

BEng-BSE Degree Programme

<http://ibse.hk/BEng-BSE.htm>



BSE Final Year Projects



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Sep 2018

FYPs



- The Goals of the FYPs
 - The final year project is the **culmination** of the degree – it gives students a chance to demonstrate all they have learned. The project module is very different from other modules. Although students are supervised, **the onus is on the student** to define the problem boundaries, to investigate possible solutions, and to present the results in writing, verbally and in action.



FYPs

Design projects

Applied research project

Semester One

Semester Two

SBS5397 Final Year Project 1
(BSE Conceptual Design)

SBS5499 Final Year Project 3
(MEP Design)

(Identify project supervisor, select/propose/confirm study topic; attend research training seminars)

SBS5498 Final Year Project 2
(Applied Research Project)

(Group & individual)

(Mainly individual)

FYPs



- Design projects: (3 credit units each)
 - SBS5397 Final Year Project 1 (BSE Conceptual Design)
 - SBS5499 Final Year Project 3 (MEP Design)
- Applied research project: (3 credit units)
 - SBS5498 Final Year Project 2 (Applied Research Project)

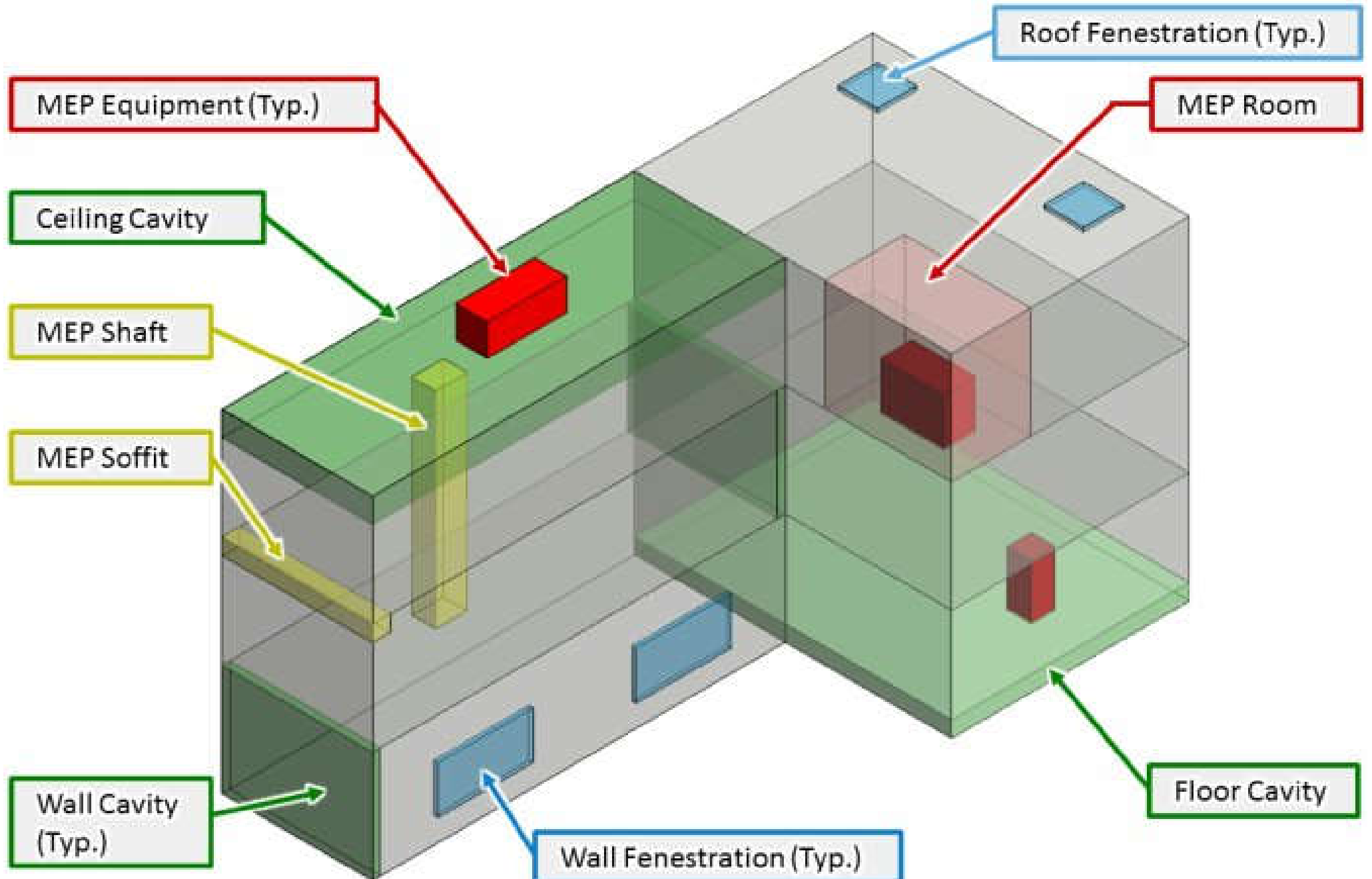


FYPs



- Final Year Project 1 (BSE Conceptual Design)
 - The module aims to enable students to understand the local business environment and opportunities at present and near future. Students are also able to identify the site constraints, infra-structure, and micro-environment/ climate through the **site investigation**. It also equips students to master the **design activities**. It also provides students opportunity to cooperate and communicate with teammates.
 - Assessment strategies:
 - Business Plan Proposal: 20%, Site Investigation Report: 20%, Final Report: 30%, Progress: 10%, Oral Presentation: 20%

Final Year Project 1 (BSE Conceptual Design)



