

Challenging time and manpower through innovative technology

Saleh Muradweij, executive director civil and infrastructure division of Drake and Scull, says contractors should seek alternatives to the conventional construction systems.

In today's construction industry, project urgency and early delivery have become the main criteria during the contractor's selection, ranking and awarding process.

Project viability has become highly dependent on early market share profitability through phased product deliveries and fast tracking operations. The pace of change in today's market dictates a continuous drop in construction schedules.

Contractors have since applied the conventional remedy of increasing manpower and plant logistics to counteract productivity requirements.

The scarcity of skilled workers and the diminishing marginal returns of today's aggressive market rates have compelled the contractor to seek other alternatives within the realm of an innovative construction system.

The need to develop and to implement innovative building systems in today's construction industry cannot be overemphasized.

Contractors are obliged to seek alternatives to their conventional systems and therefore, their involvement in the pretender phase is crucial in endorsing innovative alternatives which are both time- and cost-effective for all parties involved.

At Drake and Scull International we are continuously researching and trying to look to the future to bring new technologies into the market to enhance



Saleh Muradweij, executive director of civil and infrastructure division of Drake and Scull.

our services provision to customers.

Gulf Technical Construction Company (GTCC), the civil contracting company of Drake and Scull International introduced, for the first time in the Middle East, an innovative technology to specifically address the above issues and challenges, and to answer the shortcomings of the conventional systems.

This technology, which was developed in Australia in 2001,

provides an innovative construction technique that serves the dual role of a partition and a load bearing element.

As such, structures are built quicker without the need for skilled personnel, while other resource requirements are reduced and daily output rates are dramatically increased.

Plastic connectors, acting as steel locators within the block, allow the steel to be placed by masons as the wall is being

erected. This eliminates the need for steel fixers, removing a specific trade, and again reduces workers on site. Rough carpentry is dispensed with as a consequence of the block being a shuttering system in itself.

The cost-saving implications on superstructures cannot be overlooked as it bears an average positive impact of 28% when compared to any other load-bearing system, be it precast or the traditional column-supported options. In addition, productivity rates are dramatically increased as construction duration can be reduced by up to 80%.

Being a partition load bearing system, sub-structural loads are distributed on the basis of strip footings (as opposed to concentrated isolated column footings) where the efficiency can be directly translated to savings in concrete and reinforcement quantities.

It is imperative that construction expertise and builder input at design development stages are implemented in order to ensure the incorporation of such systems.

The latter would undoubtedly provide the cost- and time-effective solutions that all shareholders in any given project would not hesitate to apply in order to guarantee sustainability, compliance with delivery schedules and profitability.

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If you would like to write for *Construction Week* in this column, please email rob.wagner@itp.com