



IBPSA Project 1

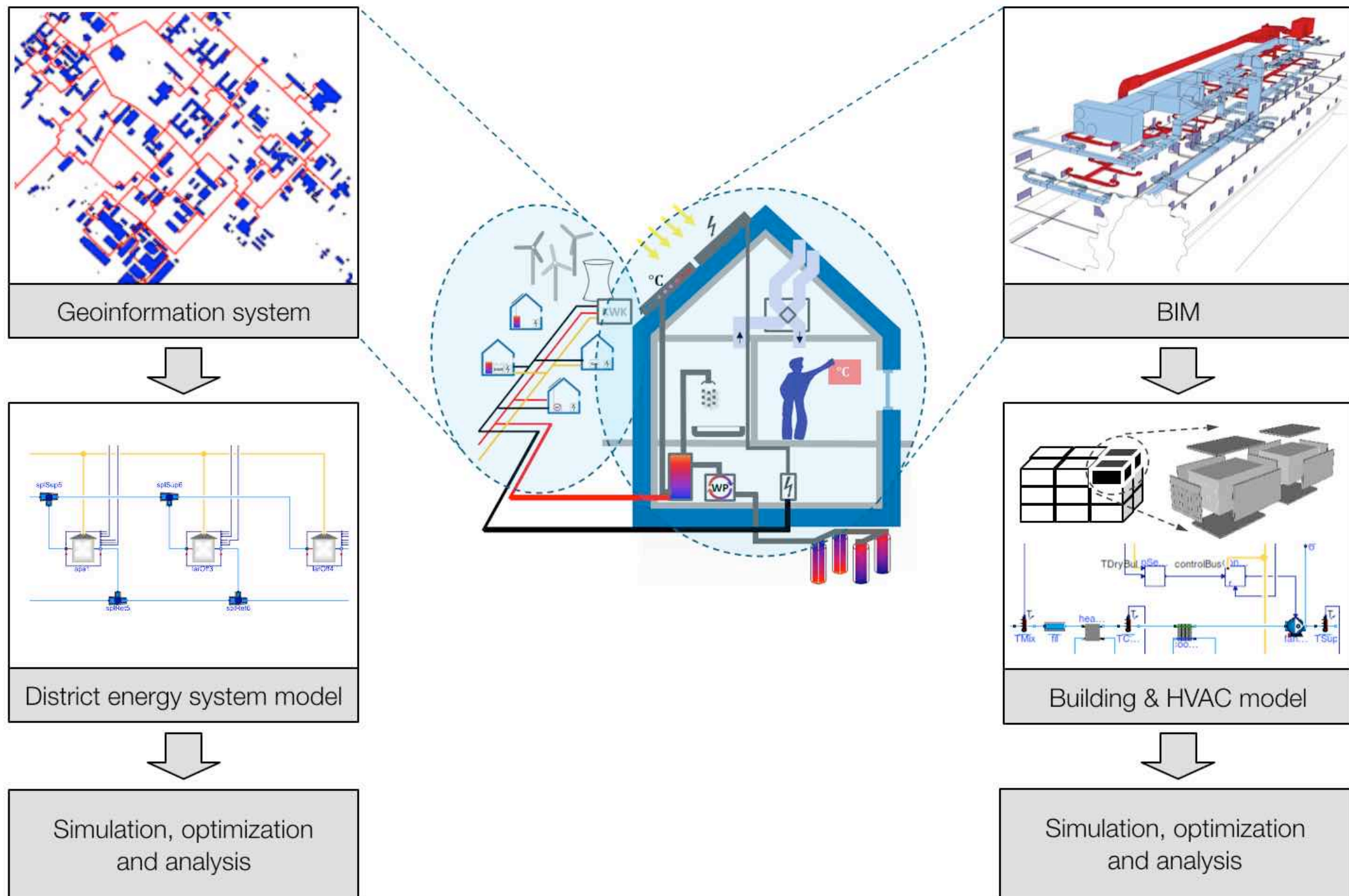
BIM/GIS and Modelica Framework
for
building and community energy system
design and operation

