BIMEET

Project pitch

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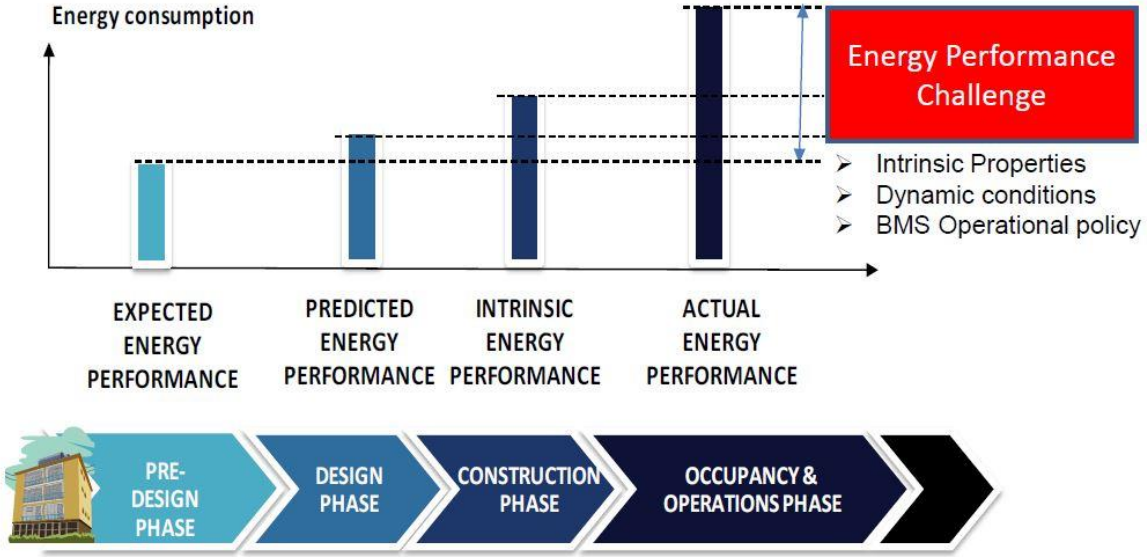
CHALLENGES

The "energy gap"

Energy use **predicted in the design** stage of buildings vs. the energy use of those buildings **in operation**

- Intrinsic properties
- Dynamic conditions
- Environmental uncertainties
- *Workmanship*
- *Occupants* behaviour
- BMS Operational Policy
- …



Extract from: Prof. Yacine Rezgui. Cardiff University. *Sustainable Places A Multi-disciplinary Perspective to Built and Natural Environment Challenges in the 21st Century*. Presentation. LIST Seminar. August 2016.

https://en.wikipedia.org/wiki/Performance_gap

BIMEET, THE CONCEPT

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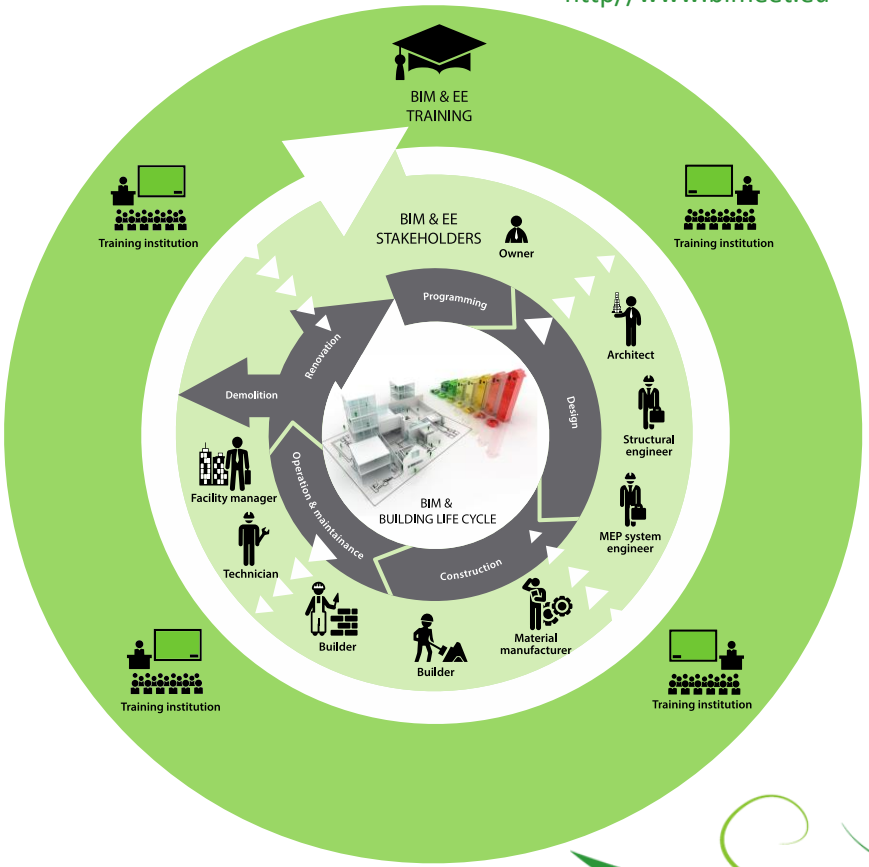
- BIM for Energy Efficient Buildings bridging the gap between **improved design and actual EE measurements in Operation & Maintenance**
- But only a **few dedicated trainings** offered across EU focus on this challenge
  - The **field is dynamic**: roles and competencies rapidly changing
  - Technologies still not completely **mature**