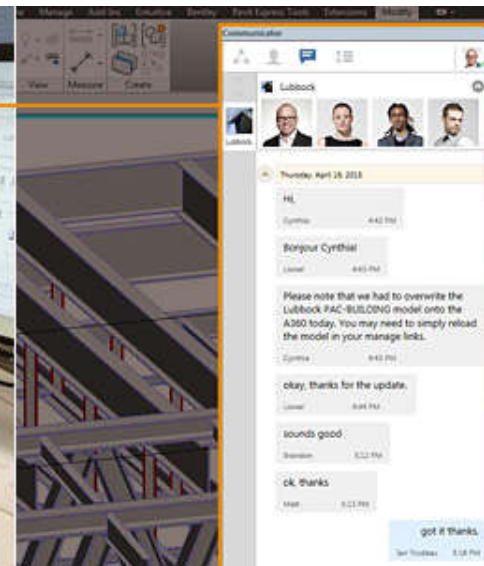
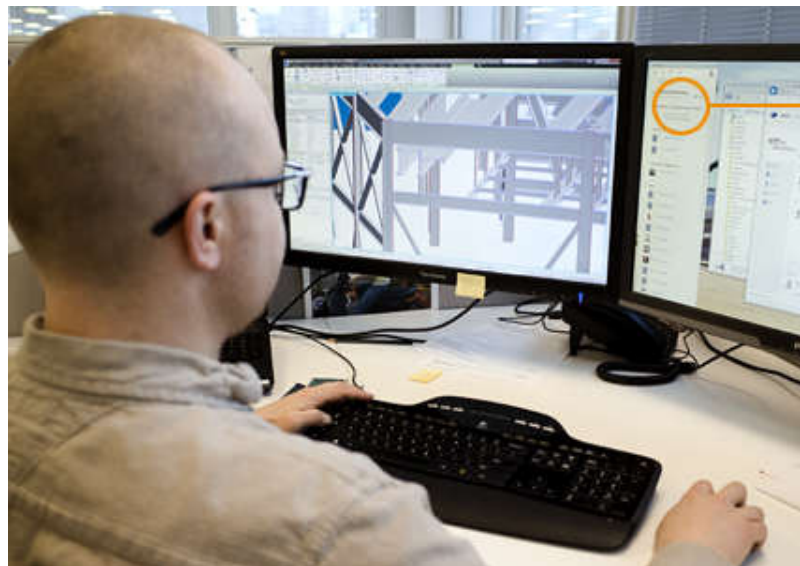
