



INSTRUCT



website



**Energy
efficiency skills
across
construction
value chain**

New set of tools



This project has received funding
from the European Union's Horizon 2020
research and innovation programme
under grant agreement No. 894756

INSTRUCT for the European construction sector

The European Union aims to achieve zero net greenhouse gas emissions by 2050.

The Green Deal strategy, which aims to halt environmental degradation, calls for appropriate measures at many levels: from legislative changes to initiatives in specific sectors. A particularly important sector is the construction industry which provides 18 million direct jobs and contributes to about 9% of the EU's GDP. By making the sector more competitive, resource efficient and sustainable it will significantly contribute to green transformations and to achieving the EU targets.

The aim of the INSTRUCT project is to introduce changes in the requirements for construction workers and to prove the close link between energy skills and the energy performance as well as the effect of reducing greenhouse gas emissions. It intends to create a complete operational framework to increase the number of skilled building professionals and blue collar workers over the whole value chain (both for renovations and new constructions), and offer a set of services to support raising awareness of home and building owners and tenants about the benefits of sustainable energy skills, and the public authorities for the development of new legislative frameworks, e.g. requirements for skilled workers in public procurement.



In addition, the INSTRUCT also supports legislative changes, thanks to which energy skills will need to be confirmed by certificates, desired by investors.

The top-down and bottom-up activities in the INSTRUCT project are intended to eliminate the existing shortage of construction skills and thus contribute to constructing buildings that are 100% energy efficient.

Developed in INSTRUCT project services included sustainable energy skills passports/registers for workers, new legislative frameworks or public procurement practices, initiatives for home and building owners, and new partnerships in the construction value chain. Those solutions have been demonstrated in 8 Pilot Demonstrators across 7 European countries in order to evidence links between energy skills/education and energy performance/quality, as well as the usefulness and ease of use of the developed tools for recognition of energy skills and qualifications.

Each demonstration focused on different topic:



Achievements of the project



Quantitative and qualitative evidences that corroborate and reinforce the correlation between skills and education and energy performance and quality;



A set of tools and instruments facilitating the mutual recognition of energy skills and qualifications in the construction sector;



Real-world demonstrations (in 5 geographical European areas) of the usefulness and ease of use of the deployed instruments for recognition of energy skills and qualifications;



Dissemination and awareness raising actions in consortium members countries, scaled up to the wider Europe;



New legislative frameworks enabling reliance on skilled workers in public / private procurement.



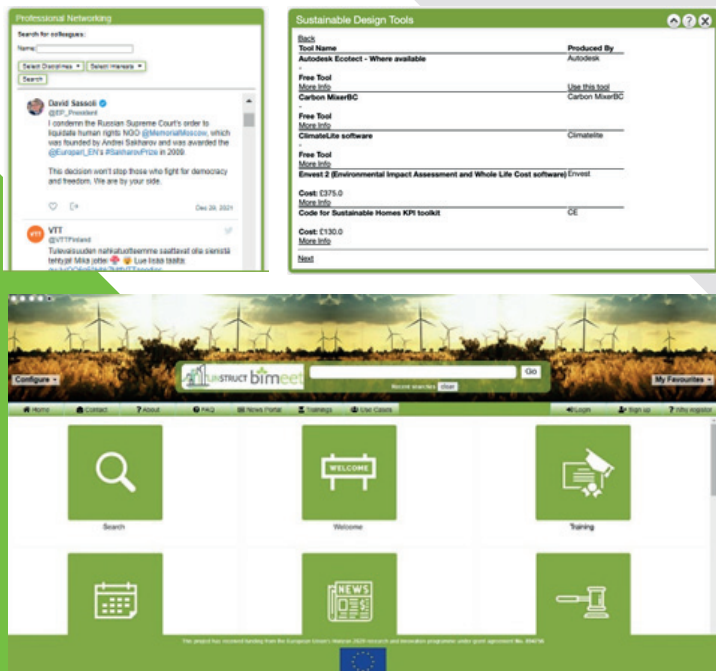
ENERGY-EDUCATION PLATFORM

This one-stop-shop platform as a basic tool of INSTRUCT project allows to access training, knowledge, expertise, best practice and associated services related to BIM for energy in a single click!

The Energy-Education platform (www.energy-education.com) is formed by a number of services that support training management and authenticity for a community of users. The web-based platform works as a dynamic, user-oriented platform for educational purposes in the construction sector. The architecture of the platform includes several functions:

- ◆ Professional Networking Service
- ◆ Events Calendar Service
- ◆ Sustainable Energy Tools
- ◆ Use Cases
- ◆ Trainings data base

The platform is a scalable and context-based solution with modules that enable searched BIM information and knowledge discovery using a symbiosis of technologies such as semantic web, social networking. The platform aims at supporting the understanding of the landscape concerning BIM training requirements for energy efficiency.



