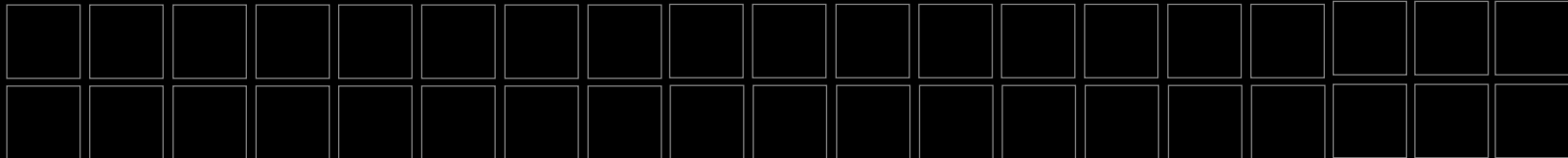
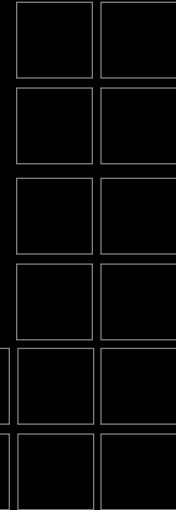




EC-ASEAN Energy Facility (EAEF)

Projects 64 and 68 2nd Meeting



Development of a Comprehensive Database for Building Energy Performance Benchmarking in the ASEAN Region

– Progress updates

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Agenda

- 1. Review of objectives**
- 2. Review of general methodology**
- 3. Progress updates of tasks**
- 4. Updates of information centre**



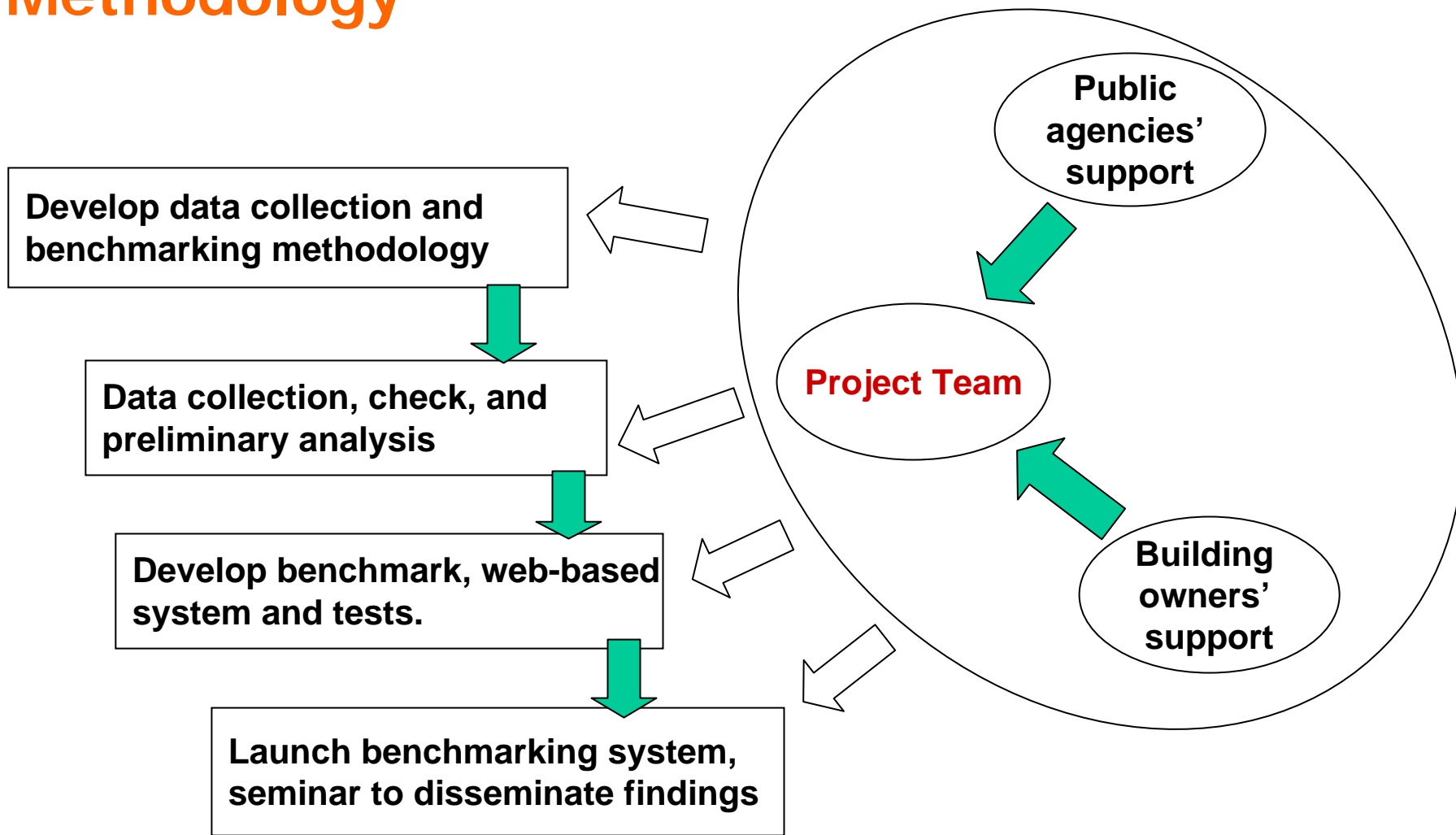
Objectives

To establish a comprehensive, reliable and accurate database for benchmarking energy consumption and efficiency in commercial buildings. The main deliverables are:

