# Implementation Plan
# of
# Electronic Submission Hub (ESH)
# and
# Building Information Modelling (BIM)

Buildings Department
31 July 2018

# Agenda

1. Overview of ESH

2. BD's Tentative Implementation Plan of ESH

3. 2017 Policy Address & 2018 Budget

4. Present Situation

5. BD's Tentative Implementation Plan of BIM

6. Singapore and Local Experience

7. Proposed Template / Guidelines / Major contents

8. Programme

# Overview of ESH

- Establish a central hub to allow on-line e-submissions by the public, e-referrals to Centralized Processing System (CPS) participants and e-approval of the applications under Buildings Ordinance

- Allow communication and processing of building development related submission under other departments/authorities

- Allow the self-service tracking of application process

- Integrate the existing Electronic Form Submission System with the new ESH

- Facilitate the use of BIM (one of the acceptable electronic submission formats) by the building professionals for plan submission

- Develop computer-aided plan-checking facilities to improve efficiencies of plan approval processes

# BD's Tentative Implementation Plan of ESH

- ☐ Launch ESH for accepting plan submissions / applications electronically and referral to 36 Departments / Authorities in 3 stages starting from **mid-2021 to 2026**

# 2017 Policy Address & 2018 Budget

## 2017 Policy Address (para 113)

**Construction and Related Professional Services Sectors**

From 2018, adopt BIM technology in the design and construction of **major government capital works projects** and promote the use of this technology in **private construction projects**.

## 2018 Budget(para 115)

**Construction Innovation and Technology Fund**

$1 billion Construction Innovation and Technology Fund to boost the construction industry to adopt new technology.  Financial support to acquire the software and hardware, nurture the expertise required such as BIM, to receive training for students and practitioners.

# Present Situation

- **PNAP ADM-19 - Use of AutoCAD for floor area calculation in GBP submission**
  - Submitted in DVD-rom
  - Standard format / file name / diagram layers / presentation style

- **PNAP ADV-34 - Acceptance of BIM as supplementary information for plan submissions**
  - Submitted in DVD-rom
  - BIM viewing software for free download
  - Examples: Innovative building design, complex drainage/ superstructure, sequence and phasing of works

# BD's Tentative Implementation Plan of BIM

☐ Accept BIM submissions (**GBP only**) for mathematical calculations to facilitate verification and checking area calculation under the Buildings Ordinance in **early / mid-2019**

☐ Cover diagrammatic breakdown and details on calculation of the GFA, UFA, site coverage, plot ratio, refuge floor area, site coverage of greenery, etc.

☐ Revise PNAP ADM-19 - define the standard submission requirements

# Singapore Experience

- Singapore BCA (Building and Construction Authority)
- Architectural BIM e-Submission templates
  - Archicad 20 & Archicad 21 Templates and Template Guides
  - Revit 2015, Revit 2016 Templates and Template Guides
  - https://www.corenet.gov.sg/general/building-information-modeling-(bim)-e-submission.aspx

# Local Experience / Adoption of BIM

☐ **The Housing Authority (HA) has started piloting BIM since 2006 with standards, guidelines and component families**

    ☐ https://www.housingauthority.gov.hk/en/business-partnerships/resources/building-information-modelling/

☐ **Building Information Modelling – Asset Management (BIM-AM)**

    ☐ providing BIM modelling standard, coding standard and information requirement for E&M systems and assets at handover stage for building operation and conforming to EMSD BIM-AM System.

    ☐ https://www.emsd.gov.hk/en/engineering_services/project_management_consultancy/highlights_of_work/bim_am/index.html

# Local Experience / Adoption of BIM

- **Construction Industry Council**
- Building Information Modelling Standards (Phase One) (September 2015)
- Building Information Modelling for General Building Plan Submission (Phase One) Consultancy Report (February 2017)

- [http://www.bim.cic.hk/EN/Info/Lib_List?cate_id=2](http://www.bim.cic.hk/EN/Info/Lib_List?cate_id=2)

# Proposed Templates for BIM

☐ **Archicad**

☐ **Revit**

# Modelling Guidelines

- **Format and software version**
- **file name/drawing number convention**
- **presentation style – drawing scale, area diagram, dimension, decimal places, text font, line style**
- **colour codes**
- **dimensioned and annotated GFA diagrams**
- **title panel**

# Proposed Programme

| | Tasks | Duration | 2018 | | | | | 2019 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar |
| 1 | Collection of sample templates | 1 month | ■ | | | | | | | |
| 2 | Assess and consolidate the template | 1 month | | ■ | | | | | | |
| 3 | Consult the working group members on the proposed template | 1 month | | | ■ | | | | | |
| 4 | Revise PNAP ADM 19 | 3 months | ■ | ■ | ■ | | | | | |
| 5 | Preparation of APSEC paper | 1 month | | | | ■ | | | | |
| 6 | Endorsement of PNAP ADM 19 and templates by APSEC | | | | | | 07/12/18 | | | |
| 7 | Issue of PNAP ADM 19 | | | | | | | ■ | | |

# Discussions