



IBPSA Project 1

BIM/GIS and Modelica Framework
for
building and community energy system
design and operation

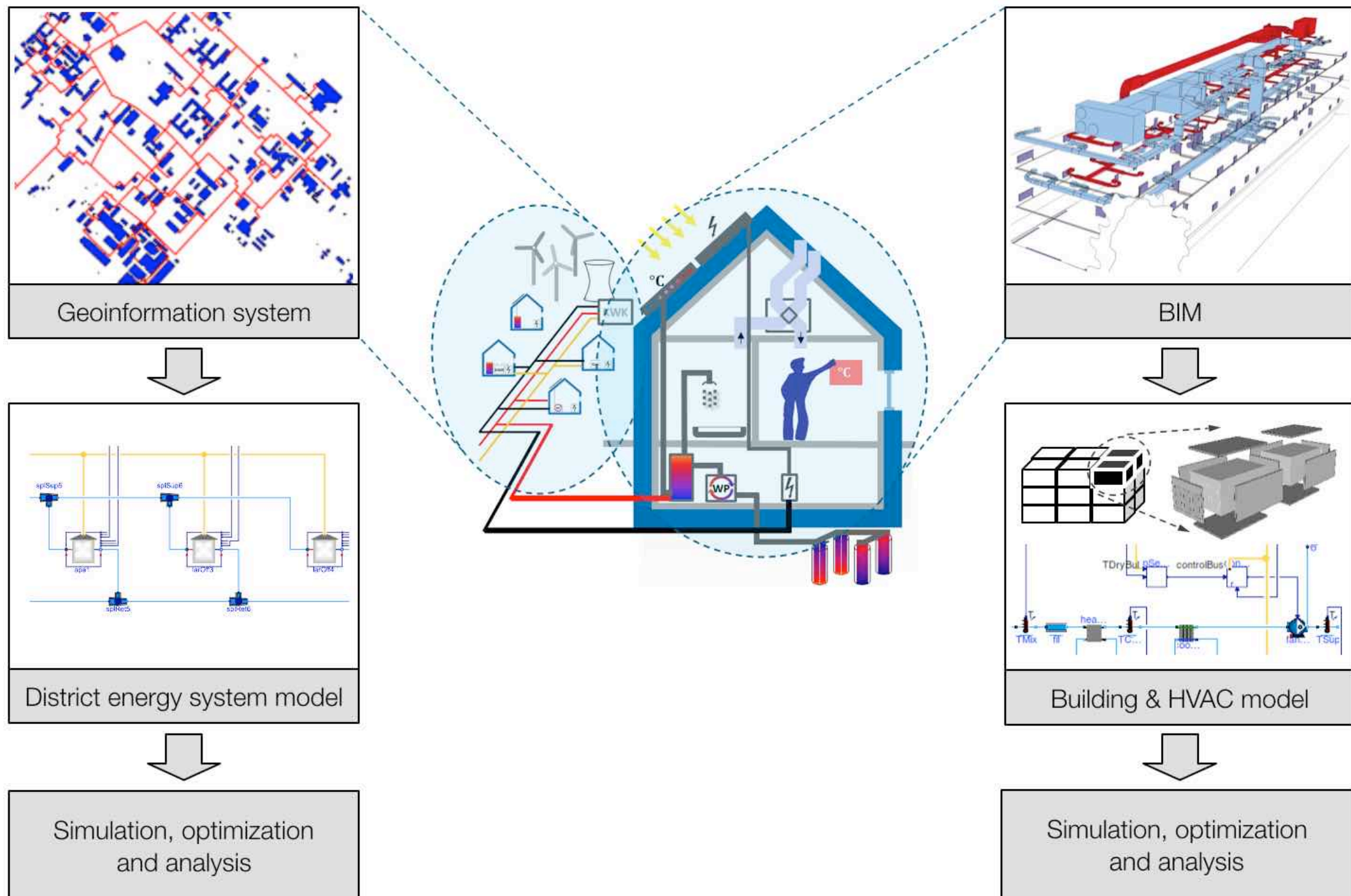
Michael Wetter, LBNL, Berkeley, CA

Christoph van Treeck, RWTH Aachen

Jerome Frisch, RWTH Aachen

May 6, 2020

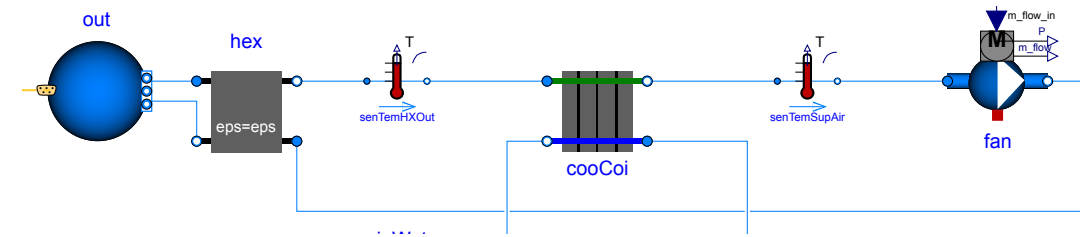
The vision of IBPSA Project 1 is to create open-source software that builds the basis of next generation computing tools for the buildings industry



Structure

Task 1: Modelica libraries for building and community energy systems

- WP 1.1: Library for design and operation
- WP 1.2: Model Predictive Control
 - BOPTEST
 - MPC Library



