



**Asia-Pacific
Economic Cooperation**

2013/SOM3/SCSC/WKSP2/011

Session 5

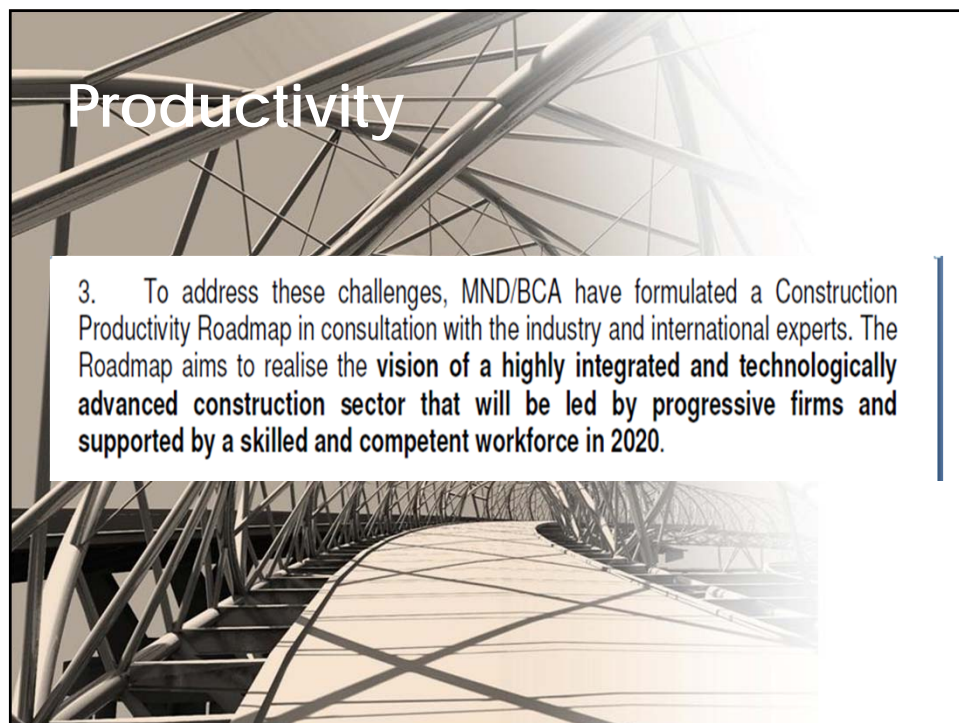
Singapore BIM Roadmap

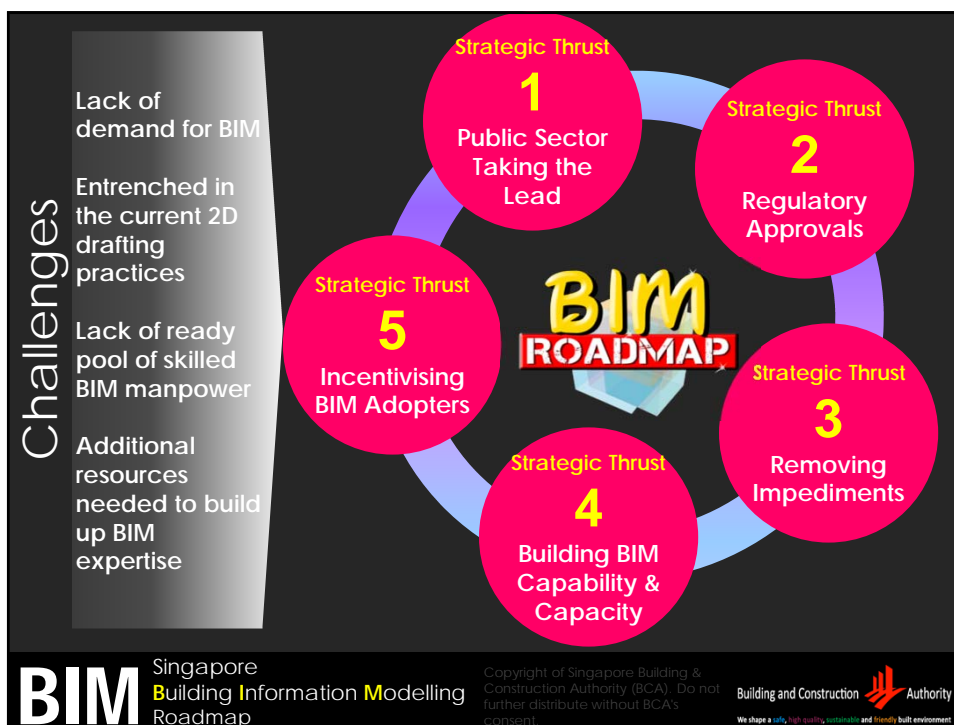
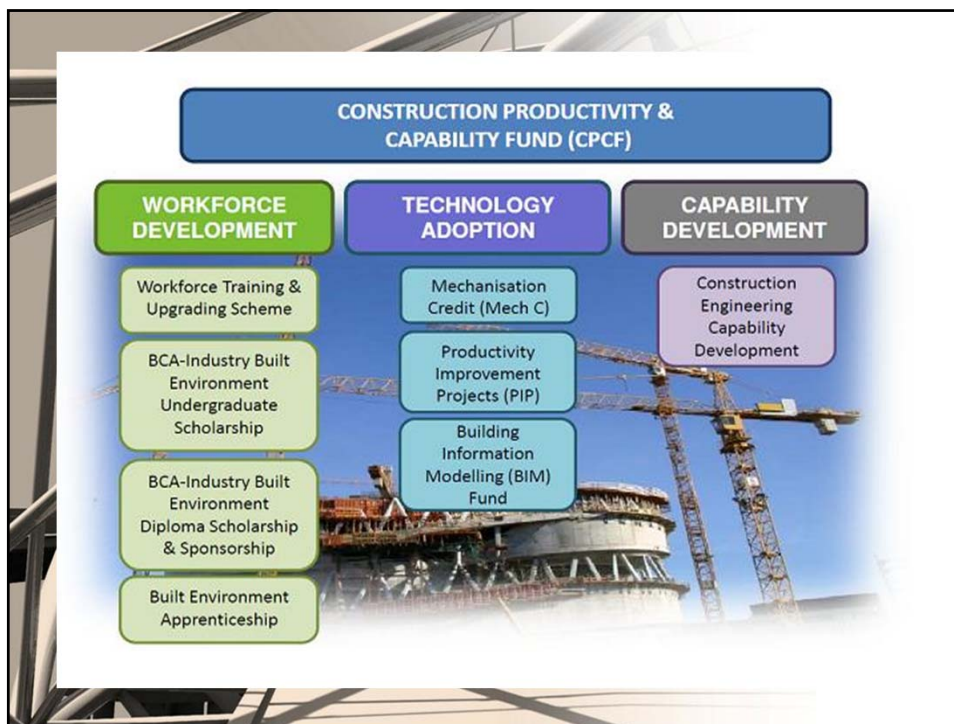
Submitted by: Singapore

