ABSTRACT

The projected increase in new property developments of high-rise buildings to meet the demand in the coming years would imply that there would be an increase in demand for new elevators with improved performance and efficiency. Studies conducted in the 1980s revealed that double-deck lift was a superior form of vertical transportation for high-rise buildings.

In view of the significant changes to building design and its functionality and the rapid technological advancements made in the electronics industry with potential implication in the operation and control of lift systems, it is reasonable to explore the current viability of double-deck lifts for high-rise buildings.

The aim of this research is to evaluate the performance of double-deck lift in a high-rise building, using Temasek Tower as a case study. An analysis of the design considerations in conjunction with the operation and maintenance features of the lift system, has reiterated the notion that double-deck lifts are still the most desirable form of vertical transportation for high-rise building despite the operational problems.