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MINISTER FOR MANPOWER

AT THE LAUNCH OF THE CONSTRUCTION 21 REPORT

ON WEDNESDAY, 20 Oct 99 AT 9 AM

AT MND AUDITORIUM

Mr Mah Bow Tan, Minister for National Development Distinguished Guests

Good Morning

1 It gives me great pleasure to be here to launch the Construction 21 Report.

Introduction

Construction 21 is a comprehensive review of the construction industry to meet emerging challenges arising from new technology and demands. We are not alone in trying to revamp and upgrade the construction industry. In recent years, several other countries have also carried out similar review of their construction industries. For example, the Australian government's Department of Industry, Science and Tourism conducted a similar study in 1998 entitled "Building for Growth".

The United Kingdom, in 1998 also commissioned a study, "Rethinking Construction", by the Construction Task Force (CTF) to improve the quality and efficiency of UK construction industry. These reviews demonstrate the need for a fundamental change in construction processes and practices to improve performance, meet emerging challenges, and tap new opportunities. They also represent efforts to reorganize the industry to meet emerging global trends.

Global and Local Imperatives for C21

- Some of the global trends include a greater level of integration among designers and contractors through the design and build approach; a move to industrialize the construction process by adopting the use of more prefabricated components; and increased use of information technology to bring about productivity breakthroughs in the construction industry. The fact that more established and more efficient construction industries in Australia and the UK see the need for re-structuring to respond and prepare for these trends, underscore the need for the Singapore's construction industry to re-invent itself.
- Apart from global imperatives, the Singapore construction industry also faces certain unique challenges which require prompt resolution. These include negative productivity growth, poor safety records, labour-intensive construction methods, and a host of social problems related to the industry. Many problems of the construction industry have been documented and I will not dwell on them here. Suffice to say that today, much of the design and construction processes are still segregated. Construction methods are generally labour-intensive and out-moded, relying on low-wage manual labour to sustain growth and profitability. This cannot continue indefinitely.
- The Construction 21 study is thus a thorough effort to re-invent the construction industry in Singapore. The C21 blueprint will address immediate issues, while also laying the foundation for a stable and progressive industry in the longer term. The C21 blueprint is indeed timely and appropriate. Singapore is evolving into a knowledge economy. The construction industry cannot be left behind as other sectors of Singapore move ahead in support of our vision of a globally competitive knowledge economy.

A first world economy cannot be supported by a third world construction industry based on cheap and unskilled labour from developing countries.

6 The C21 study is a collaborative effort by the Ministry of National Development, the

Ministry of Manpower and representatives of participants in the construction industry value-chain.

The C21 Committee had adopted a total systems approach in its review and came up with

comprehensive recommendations to address both upstream and downstream issues. The ${\rm C21}$

Committee has set out a vision for the Singapore construction industry "To be a World Class

Builder in the Knowledge Age". In order to fulfil this vision, the C21 Committee has

formulated 6 strategic thrusts and 39 recommendations. $\,$ I am happy to announce that the

Government has accepted the vision, strategic thrusts and recommendations of the Construction ${\bf r}$

21 Committee.

Recommendation on MYE

- 7 In particular, I would like to highlight the recommendation on the foreign construction worker allocation system which the Ministry of Manpower will be implementing.
- 8 Many problems in the construction industry can be attributed to the high dependence on unskilled foreign workers. In 1992, the dependency ratio, ie number of foreign workers permitted for every local worker, for the construction sector was raised from one local worker to two foreign workers, to one local worker to five foreign workers. Following this, the number of construction workers had more than doubled between 1992 and 1998, while project volume increased by 1.5 times over the same period. Interestingly, productivity growth of the industry started to slide shortly after, from +4.6% in 1994 to -3.4% in 1998. Safety performance also deteriorated, from 856 accidents in 1994 to 1,532 accidents in 1998.
- 9 Although we should be cautious in attributing causal relationships to these developments, it is quite clear that the liberal admission of unskilled foreign workers has retarded industry development. Given a choice of using low cost foreign workers or investing in technology to raise productivity, many companies simply took the easy way out and applied for more foreign workers. This is especially so when the industry faces pressures of time and intense competition such as the construction boom in the early 1990s. There was no time to explore Page 3