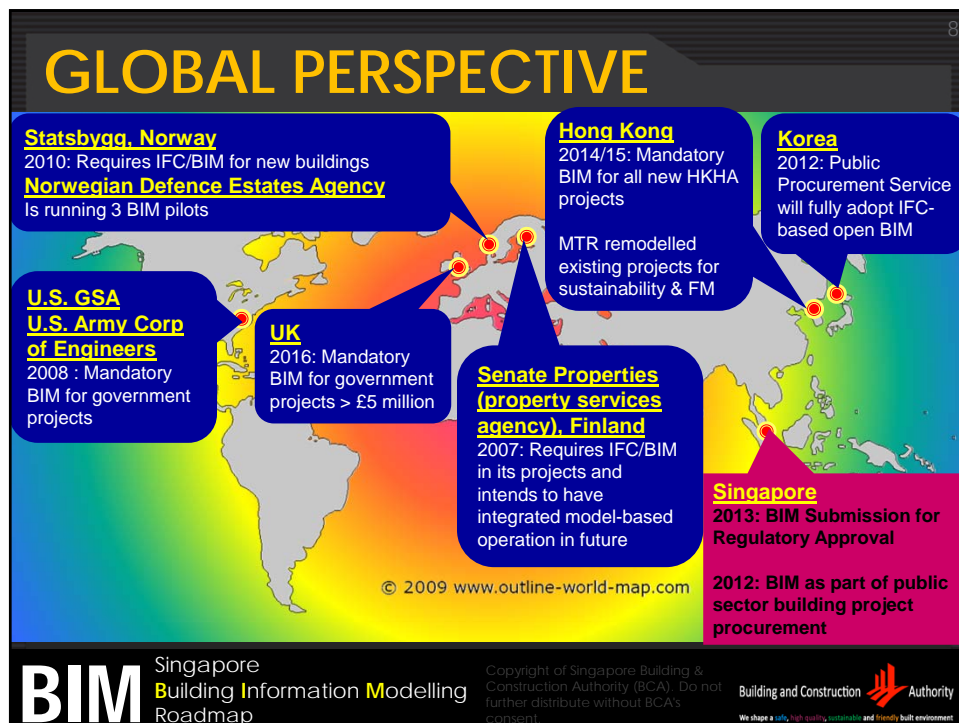
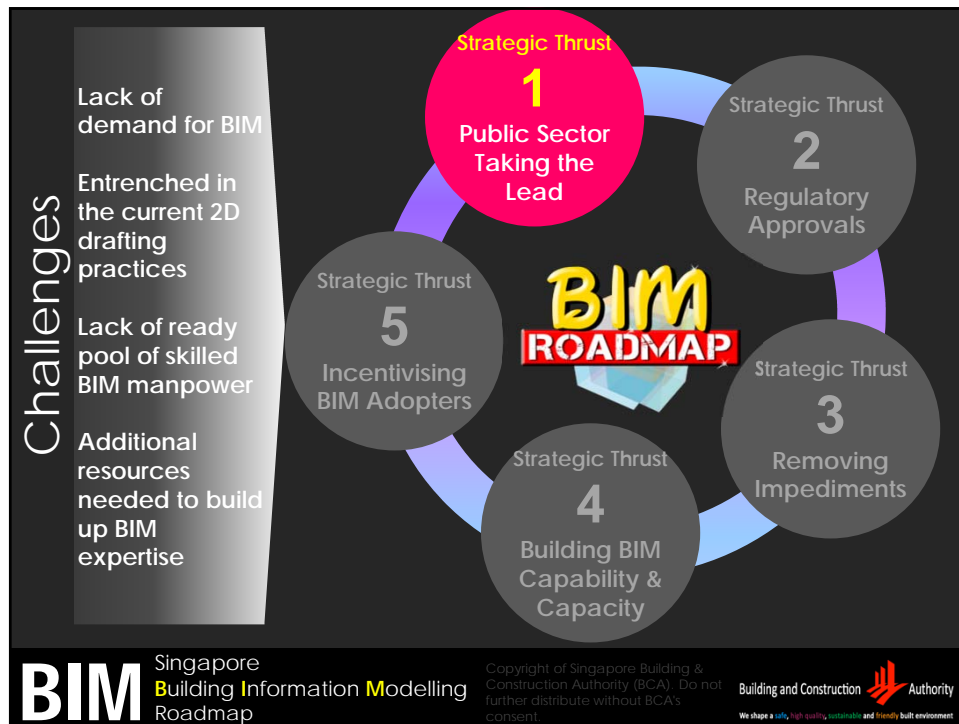


