

BCA's Building Information Modelling Roadmap

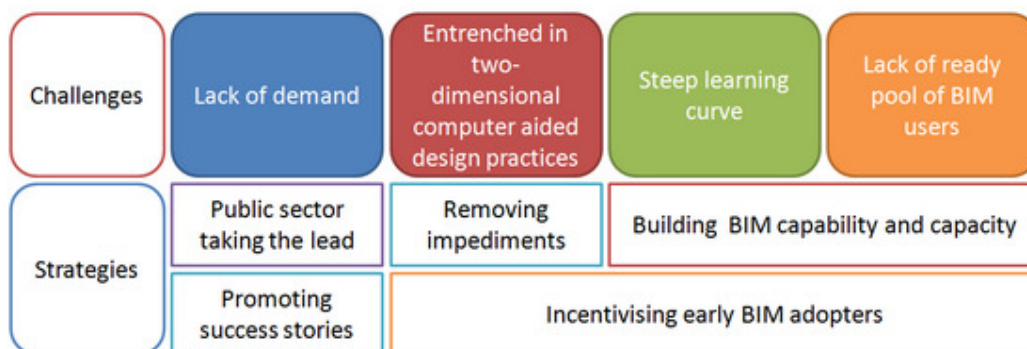
Objective

BCA targets the construction industry to use Building Information Modelling (BIM) widely by 2015.

Strategies

To meet the objective, these are BCA's strategies:

- (A) Removing impediments to help the industry ease the transition from two-dimensional computer aided design (CAD) to Building Information Modelling;
- (B) Incentivising early adopters of BIM;
- (C) Creating the demand with the public sector taking the lead;
- (D) Building BIM capability and capacity; and
- (E) Promoting success stories.



A. Removing impediments

To help the industry ease the transition from two-dimensional computer-aided design (CAD) drawings to three-dimensional BIM, BCA has developed BIM submission templates to help the industry adopt BIM while reducing their learning curve.

Architectural and structural BIM submission templates were introduced in January and November 2010 respectively, while the mechanical and electrical (M&E) submission template was introduced in April 2011.

To facilitate information sharing, BCA and buildingSMART Singapore are developing a library of building and design objects, as well as project collaboration guidelines by early 2012. To date, more than 200 projects were submitted electronically to regulatory agencies using models rendered in BIM.

B. Incentivising early BIM adopters

To promote BIM among businesses and professionals in the industry as early as possible, BCA introduced a S\$6-million BIM Fund under the Construction Productivity and Capability Fund in June 2010. The BIM Fund covers costs on training, consultancy, software and hardware. To date, 70% of the BIM Fund has been committed.

C. Creating the demand - public sector taking the lead

Countries such as the United States, Finland and Norway have made BIM mandatory for public-sector building projects. Singapore's public sector agencies are also taking the lead in specifying BIM requirements for all new public sector building projects.

In 2011, BCA is working with key public agencies such as MOE, LTA and HDB to use BIM for a number of pilot projects. From 2012, public sector agencies will require their industry consultants to use BIM for their new projects.

In addition, mandatory regulatory submissions using BIM would be introduced for architectural submission (by 2013), structural and M&E submissions (by 2014) and eventually for plan submissions of all projects with gross floor area of more than 5,000 square metres by 2015.

D. Building capability and capacity

To equip industry practitioners and new entrants with expertise in BIM, BCA engaged institutes of higher learning in Singapore to include BIM as part of their curriculum. In 2011, Singapore Polytechnic and the National University of Singapore's Architecture Department have started teaching BIM to their students.

For the graduating batch of students in 2011, BCA organised intensive BIM training programmes to equip them with BIM skills before they enter the industry.

To equip professionals in the industry, the BCA Academy of the Built Environment introduced a Specialist Diploma degree in BIM in May 2011 and BIM Modeling and Management Courses in September 2011. Currently, about 1,200 professionals in the industry and graduates are trained in BIM.

E. Promoting success stories

In September 2010, BCA established the Centre for Construction IT (CCIT) to guide professionals and companies from the construction industry in their BIM journey. The Centre will set up an internet portal on BIM and produce materials covering successful case studies and best practices to educate the industry on BIM.

In addition, CCIT will work with buildingSMART Singapore and the industry to organise BIM workshops and seminars regularly.

Recent events held were a BIM conference and BIM Design Competition in September 2011.