

## Annex C - Background of the Construction Productivity Roadmap

In support of the Economic Strategies Committee's (ESC) recommendation to raise productivity for sustained economic growth, MND/BCA has formulated a holistic Construction Productivity Roadmap to transform the construction industry and raise its productivity.

2 The Construction Productivity Roadmap aims to realise ***the vision of a highly integrated and technologically advanced construction sector led by progressive firms and supported by a skilled and competent workforce in 2020***, through a four-thrust strategic approach:-

- a. Strategic Thrust 1. Introducing regulatory requirements and setting minimum mandatory standards to drive widespread adoption of labour-saving technology;
- b. Strategic Thrust 2. Providing incentives to encourage manpower development, technology adoption and capability building;
- c. Strategic Thrust 3. Regulating the demand and supply of low cost, foreign workforce; and
- d. Strategic Thrust 4. Enhancing the quality of the construction workforce.

3 The four-thrust approach is complemented by a horizontal strategy involving extensive outreach efforts.

### How each of the 4 Strategic Thrusts contributes to the overall vision

4 Strategic Thrust 1. BCA has enhanced the Buildability<sup>1</sup> framework to require architects and engineers to adopt "easier-to-construct" building designs. A new component, Constructability<sup>1</sup> was introduced in July last year, requiring contractors to also adopt more labour-efficient construction methods and technology, thus reducing their labour reliance. Also, BCA is strongly promoting the adoption of Building Information Modelling (BIM)<sup>2</sup> which will help improve overall coordination of the construction value chain, and reduce the amount of reworking required. BCA will be mandating BIM electronic submission of architectural, structural and mechanical & engineering (M&E) plans for building works for regulatory approval by 2015.

5 Strategic Thrust 2. To help construction firms cope with rising manpower costs and lower the cost of technology adoption, BCA has provided financial incentives in the form of the \$250 million Construction Productivity and Capability Fund (CPCF). The fund encourages firms to go beyond mandatory requirements in manpower development, technology adoption and capability building.

6 Strategic Thrust 3. The supply of low-cost foreign workers is regulated by progressively tightening the Man-Year Entitlement (MYE)<sup>3</sup> quota, tightening access to MYE-waiver workers<sup>3</sup>, and higher levies.

7 Strategic Thrust 4. To address the transient nature of construction workforce, schemes like CoreTrade<sup>4</sup> and Workforce Training and Upgrading (WTU)<sup>5</sup> are in place to facilitate the retention of experienced workers and skills upgrading to bring about productivity and safety improvements. In addition, a new tiered-levy framework was introduced in July 2011 to distinguish “Higher Skilled” foreign workers from the “Basic Skilled” ones (see Annex B on the new skills framework).

Notes:

<sup>1</sup> The Buildability framework requires designers to deliver more buildable designs upstream, and builders to adopt more labour-saving construction methods / technologies downstream. Builders will have to comply with a minimum Constructability Score downstream which encourages the use of construction technologies, methods and processes that reduce the industry's reliance on foreign workers.

<sup>2</sup> Building Information Modelling (BIM) is a new three-dimensional modelling tool to improve productivity in building design and construction. It allows building professionals across the value chain to explore the building digitally before it is built and in the process improve on the design and avoid abortive work.

<sup>3</sup> The Man-Year Entitlement (MYE) Allocation System is a Work Permit allocation system for foreign workers in general. Foreign workers under the Man-Year Entitlement-waiver route will be subject to higher levies to encourage firms to reduce their reliance on foreign workforce and adopt technologies in place of labour where possible.

<sup>4</sup> **Construction Registration of Tradesmen (CoreTrade)** is a registration scheme for skilled and experienced construction personnel in the various key construction trades. CoreTrade provides a platform to retain the better and more experienced workers by providing a clear career progression path and giving them due recognition.

<sup>5</sup> The Workforce Training and Upgrading (WTU) Scheme co-funds the costs of selected skills assessment and training courses to upgrade the skills of workforce in the built environment.