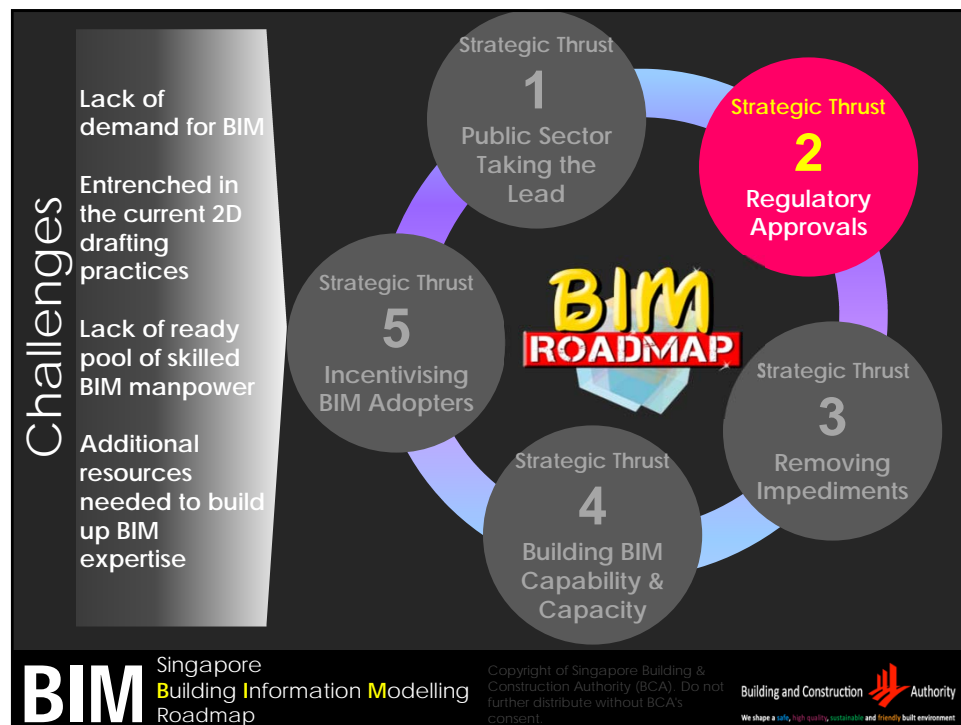
**Joint APEC-ASEAN Workshop - How
Building Information Modeling Standards
Can Improve Building Performance
Medan, Indonesia
24-25 June 2013**











CORENET E-SUBMISSION SYSTEM

CORENET E-Submission System
<https://www.corenet-ess.gov.sg>

Qualified Persons
(architects and engineers)

SUBMIT

Notify

COLLECT

COLLECT

Notify

REPLY

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CORENET E-SUBMISSION SYSTEM

Industry Survey 2011

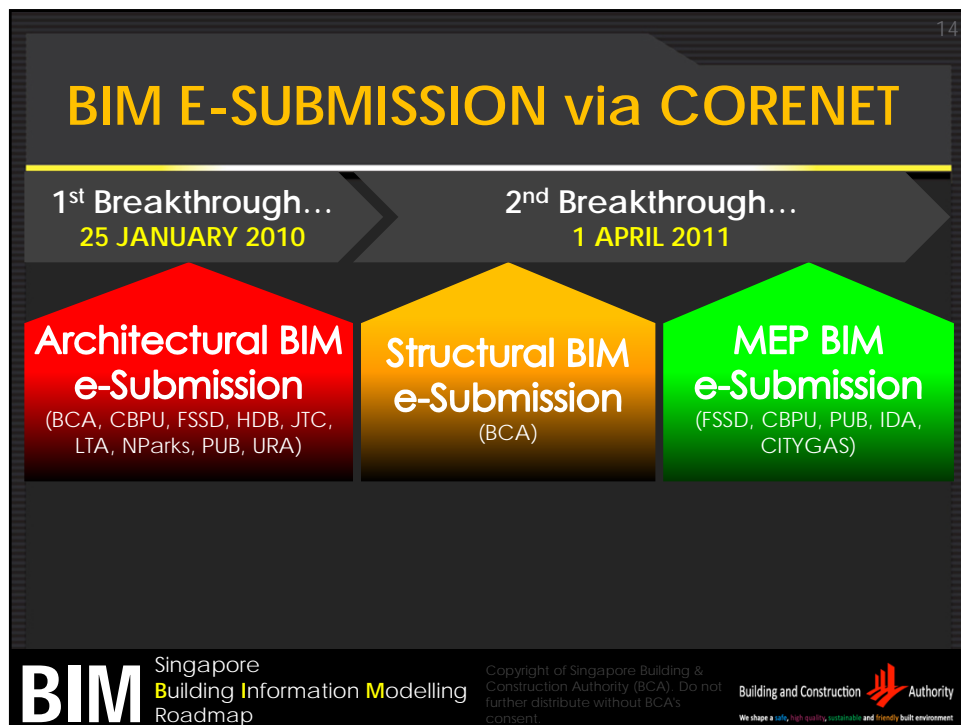
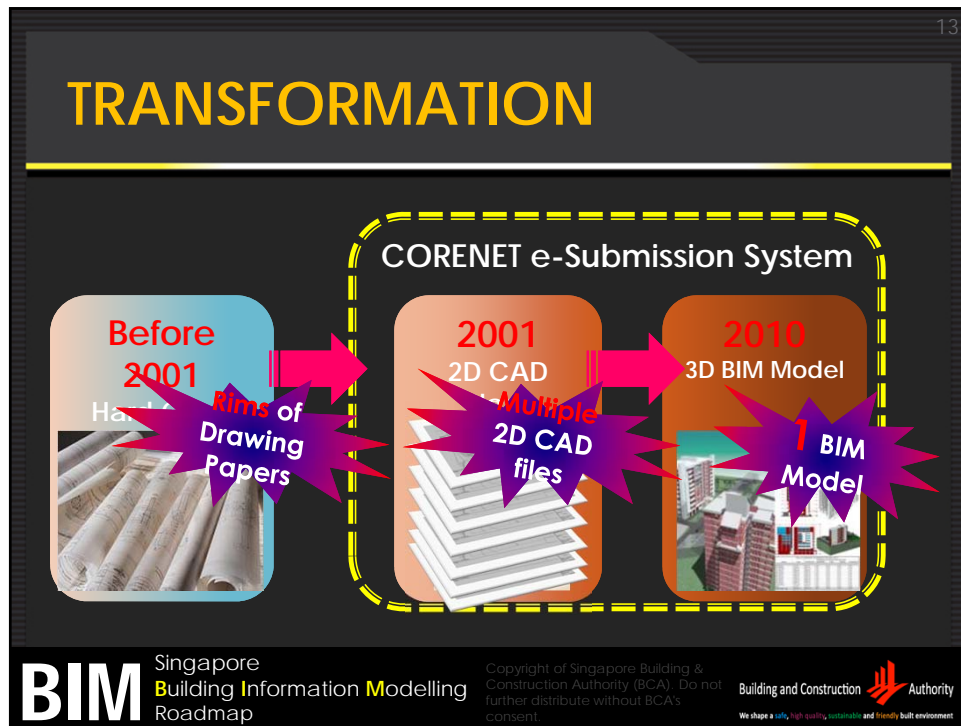
Category	Percentage
Printing	73%
Transport	76.2%
Manpower	39.7%
Time	52.4%
Hardcopy Storage	58.7%
Total Savings	100%

