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
- …


https://en.wikipedia.org/wiki/Performance_gap
BIMEET, THE CONCEPT

- 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

REVIT

OPENSTUDIO

DESIGNBUILDER

ARCHICAD ECODESIGNER

GRASSHOPPER HONEYBEE

PLEIADIES

SIMPLE BIM

IDA ICE
# LEARNING OUTCOMES TOWARDS EU-WIDE TRAINING

## Ex. Architectural design professionals

<table>
<thead>
<tr>
<th>EU_LO</th>
<th>Learner is able to explain the principles and importance of BIM, Energy efficiency and performance based buildings</th>
<th>Bloom level</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO1</td>
<td>Define and explain BIM, EE and performance based buildings, their principles and uses</td>
<td>1,2,3</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Explain and give examples of aspects and terminology of BIM, EE, building performance and impacts (financial and environmental)</td>
<td>1,2,3</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Explain and compare BIM EE uses and related indicators, benchmarks and certification systems</td>
<td>1,2,3,4</td>
<td>X</td>
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<tr>
<td></td>
<td>Summarise and illustrate the potentials of renewable energy sources including district-scale solutions</td>
<td>1,2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explain legislation and regulations for energy performance, thermal comfort and air quality.</td>
<td>1,2</td>
<td></td>
</tr>
<tr>
<td>LO2</td>
<td>Learner is able to explain the issues that affect energy performance of buildings</td>
<td>1,2,3,4</td>
<td>X</td>
</tr>
<tr>
<td>LO3</td>
<td>Learner is able to use and demonstrate competence in profession specific solutions including BIM and EE tools</td>
<td>1,2,3,4,5,6</td>
<td>X</td>
</tr>
<tr>
<td>LO4</td>
<td>Learner is able to explain and solve the essential issues related to data transfer and sharing and illustrate situations</td>
<td>1,2,3,4,5,6</td>
<td>X</td>
</tr>
<tr>
<td>LO5</td>
<td>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</td>
<td>3,4,5,6</td>
<td></td>
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</tbody>
</table>