SUMMARY

The world-wide movement towards the implementation of performance-based building regulations and the use of performance-based fire safety engineering has recently drawn Singapore into its move toward the establishment of a Performance-Base Code in Singapore.

One of the objectives for such move is also to weed out unnecessary regulations which add to building costs, encouraged the use of innovative materials, products, construction technologies or novel designs as advocated by the newly formed Building and Construction Authority (BCA).

This dissertation was initiated to help assess the acceptance and identify issues that are of concerns to the building and construction industry for Singapore to operate in a performance-based environment.

The primary objectives were to identify and gain an in-sight on six key issues:

a. Why is there such a strong movement towards performance-based codes in the International Arena?


c. What does a performance-based code entail, and what changes or improvements are needed? and How ready are they to support those changes and improvements?
d. What are the components of such a system be?

e. How are the components be developed, formatted, implemented and enforced?

f. What needs to be accomplished before widespread implementation and acceptance of such a system can occur?

To discuss these issues, literatures review coupled with a direct consultation with the authors of the journals, publications and book was carried out to seek further understanding on those issues raised in the literatures.

More importantly, the lessons learnt were used as the basic to formulate the questionnaires for the surveys and interviews with the local authorities and the fire professionals. The purpose is to access the acceptance and to address issues that are of concerns for performance-based fire regulations to be applied in Singapore. The findings from these interviews are discussed and recommendations were made.

The survey represented by local building’s professionals and fire communities provided key input on issues as to why Singapore should move towards a performance-based system. It addressed on how such a system might be structured; what components will be required for such a system to work; and what education and qualification issues need to be addressed.

The conceptual framework for a local performance-based model is adopted from the overseas' models. The comments received from the feasibility study and a summary of the discussion and views on a performance-based system for Singapore are provided. The following conclusions resulted:
• Singapore needs to pursue a performance-based fire regulatory system.

• The performance-based fire regulatory system for Singapore would likely to be spawned from the present system. Each section of the code includes explicit policy level goals, functional objectives and performance requirements in the codes (to describe the level of safety that is desired), and will utilize both prescriptive solutions (as we currently have) and performance-based solutions as acceptable means to provide the desired level of safety.

Other issues identified from the survey will be discussed in details in the relevant chapter.

Regardless of the level of effort yet required, the comments and views gathered in this study has given the local building’s professionals and fire communities a solid platform from which to build a performance-based building regulatory system.