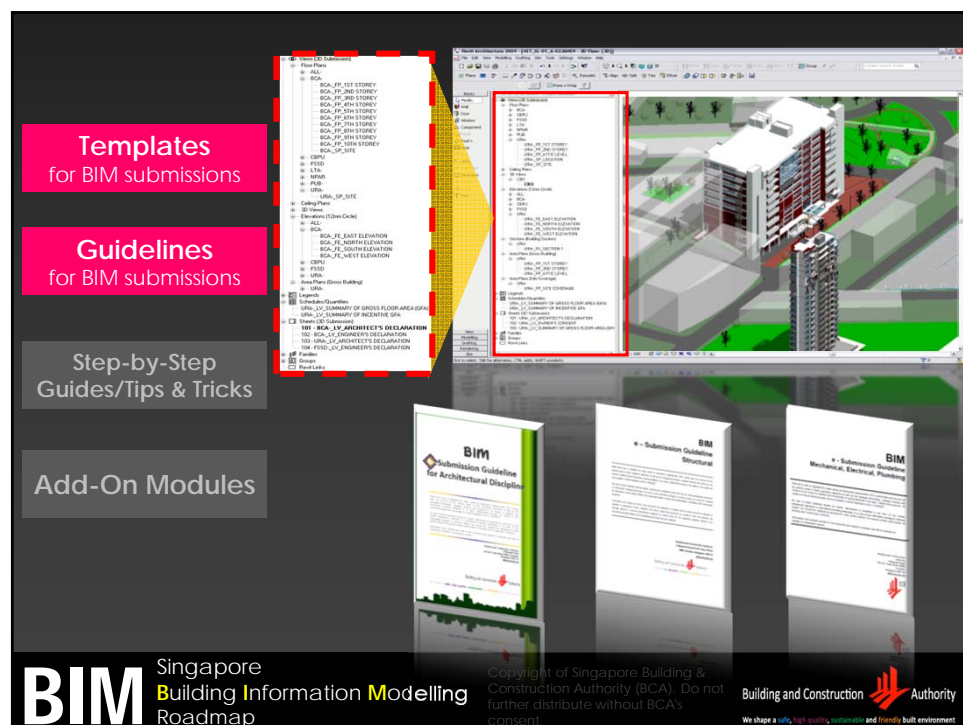
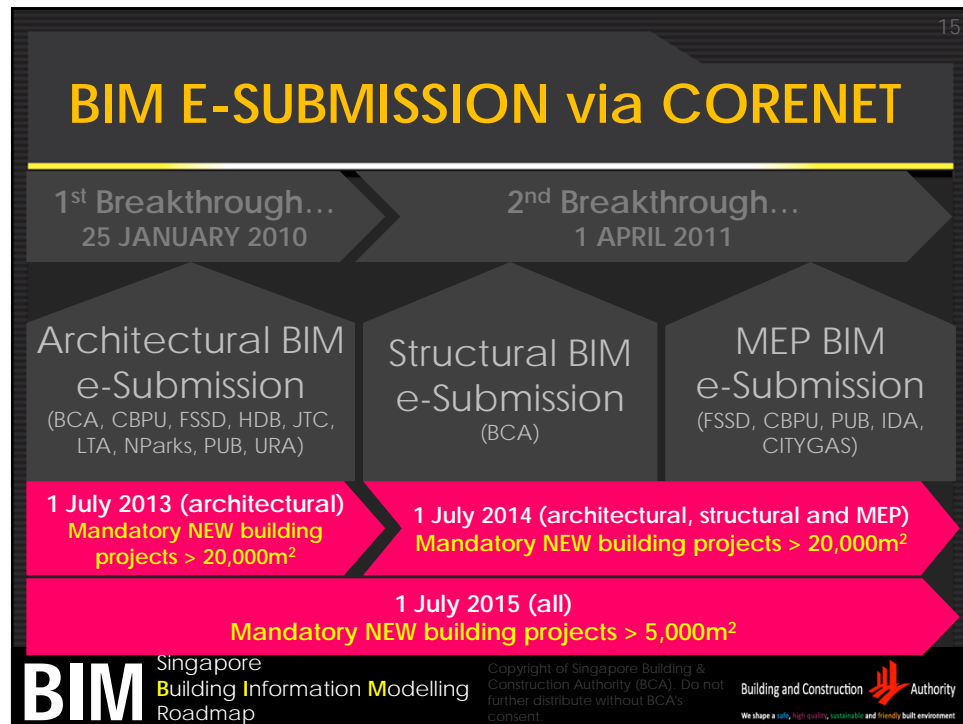
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Templates
for BIM submissions


