

**“VET4LEC” - Inclusive Vocational Education and Training
for Low Energy Construction**
(Project ref. VS/2016/0404)

Research Objectives and Strategy

Meeting the EU 20/20/20 energy efficiency targets in the built environment is dependent on a workforce equipped with the knowledge, skills and competences (KSC) required in low/nearly zero energy construction. The *Build Up Skills* investigation illustrated both the KSC and qualification requirements and the skills/VET provision needed in EU member states, as well as the complex set of barriers to be overcome if the objective of increasing energy efficiency of buildings is to be met. KSC requirements call for a fundamental review of initial and continuing vocational education provision to embed a high degree of energy literacy and to develop understanding of the principles of low energy construction, which in turn requires a holistic view of the building process. They also imply that the sector needs to transform, to acquire a new image as an eco-sector, and to be more inclusive if it is to become accessible and attract new recruits, especially young people, women and migrants. In this way, too, the decline in the number of young people entering the industry can be reversed and the industry can benefit from the generally higher proportions of women to be found in technical than in manual construction occupations.

A further set of problems highlighted in the *Build Up Skills* reports relate to site practices and the organisation of the construction process. They indicate above all that insufficient co-ordination between those in different occupations and between subcontractors on site contributes to the ‘performance gap’ between intended and actual energy performance. The ‘gap’ is identified in particular for mainstream construction schemes built to legally required standards, rather than for schemes built to ‘higher’ specifications such as Passivhaus.

Our aim in this study is to identify the issues that arise in low energy construction and the ways in which different European countries address these, in the contexts of:

1. the construction industry, construction labour market and national policy environment;
2. the VET system, including governance, depth, breadth and accessibility of provision, and the extent to which requirements of LEC, such as interdisciplinarity, high levels of technical knowledge and energy literacy, are catered for; and
3. the roles of on-site practices and contractual and social relations, which are likely to vary by building type, size and the technical specifications of the scheme.

The interface between these three dynamics is the distinctive focus of this study and will be investigated through in-depth examination of examples of low/zero energy building schemes in ten EU member states. This approach has two implications for the selection and assessment of case studies. First, we need case studies of different type, size and built to different standards of energy efficiency to allow problems to be identified that arise in the context of various building schemes. Second, the case



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studies need to include on-going building projects to enable a better understanding of the impact of on-site occupational relations, contractual divisions, practical application of VET4LEC, the performance gap and the measurement of achieved energy efficiency.

The investigation will proceed in two stages. In the first, national partner organisations will collect data about selected building schemes and provide an overview of developments in VET4LEC and the construction sector, and of other practical and policy initiatives being developed to contribute to improving the energy efficiency of the built environment. In the second stage, the evidence gathered will be assessed, compared and synthesised to: identify problem areas in the different partner countries; assess VET systems in relation to the requirements of low energy construction; evaluate the association between VET models and site performance; and group countries according to their particular communalities. This will inform the development of guidelines and recommendations on how to address the weaknesses identified, improve the inclusivity of the sector, and develop an energy literacy curriculum in line with the EQF.