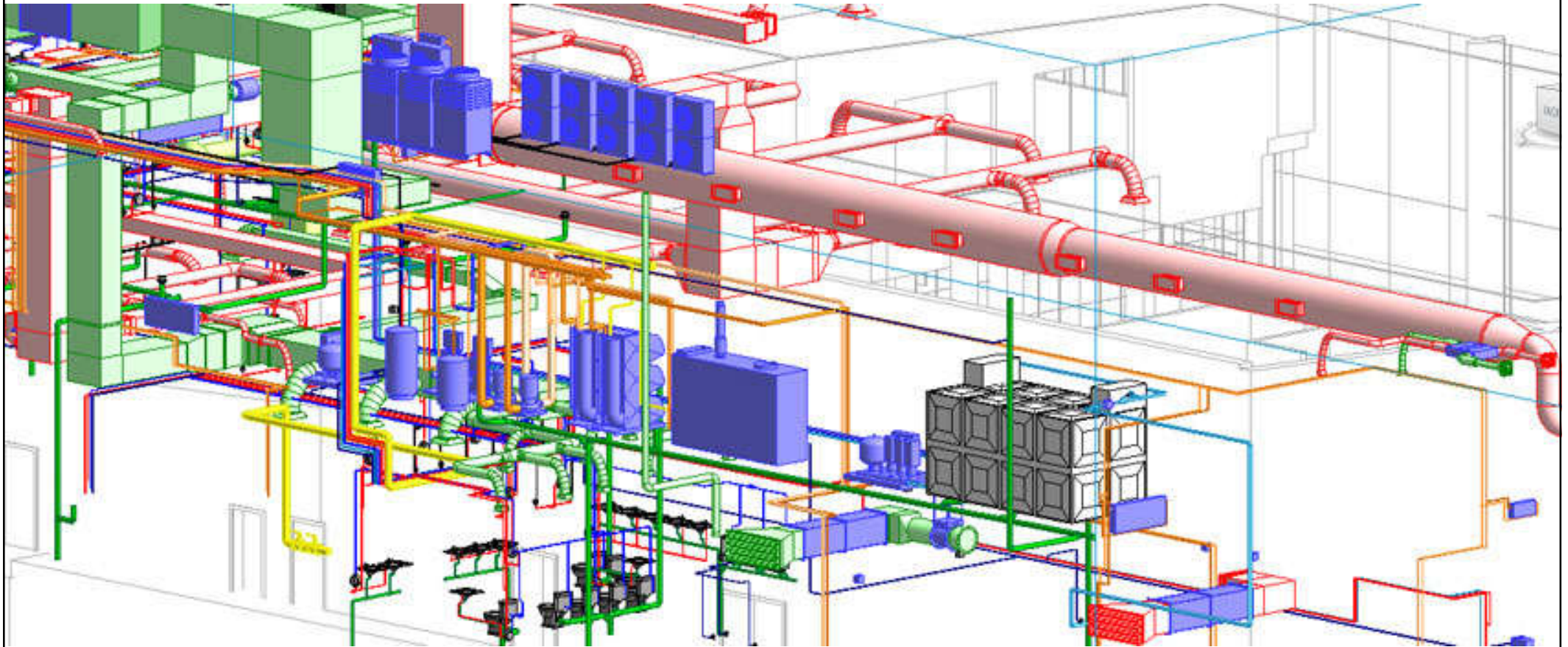
FYPs