Guidelines
for BIM submissions

Step-by-Step
Guides/Tips & Tricks

Add-On Modules



E-learning



General requirement
DELIVERABLE'S FORMAT
(OTHER AGENCIES)

- A SINGLE DWG/PDF FILE

via CORENET
in submission system

CHAPTER 1: CUSTOMISATION

CHAPTER 2: GETTING STARTED

CHAPTER 3: PROJECT ELEVATION/DATUM LEVEL

CHAPTER 4: SITE CONFIGURATION

CHAPTER 5: GFA TABULATION

CHAPTER 6: SITE & SITE COVERAGE TABULATION (ONLY AFFECTING SITE PLAN)

CHAPTER 7: ANNOTATION & SYMBOLS

CHAPTER 8: A&A WORKS/RE-SUBMISSION/AMENDMENTS

CHAPTER 9: ENDORSEMENT & DATA INFORMATION

CHAPTER 10: EXPORT/PUBLISH TO DWG

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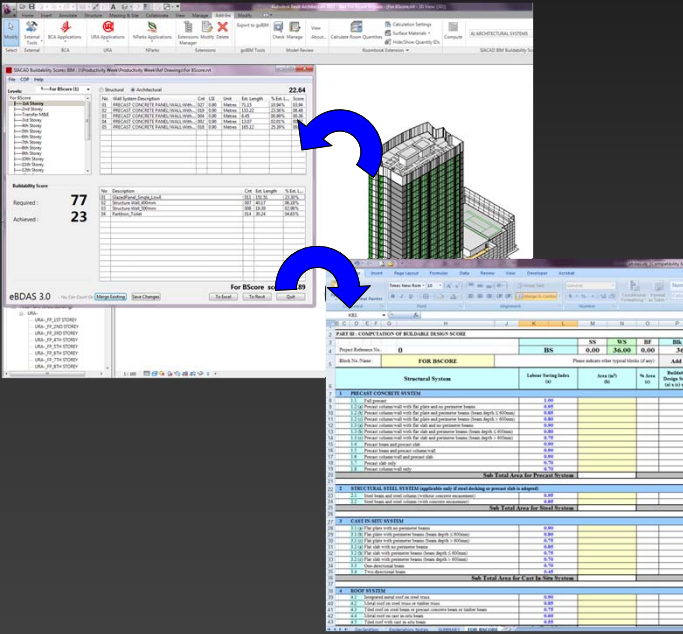
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Templates
for BIM submissions

Guidelines
for BIM submissions

Step-by-Step
Guides/Tips & Tricks

Add-On Modules



The screenshot shows the eBIMAS 3.0 interface. On the left, there's a tree view of the project structure. In the center, a 3D model of a building is displayed. On the right, a table titled 'FOR DISCLOSE' lists various deliverables and their status. The table has columns for 'Deliverable', 'Status', 'Remarks', and 'Action'. The table is divided into sections for 'Pre-Construction System', 'Construction System', and 'Post-Construction System'.

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BIM E-SUBMISSION via CORENET



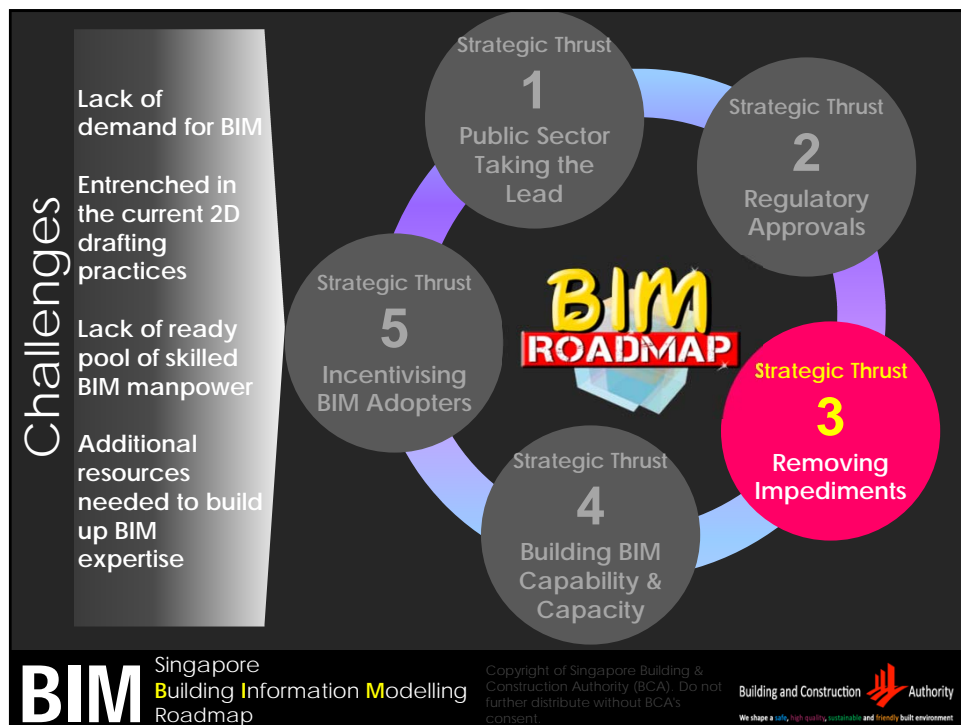
“The successful completion of the CORENET BIM submission project is probably the world's first by any government regulatory authority”

Denis Branthonne,
Regional Director, Autodesk
(left, with our Deputy CEO Mr Ong See Ho)

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BIM STEERING COMMITTEE

Mr Lee Chuan Seng
BIMSC, Chairman



Mr Lam Siew Wah
BIMSC, Deputy Chairman



Er Lai Huen Poh
BIMSC, Deputy Chairman



Objective

- ❖ To lead the **development of BIM standards** and supporting resources to facilitate the collaborative use of BIM, and
- ❖ To advise on areas needed to enable effective implementation of BIM at company, project and industry level