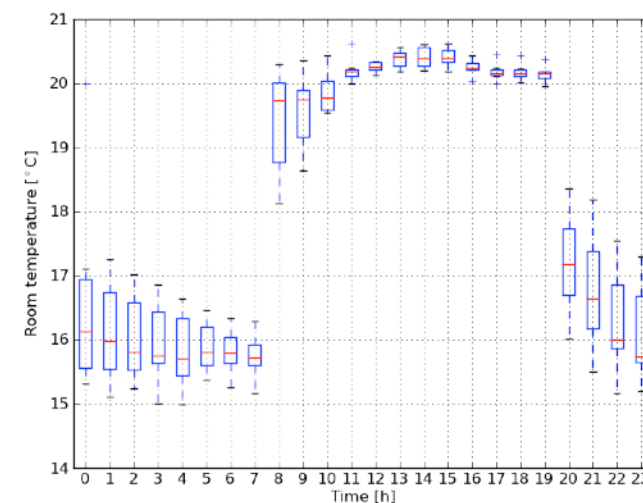
Task 2: Building and City Quarter Models

- WP 2.1: City Quarter Information Modeling
- WP 2.2: Building Information Modeling



Task 3: Application and Dissemination

- WP 3.1: Validation (DESTEST)
- WP 3.2: Application



Levels of participation

Sponsoring participant

- Cash \$5k per year. Thanks to
 - ENGIE Lab



Organizational participants

- minimum 0.5 full time employee per year, over the 5 year project
- contribute to 5 to 10 web-based coordination meetings annually
- attend semi-annual expert meeting, generally lasting 2 days

Individual participants

- no predetermined level of commitment, but needs to provide substantial contributions

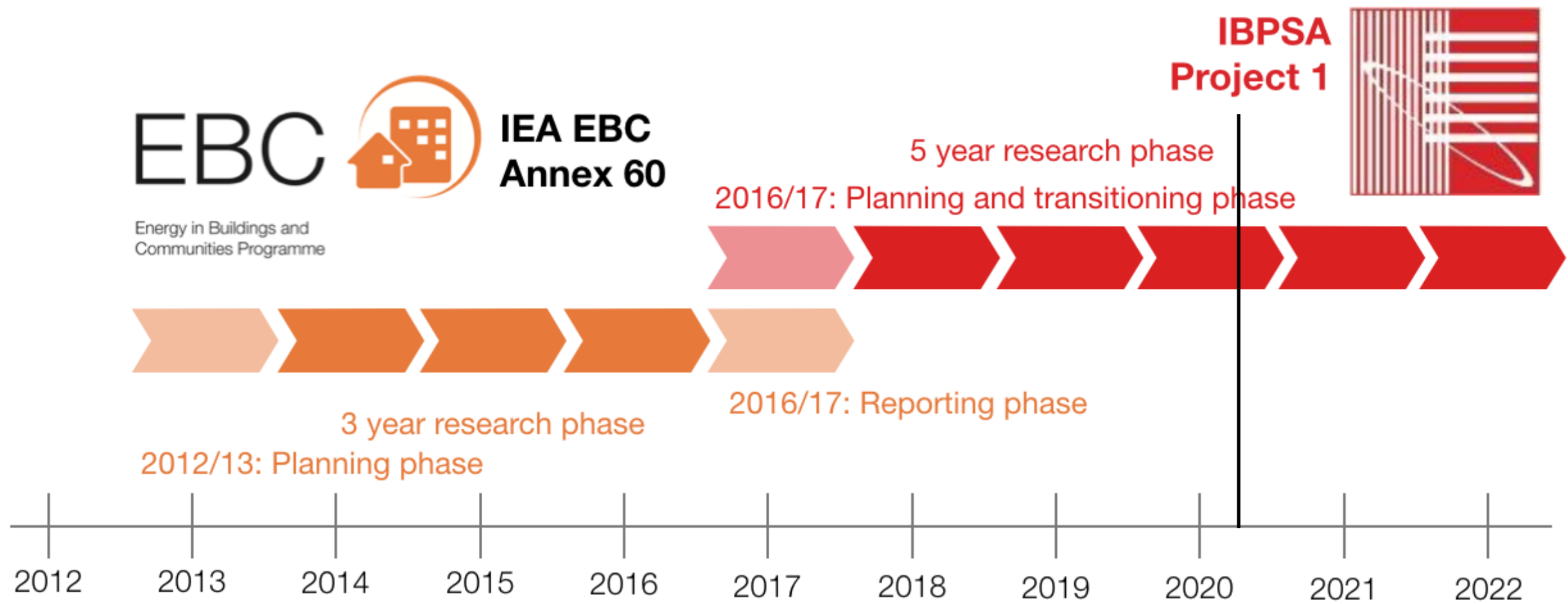
Intellectual property

IBPSA is the copyright and license holder.

All workshops, software and documentation will be open accessible to anyone.

Modelica models and other code will use the open-source BSD 3-Clause License.

Timeline



Today's Agenda

8:00 Brief overview (Michael Wetter and Jerome Frisch)

8:20 Presentations from activities, recent work and presentation of work plans (each 10 min plus 5 min questions)

- WP 1.1 Modelica library for design and operation (Michael Wetter)
- WP 1.2 Model Predictive Control (Lieve Helsen and David Blum)
- WP 2.1 City Quarter Information Modeling (Gerald Schweiger)
- WP 2.2 BIM (Jerome Frisch and Eric Fichter, 20 min total)
- WP 3.1 District energy DESTEST (Dirk Saelens)
- WP 3.2 Application (Alessandro Maccarini)

9:55 Project 1 publications (<https://ibpsa.github.io/project1/publications.html>)

- Text for acknowledgement section.

10:00 Poll about how potential participants feel about a in-person meeting in October 2020 in Montreal.

10:10 Coordination among tasks

10:30 Feedback and next steps

11:00 Adjourn