



# The BIM for Energy Efficiency in the Public Sector (BEEP)

## Final National Event

Gefinor Rotana - Hamra  
Tuesday 28 June 2022

### Objectives of the Workshop

The objectives of this event include the following:

- Share with the stakeholders the process of using BIM in renovating buildings;
- Interact with ESCO's regarding the potential for BIM applications in Energy Performance Contracting (EPC's);
- Present the outcomes of the BEEP project;
- Identify the synergies with other ENI CBC MED projects on topics related to energy efficiency and renewable energies.

### Background

Buildings are responsible for 36% of global final energy consumption and nearly 40% of total direct and indirect CO2 emissions. In such a challenging situation, renovating and making Mediterranean buildings smarter is of utmost importance to reduce the carbon footprint of our homes.

The building sector is consuming around 78% of the overall electricity generated in Lebanon. The residential sector has been the largest consumer of electricity, generating approximately 30% of Lebanon's overall electricity demand in 2014. The residential building sector is followed by the commercial sector, which accounted for 27% of demand in 2014, then by the industrial sector (processes without building demand), which accounted for 19% of Lebanon's total demand for electricity in 2014. A large share of the building sector consists of old and high energy consuming

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units. Going for energy efficient solutions in buildings will lead to a big reduction of strain on the electricity grid, which will reflect in reducing the gap between the installed capacity and the peak demand.

BIM for Energy Efficiency in Public sector-BEEP project aims at strengthening the use of Building Information Modeling (BIM) - a process supported by various tools and technologies involving the generation and management of digital representations of physical and functional characteristics of places - to enhance energy efficiency in buildings. More information can be found here: <https://www.enicbcmed.eu/projects/beep>

The testing of this emerging technology on built heritage has been performed in several Med Countries to demonstrate its scalability to the entire building stock. The project will provide public administrations with a powerful method for the energy rehabilitation of public buildings to be supported with private funds through the Energy Performance Contracting.

The project main outcome is an innovative methodology based on the integration of emerging technologies tested on heritage public buildings. The results streamline the sustainable rehabilitation process and start a virtuous circle where the money saved by public administrations in managing public assets will be used to multiply the interventions on the existing building stock.

The workshop will include the presentation of case studies from Egypt, Jordan and Lebanon. From 3D scanning to the proposal of energy renovation scenarios passing by the BIM, the workshop will as well draw the conclusions on the legal framework of applying EPCs in Lebanon.



## Agenda of the Event

Schedule	Description
10:00-10:30	<b>Registration and Welcome Coffee</b>
10:30-10:40	<p><b>Opening Note</b></p> <p>By Mr. Stefano Panighetti , Programme Manager, Local Development, EU delegation in Beirut</p> <p>By Dr. Sorina Mortada, Technical Consultant, Lebanese Center for Energy Conservation (LCEC)</p>
10:40-11:00	<p><b>Session 1: Case Studies from the Lebanese Context and the development of the EE-HBIM model</b></p> <p>By Dr. Bacem Bakhache, Head of Education and Culture Committee at the Municipality of Tripoli</p> <p>By Mr. Hussein El Samra, Energy Engineer, Lebanese Center for Energy Conservation (LCEC)</p> <p>Discussion and Q&amp;A</p>
11:00-11:50	<p><b>Session 2: Energy rehabilitation design scenarios and EPCs within the EE-HBIM approach</b></p> <p><b>Energy rehabilitation design scenarios for heritage buildings</b> By Dr. Sorina Mortada, Technical Consultant to the LCEC, Lebanese Center for Energy Conservation (LCEC)</p> <p><b>Energy Performance Contracting (EPC) in the Lebanese Context</b> By M<sup>e</sup>. Walid Choueiry, Legal Advisor to the LCEC</p> <p>Discussion and Q&amp;A</p>

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11:50-12:10	<p><b>Session 3: Advantages of BIM in the energy studies</b></p> <p>By Mr. Joe Daniel Hadchity, Architect, Managing Director, XYZ Lebanon</p> <p>Discussion and Q&amp;A</p>
12:10 – 12:30	<p><b>Session 4: BEEP Case Studies from Jordan and Egypt</b></p> <p>By Ms. Eman Al-Shbail , Senior Energy Specialist, Royal Scientific Society, National Energy Research Center, Jordan</p> <p>By Mr. Zeyad El Sayad, Assistant Professor of Architectural Engineering, Alexandria University, EJust - Egypt</p> <p>Discussion and Q&amp;A</p>
12:30-13:00	<p><b>Session 5: Synergies with ESMES and SEACAP 4 SDG</b></p> <p><b>ESMES Updates: Energy Interventions in Public Schools</b> By Ms. Ghada Daouk, Energy Engineer, Lebanese Center for Energy Conservation (LCEC)</p> <p><b>Med SE(A)CAP integration through uniform adapted assessment and financing methods, mainly targeting buildings in education and health sectors, for sustainable development goals in a smart society</b> By Mr. Bernard Massabo, General Secretary of The Euromed Cities Network team, Metropole Nice Cote D'Azur- France</p> <p>Discussion and Q&amp;A</p>
13:00-13:15	<p><b>Discussion and Recommendations</b></p>
13:15- 14:30	<p><b>Lunch</b></p>