CONSTRUCTION PRODUCTIVITY ROADMAP

1. In support of the Economic Strategies Committee’s (ESC) recommendation to raise productivity for sustained economic growth, MND/BCA, in consultation with the industry and the International Panel of Experts, have formulated a holistic **Construction Productivity Roadmap** to transform the construction industry and raise its productivity. The 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 4-pronged approach as follows:-

   a. Regulating the demand and supply of low cost, lower skilled foreign workforce through foreign worker levy and MYE system;

   b. Enhancing the quality of the construction workforce;

   c. Imposing regulatory requirements and minimum standards to drive widespread adoption of labour-saving technology; and

   d. Offering financial incentives to encourage manpower development, technology adoption and capability building.

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<th>Multi-pronged</th>
<th>Associated Initiatives</th>
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| **Prong 1:-** Regulating the demand and supply of low cost, lower skilled foreign workforce through foreign worker levy and MYE system | • **Reducing Man-Year-Entitlement (MYE).** To progressively cut the MYE to regulate supply of low cost foreign workers. In this regard, MOM has announced cumulative MYE cut of 40% by July 2013.  
• **Imposing Higher Levy.** To moderate the demand for low cost foreign workers, MOM has announced 6-monthly levy increases till July 2013. |
| **Prong 2:-** Enhancing the quality of the construction workforce | • **Enhancing Construction Registration of Tradesmen (CoreTrade) Scheme.** BCA will expand the key construction trades recognised under the CoreTrade scheme from current 7 to 17 trades in 1H2011. [See Appendix 1 on CoreTrade]  
• **Introducing New Tiered-levy Framework.** From July 2011, unskilled workers |
will be phased out for the construction sector. A new tiered-levy framework will be introduced to distinguish the “Higher Skilled” foreign workers from the “Basic Skilled” workers. The “Higher Skilled” workers, who are either CoreTrade-registered or possess minimum 4 years construction experience with relevant supervisory qualifications, will enjoy lower levy than the “Basic Skilled” workers who possess only BCA’s Skill Evaluation Certification (Knowledge) [SEC(K)]. The levy differential between the “Higher Skilled” workers and “Basic Skilled” workers will be progressively raised to encourage the employers to upgrade and retain the more experienced and higher skilled workers. [See Appendix 2 on SEC(K)]

- To facilitate the upgrading of workforce at all levels, the Workforce Training and Upgrading (WTU) scheme under the Construction Productivity & Capability Fund (CPCF) co-funds the cost of training courses and skills assessments. The supported training courses apply to PMETs, supervisory personnel, foremen as well as tradesmen. [See Appendix 3 on WTU]

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<th>Prong 3:</th>
<th>Enhancing Buildability Framework. BCA is enhancing the buildability framework to require architects and engineers to adopt “easier-to-construct” building designs. A new Constructability component will also be introduced to require contractors to adopt more labour efficient construction methods and technology. These changes will take effect in 2H2011. [See Appendix 4 on Buildability]</th>
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<td>Driving Adoption of Building Information Modelling (BIM). BCA has worked out a 5-year BIM Adoption Roadmap to implement BIM across the sector. BIM, a 3D modelling tool, enables all parties in the construction value chain to visualise the design better, detect</td>
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design problems early, enhance planning and coordination, and reduce reworks for projects. This integrated approach can result in time and cost savings for the entire project. BCA will be mandating BIM e-submission of architectural, structural and M&E plans for building works for regulatory approval by 2015. The public sector will also take the lead in driving BIM adoption and work towards specifying this as a requirement in new building projects from next year. [See Appendix 5 on BIM]

| Prong 4: | **Enhancing the Construction Productivity & Capability Fund (CPCF).** To help firms cope with the upcoming manpower policy changes, BCA is enhancing the CPCF to (a) extend the funding support to cover more industry stakeholders, (b) expand the scope of funding, and (c) raise the funding support levels to give a stronger push for firms to make the swift switch to technology in place of labour. [See Appendix B for details of the enhancements to the CPCF]

2. To steer the industry towards raising productivity, BCA has established the Construction Productivity Centre (CPC) and the Centre of Construction IT (CCIT) to step up industry outreach efforts. The CPC and CCIT aim to educate and raise the industry’s awareness and ownership on productivity improvements and manpower development. It adopts a customer-centric account management approach in chaperoning firms in their productivity journey and in administering CPCF incentives to encourage technology adoption, manpower development and capability building by firms.

3. Some of the key initiatives of the CPC includes:-
   - Showcasing best practices and successful stories in productivity improvements through a bi-monthly publication called “BuildSmart” for industry players;
   - Recognizing industry productivity leaders through awards to create a culture of productivity excellence; and
   - Establishing Benchmark indicators for productivity improvements to create greater ownership in productivity improvement across the sector.
4. In April 2011, BCA is organising the **inaugural Singapore Construction Productivity Week**, to further heighten industry awareness of latest initiatives and best practices geared towards productivity improvements. The Week serves as a learning platform for the construction industry to gain valuable insights on best practices, new technologies and skills that have a positive impact on raising productivity at the individual, firm and industry level. The Week will have the following key events:

- The **Skilled Builder Competition**, with four categories of trades (system formwork installation, drywall installation, telescopic handler operation, simulated crane operation) for skilled tradesmen to compete over two days (from 25 to 26 April 2011)
- The **Building Information Modelling (BIM) Competition**, which is targeted at professionals and students, to use BIM software to put together a building design (25 to 26 April 2011).
- The **Build Smart Conference**, a two-day conference at Singapore Expo on construction productivity (27 to 28 April 2011)
- **BuildTech Asia 2011 Exhibition**, a three-day trade exhibition at the Singapore Expo focusing on innovative technologies and products to improve construction productivity (27 to 29 April 2011)
- **Build Smart Site Tours** of innovative projects and construction technologies (29 April 2011).

5. MND/BCA will continue to review and evaluate the effectiveness of the measures under the Construction Productivity Roadmap to steer the industry towards improving productivity and raising capability.