and the implementation of QFD in Brazil and Japan.