alternative construction methods to enhance buildability and lower labour reliance. Those who did found themselves out-bidded by others with less regard for long term sustainable growth. As a result, there is no imperative to upgrade construction techniques and the industry is locked in the downward spiral of requiring more unskilled workers, resulting in low productivity, poor quality of work, labour-intensive construction methods, and even more workers to sustain output.

To break the downward spiral, concerted effort by all parties is needed. At the upstream level, designers should design for buildability. At the downstream, contractors should adopt labour saving methods of construction. Addressing one without the other will be futile. To force the pace of development, the Government has decided to legislate minimum buildability, and restrict foreign worker intake through tightening the foreign worker allocation formula for construction projects. This 2-pronged approach will force the pace of development and create a more level playing field for all players. The Ministry of National Development has amended the Building Control Act to enable thelegislation of minimum buildabilityConcurrently, MOM will gradually reduce man-year entitlements (MYE) based on the recommendations of C21, ie to reduce it to 70% of current levels by 2005, and 50% of current levels by 2010, or sooner if practicable. My Ministry will monitor the progress of the industry closely and set a suitable pace for reducing the MYE. In fact, the current MYE formula contains some "fat" in that it is based on the manpower utilization of the industry in 1996 and 1997.

Given that the productivity levels in these 2 years were hardly desirable, there is much scope to tighten the MYE formula at a faster pace to reflect a more productive outcome. We have already commissioned a review of the MYE formula. This is to derive a formula which is more robust and leaner.

- The reduction in foreign worker allocation will compel the contractors to upgrade their operations and adopt more innovative methods of construction which use less labour on site. With the tightening of the MYE, we should see less social problems resulting from malpractices by unscrupulous contractors and foreign workers. At the same time, contractors will be better off hiring skilled workers so that they can carry out their work more efficiently with fewer workers. In order to add impetus to achieving a higher skilled workforce, MOM will impose a requirement that the contractors must have 45% of their workforce with Skill Evaluation Certificates by 2005 and 60% by 2010. This was the recommendation of the C21 to improve the skills profile of the construction workforce.
- There is some concern that the recommendation to tighten the MYE formula will "hobble" the industry. We appreciate that the construction industry will continue to need foreign workers. However, the increase in the number of unskilled foreign construction workers to support the growth of the industry cannot continue. New ways of building which are less labour-intensive, and more compatible with industry development will be preferred in the future. By making the MYE formula transparent and setting a time schedule for its tightening, all contractors will be able to plan ahead and put in serious efforts to optimize labour usage. In fact, the C21 recommendations have the distinct merit in its total systems approach. While pushing the industry towards higher buildability and less labour usage, it offers many complementary measures to help the industry transform itself to achieve productivity breakthroughs. This can be seen in its recommendations on skills upgrading of both professionals and workers; its push for standardization and modularization; and the emphasis on R&D, with dedicated R&D funds for the industry.

Marine Industry As An Example

The construction industry is not the only industry with a heavy dependence on foreign workers. The marine industry also requires many foreign workers to Page 4

sustain competitiveness. As a result, the marine industry, with its dependency ratio of one local worker to three foreign workers is second to construction in dependence on foreign workers. Also like the construction industry, the marine industry has levels of contractors and sub-contractors. Interestingly however, the marine industry has succeeded to avoid most of the problems plaguing the construction industry. While it admits foreign workers, it ensures that both local and foreign workers are skilled through training initiatives such as the Local Industry Upgrading Programme (LIUP), SRP and the setting up of overseas training centres. At the same time, it continues to apply the latest marine technology to cut costs and reduce labour reliance. Today, the marine industry boasts a workforce that is more than 80% skilled. In the area of foreign worker management, the marine industry has also been exemplary.