- BIMEET considers
  - **Each stage** of building's life-cycle
  - **All actors** involved
- To highlight specific skills required
  - For a global BIM approach
  - Enabling **achieving EE in buildings**



BIM TO BUILDING ENERGY MODELS – A BENCHMARK

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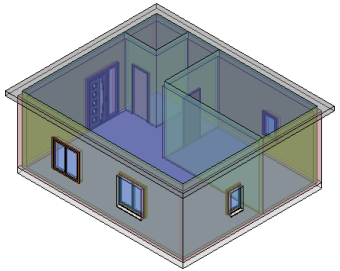
REVIT



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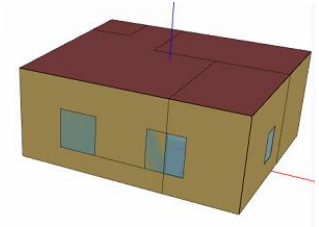

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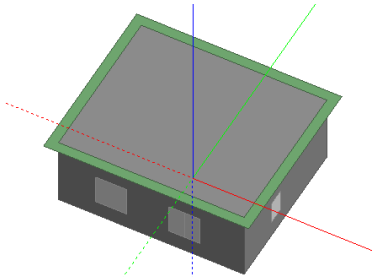

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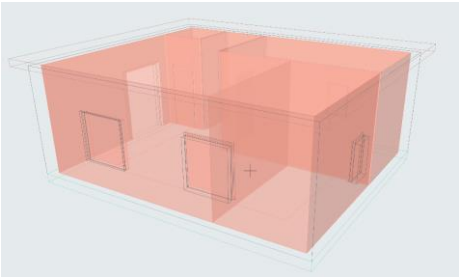
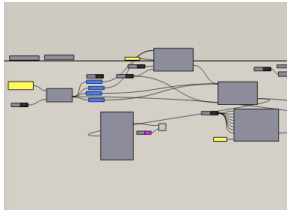
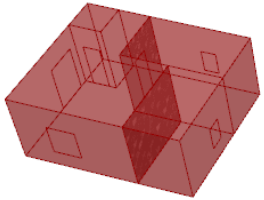
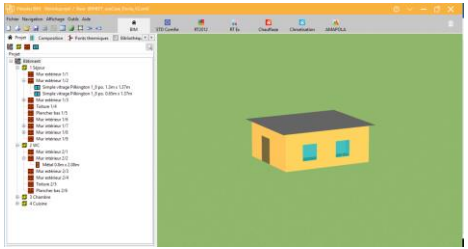


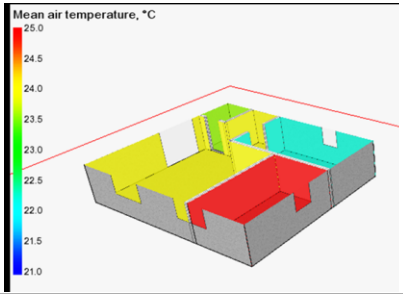




GRASSHOPPER HONEYBEE



PLEIADES



SIMPLE BIM

IDA ICE

LEARNING OUTCOMES TOWARDS EU-WIDE TRAINING

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Ex. Architectural design professionals

EU_LO Architectural design and BIM coordinator (arch), Chief designer (CD), Architect (ARCH), Assistant designer (ASS)		Bloom level	Course	
			Basic	Advanced
LO1	**Learner is able to explain the principles and importance of BIM, Energy efficiency and performance based buildings**	**1,2,3,4**	**X**	**X**
	Define and explain BIM, EE and performance based buildings, their principles and uses	1,2,3	X	X
	Explain and give examples of aspects and terminology of BIM, EE, building performance and impacts (financial and environmental)	1,2,3	X	
	Explain and compare BIM EE uses and related indicators, benchmarks and certification systems	1,2, 3,4	X	X
	Summarise and illustrate the potentials of renewable energy sources including district-scale solutions	1,2	X	
	Explain legislation and regulations for energy performance, thermal comfort and air quality.	1,2	X	
LO2	**Learner is able to explain the issues that affect energy performance of buildings**	**1,2,3,4**	**X**	**X**
LO3	**Learner is able to use and demonstrate competence in profession specific solutions including BIM and EE tools**	**1,2,3,4,5, 6**	**X**	**X**
LO4	**Learner is able to explain and solve the essential issues related to data transfer and sharing and illustrate situations**	**1,2,3,4,5, 6**	**X**	**X**
LO5	**Learner is able to develop, select and explain the flow of the collaborative interdisciplinary BIM EE processes and point out essential issues of successful leadership**	**3,4,5,6**		**X**