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BIM STEERING COMMITTEE

BIM Steering Committee

BIM Guide Workgroup


Legal & Contractual Workgroup

Interdisciplinary Workgroup

- ✓ To define a industry-wide **BIM Guide**

- ✓ To define a legal & contractual framework – **BIM Particular Conditions**
- ✓ To study BIM modeling effort and review payment schedule to remunerate the effort and identified a list of value-added services


- ✓ To study workflow & interaction btw design consultants & their interaction with contractors
- ✓ To study feasibility of newer interaction methods such as early contractor involvement (ECI) and integrated



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SINGAPORE BIM GUIDE

Launched May 2012



Singapore BIM Guide

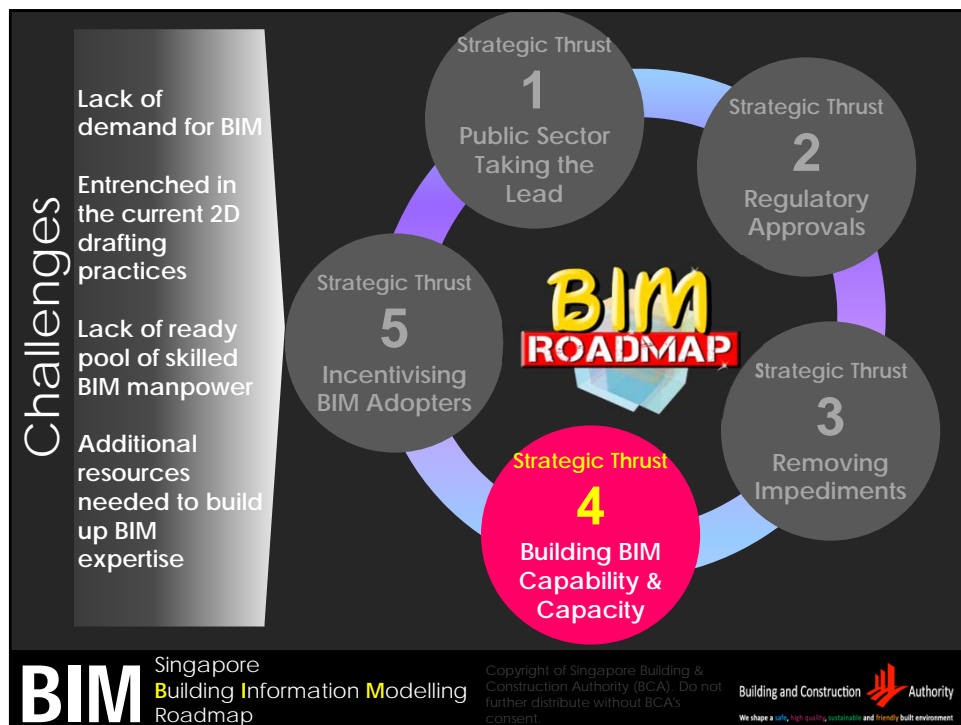
Building and Construction Authority
#16-02 Tower Block MND Complex
Singapore 059113
www.bca.gov.sg

DOWNLOAD:
http://www.corenet.gov.sg/integrated_submission/bim/BIM_Guide.htm

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CENTRE FOR CONSTRUCTION IT (CCIT)