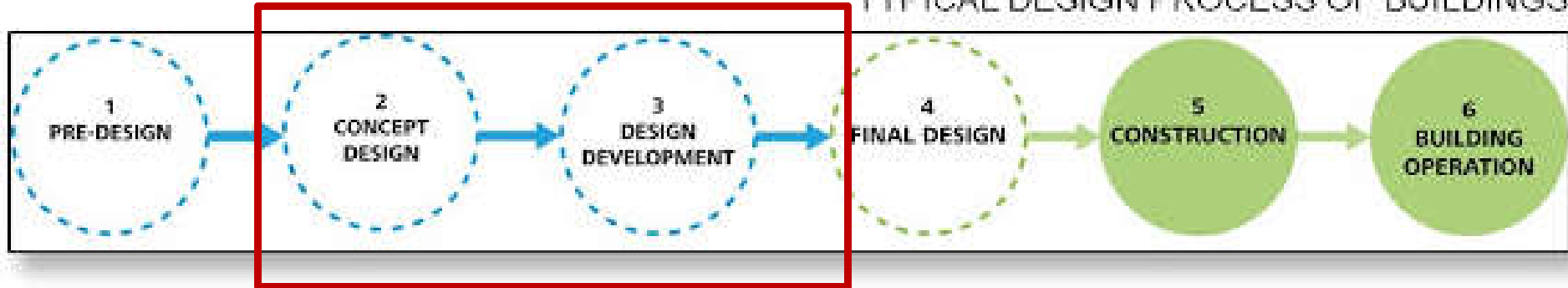
- Final Year Project 3 (MEP Design)

- To perform a **detailed and in-depth design** as the role of building services engineer in a design team with consideration of installation, testing and commissioning, measurement and verification as well as operation and maintenance in the dimensions of technical justifications, environmental awareness and economic justifications. It also provides students opportunity to cooperate and communicate with teammates.
- Assessment strategies:
 - Design Report: 40%, Final Design Report: 30%, Exhibition: 10%, Progress: 10%, Oral Presentation: 10%