PARTNERSHIPS to cooperate toward joint goals

The establishment of new partnerships among the construction value chain is crucial in achieving energy efficiency goals and promoting sustainable development. By working together, manufacturers, suppliers, installers, and other stakeholders can share knowledge and resources, and create innovative solutions that promote energy efficiency.

Important aspects of the partnerships:

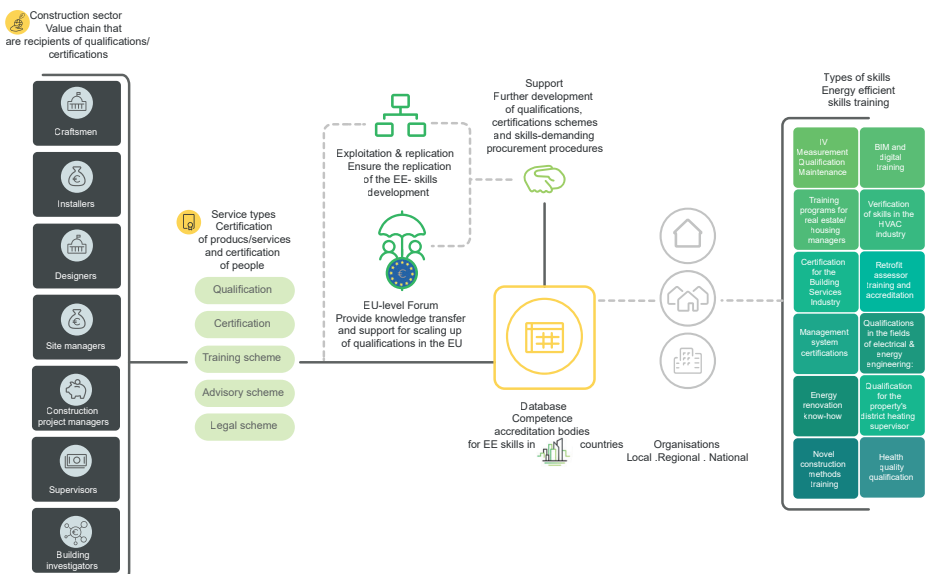
- ◆ certification of skilled workers in energy efficiency;
- ◆ proper installation of energy-efficient products such as doors, windows, air-tight seals, and wall insulation is essential to achieving energy efficiency goals.

EU-LEVEL FORUM to scale up EE qualifications in Europe

To include relevant associations and organisations that are responsible for the development of qualifications and certification schemes in the member countries of the project we have created the EU-level forum for competence accreditation bodies for EE skills.

It aims to gather competence accreditation bodies for EE skills, comprising relevant associations that are responsible for the development of qualifications and certification schemes in the INSTRUCT member countries. The forum also aims to include other relevant actors such as relevant public clients and cities.

The main idea and purpose of the forum is to enable knowledge transfer and mutual support for the further development and scaling up of qualifications, certifications schemes and skills-demanding procurement procedures in different European countries.



E-learning Module

Online course dedicated to the use of BIM for EPC (Energy Performance Certificates)

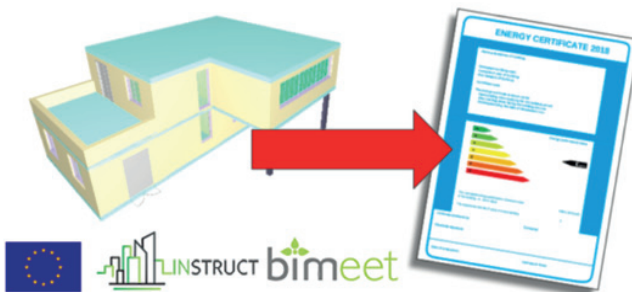
The course helps the learner to understand the benefits and importance of BIM in enhanced and accurate EPC assessments. (S)he also learns what needs to be considered in the information modelling to unleash its potential as the data source for the analysis. (S)he also learns why developing the modelling and assessment skills are important for sustainable buildings building projects.

Assessing EPC (Energy Performance Certificate) is mandatory for most buildings in the EU. EPC has the potential to direct construction projects towards sustainable solutions. The traditional way of generating EPC manually with a variety of different information sources can be time consuming. Utilizing BIM (Building Information Modeling) is gaining popularity in building projects. It has the potential to excessively enhance different processes of a building during its life-cycle, including the EPC-assessments. Each country in the EU has their own approach to EPC and BIM-procedures. In this course a general perspective of the topic is introduced.

Course consists of slideshows, lecture-videos, review-questions, tutorials, extra-materials and final exam. Representing different use cases helps the learner to understand the benefits and challenges of current BIM and EPC -related tools and procedures. Since its beginning in May 2020, this course had 400 unique trainees, among whom 130 passed the online exam.

Introduction of BIM enabled EPC assesment - Online course

★★★★★ 4 (2)



Produced in multinational [BIMEET-project](#) funded by the EU. Testing, updating and implementation as a training instrument in [INSTRUCT-project](#).



PARTNERS



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