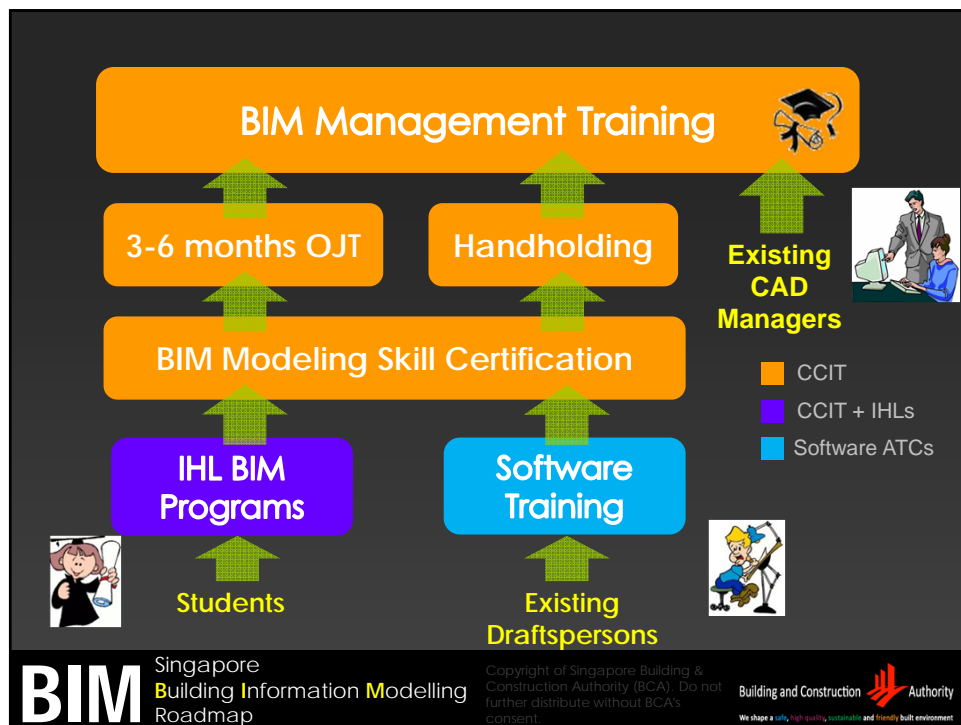


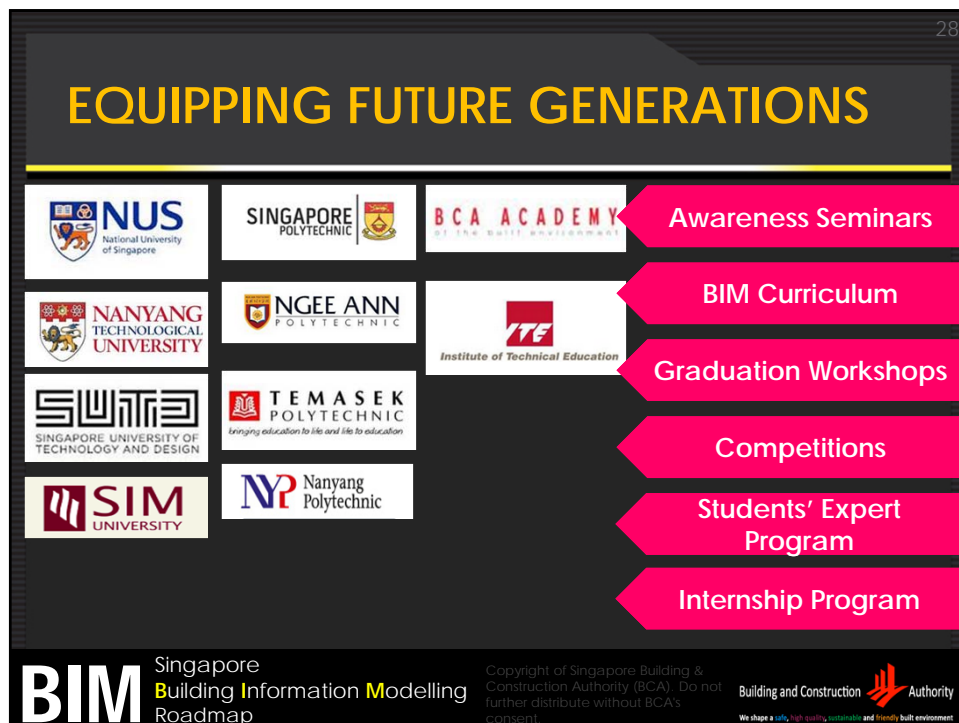
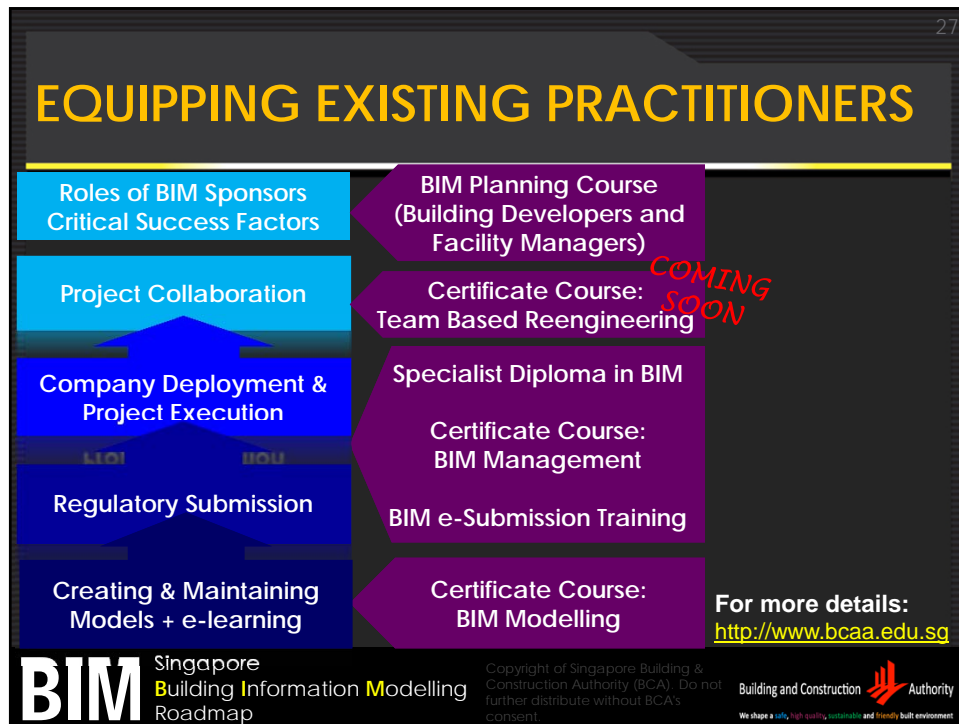
- Outreach Programs
- Chaperon/Handholding
- Trainings
- Standards