- 1. A comprehensive, independent and reliable internet based energy benchmarking system accessible by all users.**
- 2. Document the methodology of the development to serve as guide for extension to other parts of ASEAN.**
- 3. From the benchmarking, to develop a building energy performance classification system, paving the way for building energy labeling.**



Methodology





Tasks updates

Task 1: Design sample frame & identify buildings for data collection

Sub-task	Progress	Remarks
1.1 Project inception meeting (CTBP*)	Done	27 Mar to 29 Mar, Athens.
1.2 Develop data procurement form and define terminology (CTBP*)	Done (office building) Start: Nov 05 (hotel)	Data collection form is much more simplified now.
1.3 Design sample frame and identify buildings for data collection (CTBP*)	Delayed Target: Oct 05 (office building) Start: Nov 05 (hotel)	PTM to present progress in Malaysia.

* Team leader



Tasks updates

Task 1: Design sample frame & identify buildings for data collection

Sub-task	Progress	Remarks
1.4 Investigate parameters (IEN*)	Done (office building) Start: Nov 05 (hotel)	ESU has done the analysis based on existing database of commercial office buildings in Singapore. IEN to present the progress.
1.5 Workshop among members (PTM*)	Postponed Initial plan: Aug 05	22 Sep to 23 2 nd meeting in Brussels, Belgium.
1.6 Document methodology (CTBP*)	On-going Target: Nov 05	

* Team leader



Tasks updates

Task 2: Conduct field data collection from building owners and selected measurements for verification. Questionnaire survey and energy bill analysis will be made.

Sub-task	Progress	Remarks
2.1 Seek permission for data collection & preliminary briefing (CTBP-PTM*)	On-going Target: Nov 05 (office building) Start: Nov 05 (hotel)	In Singapore, buildings are approached for data updates and further investigation, e.g. system energy audit. In addition, ESU try to invite 50 new office buildings and hotels to the benchmark. PTM to present progress in Malaysia.
2.2 Data collection and field data verifications (CTBP-PTM*) * Team leader	On-going Target: Jan 06 (office building) Start: Jan 06 (hotel)	



Tasks updates

Task 2: Conduct field data collection from building owners and selected measurements for verification. Questionnaire survey and energy bill analysis will be made.

Sub-task	Progress	Remarks
2.3 Processing data and preliminary analysis (CTBP-PTM*)	On-going Target: Feb 06 (office building) Start: Feb 06 (hotel)	ESU has done the analysis on existing database of commercial office buildings. PTM to present progress in Malaysia.
2.4 Documentation (CTBP*)	Target: Feb 06 (office building) Start: Mar 06 (hotel)	

* Team leader



Tasks updates

Task 3: Develop benchmarking curves and construct web-based benchmarking system

Sub-task	Progress	Remarks
3.1 Apply statistical tests to ensure accuracy, validity of data set in representing the entire population of data (CTBP*)	On-going Target: Feb 06 (office building) Start: Feb 06 (hotel)	ESU has done the analysis based on existing database of commercial office buildings in Singapore. PTM to present progress in Malaysia.
3.2 Conduct preliminary benchmark and test for consistency (CTBP-IEN*)	On-going Target: Feb 06 (office building) Start: Feb 06 (hotel)	

* Team leader



Tasks updates

Task 3: Develop benchmarking curves and construct web-based benchmarking system

Sub-task	Progress	Remarks
3.3 Develop web-based benchmarking and application concepts (CTBP*)	Brought-forward Target: Feb 06 (office building) Start: May 06 (hotel)	The first version of web-based benchmarking tool BEPB 1.0 is about to be available on the ESU website in late Oct 2005. In the future, Malaysia benchmark will be developed in the similar form.

* Team leader



Tasks updates

Task 4: Launch websites and conduct workshop to disseminate the information and training for benchmarking, prepare final report (CTBP*)

Progress	Remarks
Brought-forward Target: Feb 06 (office building) Start: May 06 (hotel)	Please refer to the information centre updates on the following page.

* Team leader



Information centre updates



Seminar and workshops:

- On 24 Oct 2005, a workshop will be conducted for the launch of web-based benchmarking tool of commercial office buildings in Singapore and the National Environment Agency's (NEA) building energy label program.

On site training (Malaysia):

- This will be conducted during further on site investigation, such as detailed energy audit and system data logging.

Website (benchmarking tool): <http://esu.com.sg/tools4.html>



Thank You