Its efforts in providing housing for its foreign workers through dormitories such as the Arcacia Lodge, and the tracking of workers through the Marine Resource Information System (MARIS) system are notable achievements. In the area of safety, it has done considerably well, with accident rates declining for seven consecutive years. This is through the active participation of major shipyards in setting safety standards and sharing information on best safety practices. The marine industry has therefore shown that it is possible to leverage on foreign labour and yet be able to harness technology to improve performance and competitiveness. Today, despite mounting international competition, the Singapore marine industry has remained a global leader.

Some contractors and building professionals may say that this is an unfair comparison as the marine industry is more homogenous, smaller, and thus easier to manage. While this may be so, it is my belief that there is scope for the construction industry to adopt some of the good practices of the marine industry.

Industry players should leverage on the recommendations of the C21 to consolidate its processes and overcome deep-seated problems. Only then can we achieve the outcome of transforming the industry from a 3D (dirty, dangerous and demanding) to a 3P (professional, productive and progressive) industry.

Redefined Partnerships

The transformation of the construction industry requires close partnerships and redefined relationships among major players. For one, it requires close collaboration between government and industry players. The Building and Construction Authority will provide leadership and support to develop the construction industry. Transformation also requires new relationships among various players within the industry. One of the strategic thrusts advocated by the C21 Committee calls for greater integration of the construction process through the design and build arrangement. Through this process, one party has total responsibility from design to construction. The D&B system is increasingly used in other countries as it leads to tangible savings in construction time and costs.

D&B operators will be able to incorporate building expertise and practical knowledge at the design stage so that designs are more buildable and potential problems are anticipated and dealt with early to avoid wasteful rework.

While the D&B approach is not the only approach that encourages integration, its principle of consultation and incorporating construction and other considerations at the early stages of the design process should be encouraged. The Government will facilitate the move to adopt an integrated approach by creating a conducive environment to nurture multi-disciplinary firms using the D&B Process and remove legal impediments against D&B by reviewing existing laws governing

Page 5

professional practices.

The C21 recommendations will create new opportunities for professionals to team up and complement their expertise so that they can offer clients more comprehensive and productive solutions. Such strong client orientation can only result in satisfied customers. Integration of the construction process is not to let other players do the professional's job, but to facilitate the synergy of skills and experience of a multi-disciplinary team to streamline the construction process for productivity gains and greater customer satisfaction. In no way will the role of any professional group be undermined. Professionals will remain valuable partners with key inputs in the construction value-chain. Integration will in fact enhance the role of each professional group. More importantly, the construction process will gain efficiency and both clients and consumers will benefit through fewer reworks and faster project delivery.

Concl usi on

The C21 process epitomises the collaborative effort needed to transform the industry. Many government agencies, industry players and members of the public were deeply involved in the formulation of this comprehensive blueprint. The various committees and working groups have more than 100 members from the entire spectrum of the construction value chain.

They include developers, architects, engineers, consultants, academics, contractors, regulatory bodies and consumers. C21 is an industry effort and represents the collective views of all players. I would like to thank all that has contributed to this effort, and hope that the same spirit of partnership and cooperation will carry through in the implementation of the C21 recommendations.

- 19 C21 is not just asking the industry to look at what it is doing and to do it better. We are looking at a totally new approach to construction. What is proposed by the C21 Committee is a radical change from the current way we build. To achieve productivity breakthroughs and quantum leaps in the performance and image of the industry, we need to re-invent construction. I am confident that all the players in the construction industry will respond positively to this call to re-invent the construction industry.
- I now hereby declare the launch of Construction 21 Report and look forward to working with the industry to realize this new vision of a world-class construction industry capable of meeting the needs of a knowledge-based economy.