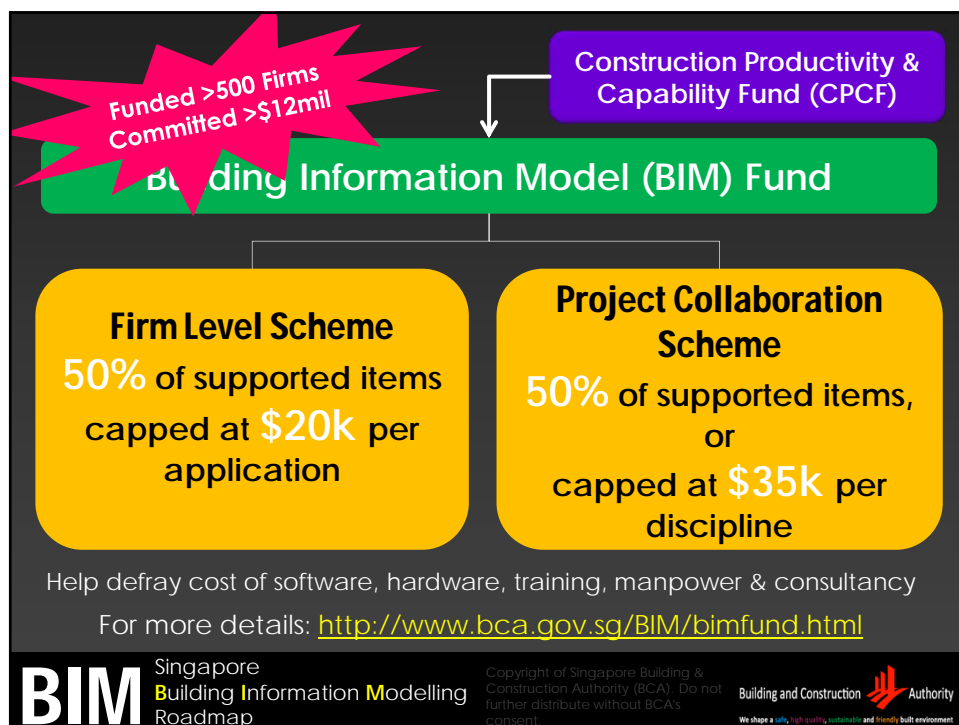
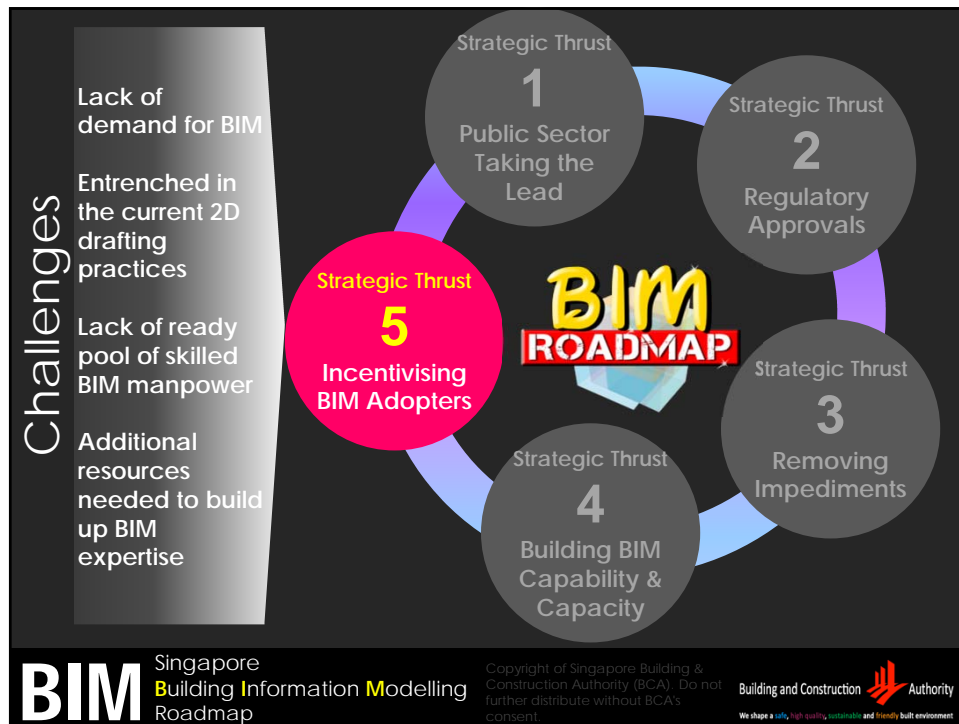
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For find out more BIM projects in Singapore:
<http://www.bca.gov.sg/Publications/BuildSmart/buildsmart.html>

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PRODUCTIVITY GAIN – CASE 1

Project Collaboration Scheme

Request for Information (RFI)

Reduced 52%

Category	2D (%)	BIM (%)
Architecture	39%	22%
Structural	75%	41%
M&E	30%	6%

- ✓ Improved Presentation/ Visualisation
- ✓ Faster Documentation
- ✓ Reduced Errors in Construction Documents

SAFRA CLUBHOUSE


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PRODUCTIVITY GAIN – CASE 3

Firm Level Scheme



138 Hrs Saved



Category	Using BIM (hours)	Conventional 2D (hours)
Clash Detection	90	170
BD (hours)	36	170
Total time spent	572	710

VERMONT CONDOMINIUM

- ✓ Faster Changes
- ✓ Faster Documentation
- ✓ Higher Accuracy & Fewer Site Coordination Problems
- ✓ Improved Visualisation
- ✓ Clash Detection
- ✓ Positive Impact on Winning Tenders

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Upcoming BIM Events in Singapore...

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SINGAPORE CONSTRUCTION PRODUCTIVITY WEEK 2013

29-Jul (Mon)	30-Jul (Tue)	31-Jul (Wed)		01-Aug (Thu)		02-Aug (Fri)
SCPW	IPE	SCPW	IPE	SCPW	IPE	SCPW
BIM Competition Finalists Presentation and Final Judging	BIM IPE Meeting 2013 (by invitation)	<ul style="list-style-type: none"> ✓ Official Launch : SCPW 2013 & Build-Tech Asia ✓ Skilled Builders' Competition ✓ Build-Tech Asia Exhibition 2013 ✓ SCPW Conference 2011 (Construction & Productivity Track) 	<ul style="list-style-type: none"> ✓ Government BIM Symposium 2013 (Closed-Door) ✓ BIM Workshop (by invitation) 	Build-Tech Asia Exhibition 2013	<ul style="list-style-type: none"> ✓ Prize Giving for BIM Competition & BIM Mobile Apps Challenge ✓ IPE-BIM cum SCPW Conference 2013 (BIM Track) 	<ul style="list-style-type: none"> ✓ Build-Tech Asia Exhibition 2013 ✓ Amazing Race

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BIM RELATED ACTIVITIES 2013

29 July to 2 August 2013 @ Singapore Expo

BIM International
Panel of Experts'
Meeting 2013

Government BIM
Symposium 2013
+
BIM Conference
and Workshop
2013

BIM Competition
2013
+
BIM Mobile Apps
Challenge

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SINGAPORE BIM COMPETITION AND BIM MOBILE APPS CHALLENGE 2013

Total of 55 team
>500 participants

■ <http://sgbimcompetition.com>



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