Abstract

The recent economic crisis has provided the construction industry a good window of opportunity to rethink, re-evaluate and re-invent itself. The Construction 21 report published last year served as a blueprint to prepare and guide the industry in receiving challenges in the new millennium.

The industry cannot hold onto out-dated building processes and unproductive construction methods. To date, much of the design and construction processes are still segregated. Construction methods are generally labour-intensive and out-moded, relying on low-wage foreign labour to sustain growth and profitability. These bad practices should not be allowed to continue indefinitely if Singapore were to achieve its vision to be a “World-Class Builder in the Knowledge Age”.

One of the main key thrusts outlined was to enhance buildability through use of prefabricated and standardized components. This ties in with the one of the emerging global trends: a move to industrialize the construction process by adopting more prefab technology to bring about more productivity breakthroughs in the industry.

This dissertation aims to emphasize the importance of consultants upstream in incorporating prefabrication into the construction process. From the research findings, architects have been identified as the key personnel in implementing and incorporating this technique. The main barriers that hinder the local architects from designing for prefab include fear of conceiving dull designs with standardized components, lack of knowledge of such technique and low skill levels in the industry. Feasible motivators such as increase in fees for consultants, strategic alliances between public and private sector and more emphasis to prefabrication in the computation of buildable scores are proven to be favourable in increasing the use of prefabrication in construction process.

Key words: buildability, prefabrication, productivity breakthroughs, architects, barriers, motivators