Michael Wetter, LBNL, Berkeley, CA

Christoph van Treeck, RWTH Aachen

March 28, 2022

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



Levels of participation

Sponsoring participant

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



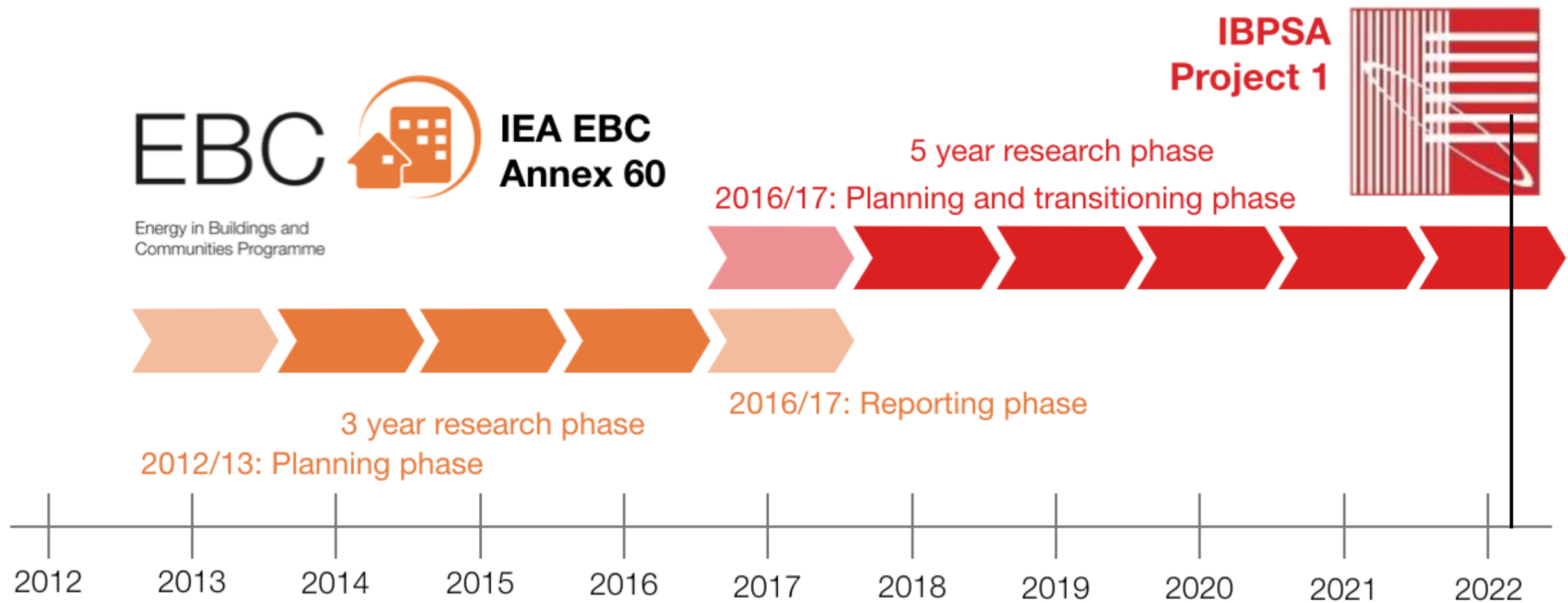
Organizational participants

- 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

Timeline



Announcements

American Modelica Conference

Conference: October 26 & 27, 2022

Workshops: October 28, 2022

Location: Dallas, TX

<https://2022.american.conference.modelica.org/>

May 1, 2022 Submission of full papers

June 1, 2022 Submission of extended abstracts for presentation-only
contributions and tutorials



Agenda

Day 1 - March 28, 2022

7:00 Brief overview and logistics (Michael Wetter, Christoph van Treeck, Avichal Malhotra)

Zoom setup, breakout rooms, participant names.

7:20 *Presentations from activities, recent work and overview of this meetings breakout groups* (each 10 min plus 5 questions, 5 min buffer)

- 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 (James O'Donnell, Gerald Schweiger)
- WP 2.2 BIM (Christoph van Treeck)
- WP 3.1 District energy DESTEST (Dirk Saelens)
- WP 3.2 Application (Alessandro Maccarini)

Overview of breakout groups.

8:55 Project 1 publications

9:00 Break

9:10 Breakout groups 1

10:00 Short break and switch to next breakout groups

10:05 Breakout groups 2

11:00 Breakout groups adjourn

Day 2 - March 30, 2022

7:00 Organization of the day (Michael Wetter and Christoph van Treeck)

7:10 Invited presentation and discussion:

Luigi Vanfretti,

Overcoming Resistance to Change: 10 years of development of the Modelica-based OpenIPSL library for electrical power grid simulation

8:40 Short break

8:45 Break-out session

10:30 Concluding remarks of previous session

10:35 Planning of next expert meeting and final report about Project 1.

10:55 Next steps

11:00 Adjourn