Final Year Project 3 (MEP Design): detailed design development

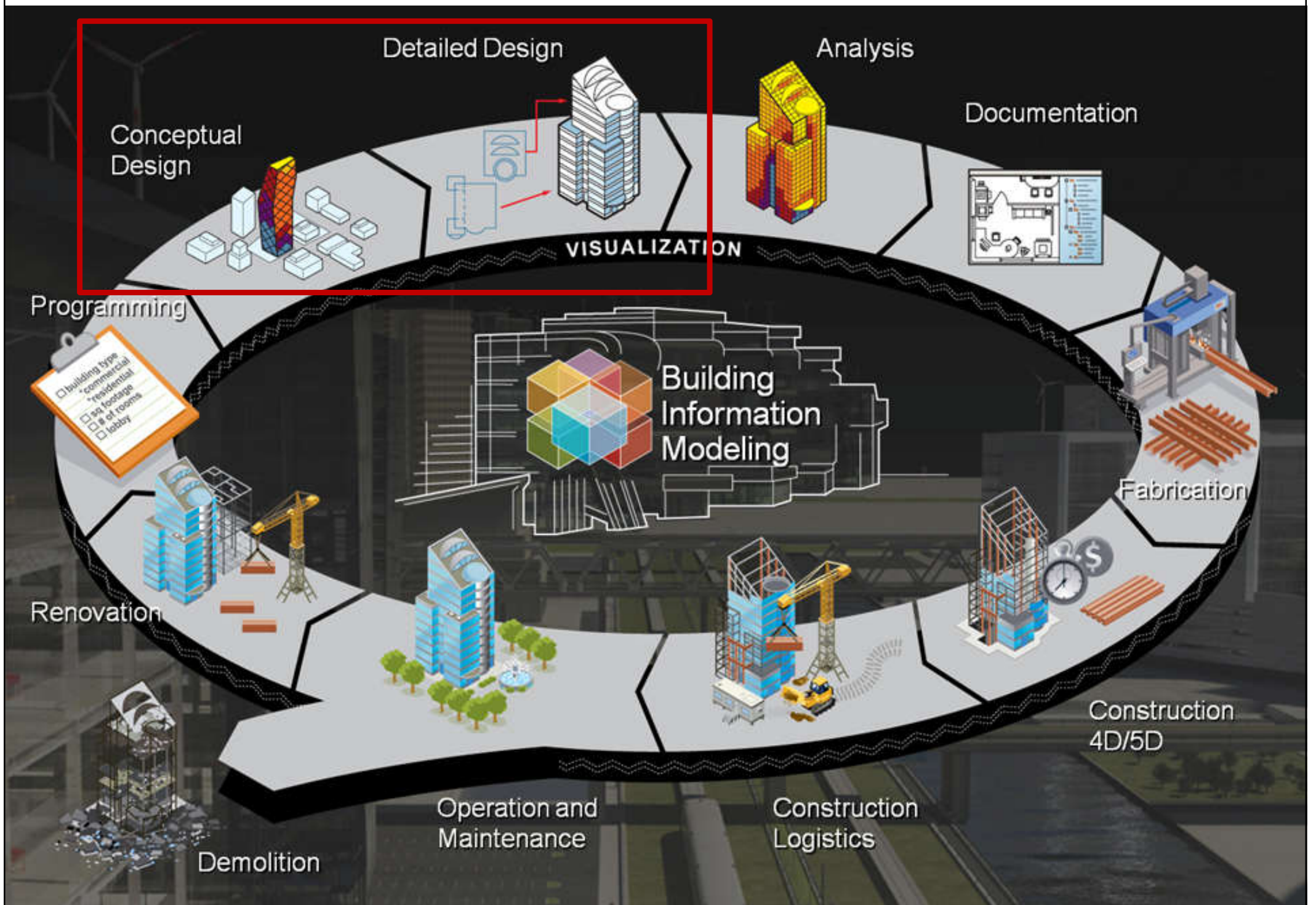


TYPICAL DESIGN PROCESS OF BUILDINGS



- Conceptual design
- Detailed design





FYPs



- FYP Coordinators:
 - Ir. Dr. Sam C. M. Hui (cmhui@vtc.edu.hk)
 - Dr. TSANG Kin Wai, Ernest (ernest_tsang@vtc.edu.hk)
- FYP Design Project Tutors:
 - Sr. Ir. Dr. WU Wing Kin, Dennis (denniswu@vtc.edu.hk)
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 - Ir Prof. K. P. Cheung (kpcheung@vtc.edu.hk)
 - Ir Dr. NG Tsz Ho Roger



FYPs



- Final Year Project 2 (Applied Research Project)
 - To develop skills in **applied research and problem solving** in major aspects of building services engineering which can integrate the technical design and research elements
 - It encourages **critical** investigation, analysis and synthesis in the professional context and the integration of knowledge gained in different subject areas
 - It will develop students' skills in literature review, gap analysis, problem identification, objectives formulation, research methodology, project implementation, report writing and oral presentation

FYPs



- Final Year Project 2 (Applied Research Project)
 - Moreover, the module promotes students' creativity and the ability to generate new ideas. It also aims to inspire students to keep abreast of developments in the profession and pursue independent and life-long learning.
 - Assessment strategies:
 - Project Proposal: 10%
 - Interim Report: 20%
 - Final Report: 50%
 - Oral Presentation: 20%
 - Industry collaboration: Potential to invite outside companies to support the research study (e.g. from WIL)



FYPs



- Four main phases in the Applied Research Project (individual):
 - 1. Choosing the right project
 - 2. Planning and execution of the project
 - 3. Documentation of the project
 - 4. Management of the project
- Find a topic and get a supervisor
 - Subject areas (broad range of possible issues)
 - Research topic (specific area & title)

