



# Development of innovative educational material for building-integrated photovoltaics – Dem4BIPV

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## Introduction

Currently a gap exists in the knowledge and skills of graduate architects, engineers, planners and designers etc. in relation to BIPV system installation.

This project addresses this gap by developing educational material on BIPV for a broad group of stakeholders.

The project runs from September 2015 to August 2018.



## Project objective

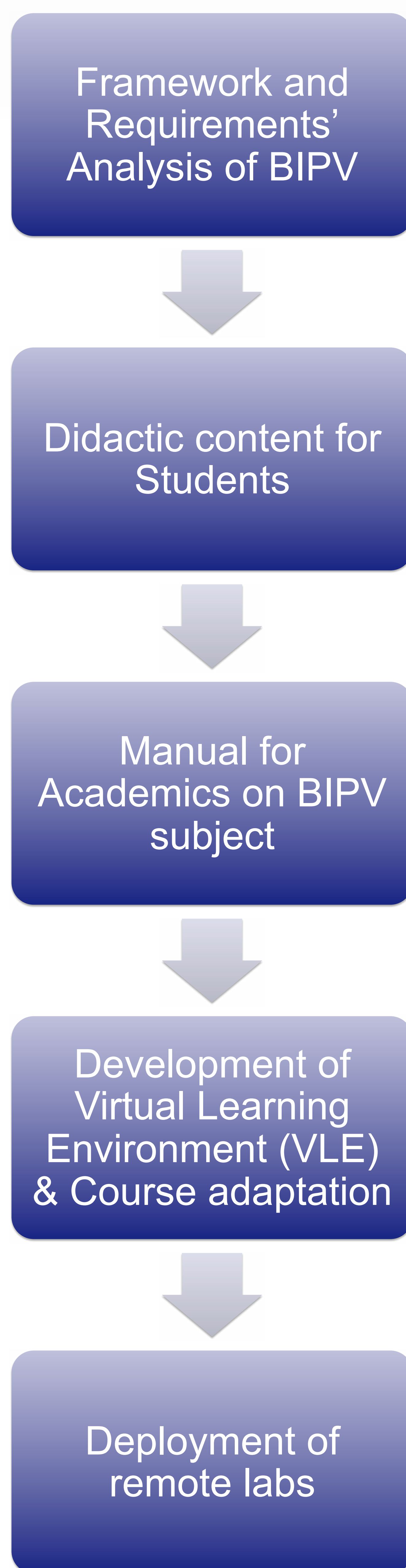
The project's specific objective is to develop innovative educational material for higher education on the important topic of BIPV while its ultimate aim is to improve the quality and relevance of higher education to the labor market needs, since there is currently a gap in the knowledge and skills of graduate architects, engineers, planners and designers etc. in relation to BIPV system installation.

Moreover, the intellectual outputs and outcomes of the project including the development of a Virtual Learning Environment (VLE), the design and deployment of remote labs, are in line with the horizontal priority of enhancing digital integration in learning.

All in all we anticipate that through the project the offering of high quality learning opportunities for students in higher education will be enhanced, particularly on an energy-related topic, which is of major importance at an EU and international level in the medium and long term.



## Activities



## Main outputs

### Output 1: Framework and Requirements' Analysis

This output will include a thorough analysis of the existing and future market needs in terms of BIPV system integration and hence education needs in this field, as well as an identification of the Best Practices in Europe mainly but not exclusively, which will result in the definition of the framework and the actual requirements of the course component.

### Output 2: Didactic content for Students

The output is a course for postgraduate Master's Programme in Sustainable Energy.

The content of the course will cover thoroughly at a minimum the following topics:

1. Building integration
2. Electrical performance
3. Thermal design
4. Regulations, Safety aspects, Standards for BIPV

### Output 3: Manual for Academics

Developing a manual for the academics which will be guided while teaching the post-graduate students on the BIPV subject. This manual will constitute an important resource, which will contain the objectives for the lessons, as well as the lesson plan including, the resources to be used, activities that support the objectives, how the lesson will be closed, and how the students will be assessed.

### Output 4: Development of Virtual Learning Environment (VLE) & Course adaptation

In the context of the Dem4BiPV project a VLE will be developed as means of an e-Learning delivery mechanism of the practical aspects of the proposed course (i.e. lab work of experimental nature).

### Output 5: Deployment of remote labs

Three remote labs will be selected, developed, adopted and integrated into the course. UCY, UU and FHTW will host one remote lab each in order to share resources of expensive and sophisticated renewable energy systems.

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