FYPs

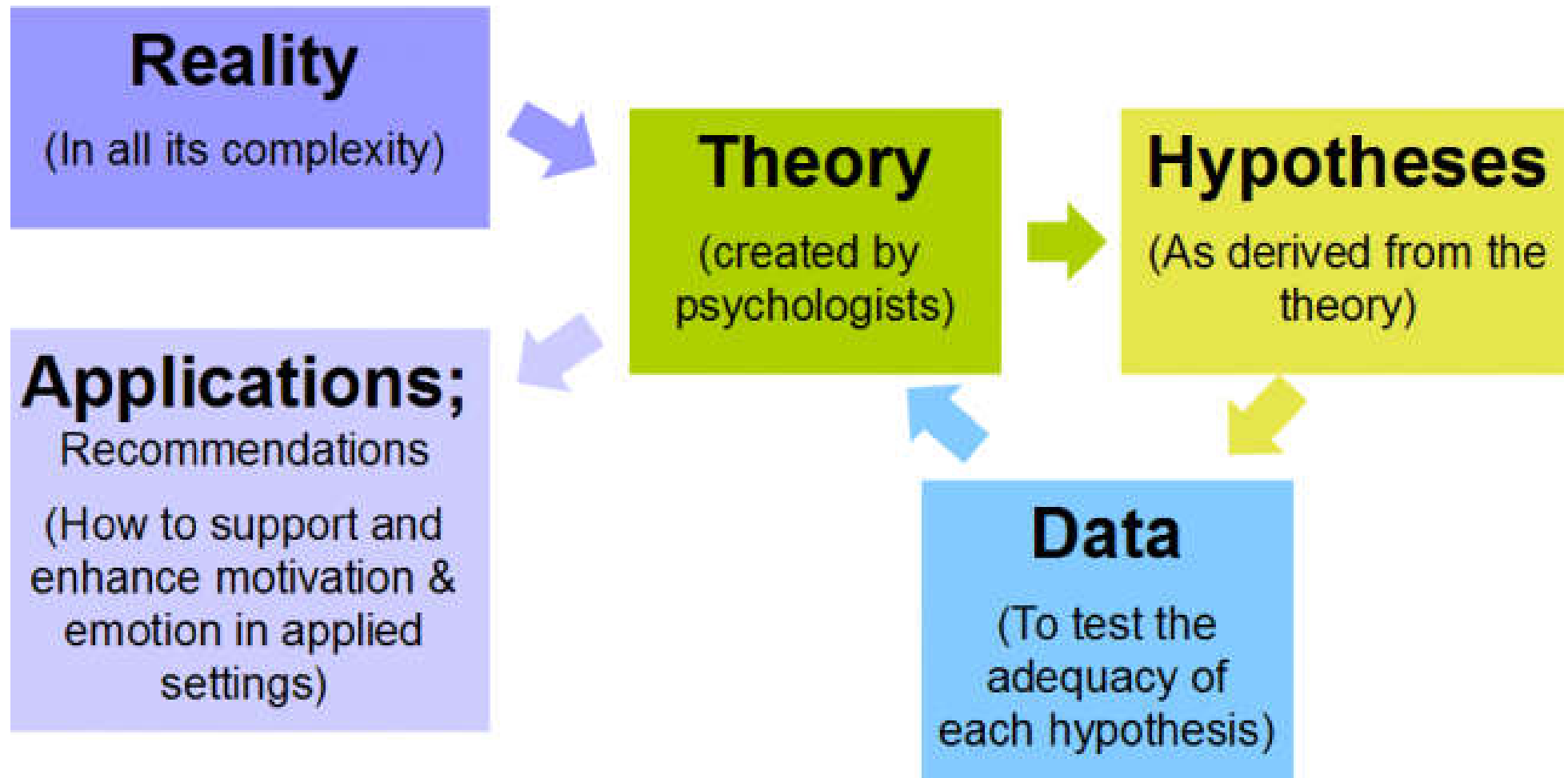


- Identifying research topic
 - Student needs to explore and discuss with the teaching staff on his/her intended research area of study in Semester 1
 - As a general guide, students may refer to the journal & conference articles in order to identify potential topics for their research. Book titles are generally NOT suitable as a research topic!
 - The student may identify an area of his/her own or select a potential topic from list provided

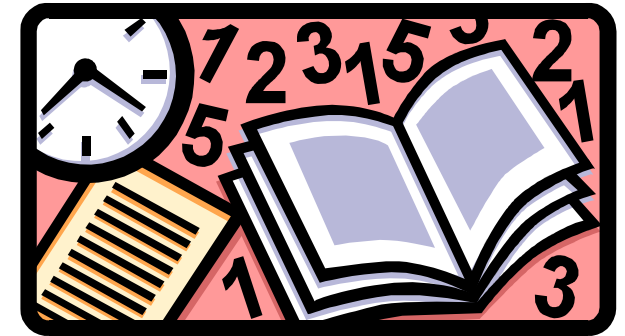
Example of FYP research process (IT/computing)



The research process model



- Reviewing the literature
- Formulating a research problem
- Identifying variables
- Constructing hypothesis
- Preparing the research design
- Data collection
- Data analysis
- Interpretation & report writing



Thank You!



Q & A

