

Question/Group	Retrofit Workers (L3-5)	Retrofit Crafts (L5-6)	Retrofit Commission (L6-8)	Retrofit Design (L8-9)
<i>Target Groups</i>	School leavers, unemployed, workers with no formal training, Operatives	Craft workers - plasterers, carpenters, bricklayers, plumbers, electricians, refrigeration, plant machinery and other apprenticeship training	Skilled workforce upskilled from craft to other specialised discipline. Specialist from IT or circular skills within the market	Professionals from the construction industry and also other sectors such as IT
<i>Where are the current jobs</i>	Plasterers, plumbers, attic insulation installers	Installing windows and doors. Installing external and internal insulation. Site Managers.	Experience crafts, site foreman or supervisors	Lack of Qualified Energy Retrofit Engineer (Level 8 upwards). Designers of heat pumps and heating systems. Designers in ventilation systems.
<i>What type of careers are available, and skills needs</i>	Training for young people in attic insulation installation. conversion course to run alongside apprenticeships	Build-up in steps - Introduce short, accredited courses aligned with apprenticeships such as installing heating systems and another module to get plumbing apprenticeship.	Energy Retrofit supervisor or coordinator is to be recognised. Skills needed in energy retrofit communication	Up skilling service/civil/mechanical Engineer and bring graduate engineers in for in-house training. Skills needs to get the heat pump installed for a deep retrofitted house. Need skills to analyse the energy properties of the building correctly for energy design, quantity surveyors, project managers, quality survey and assurance
<i>What training provision is available</i>	Short manufacturer and product provider trainings. Construction skills at levels 3, 4 and 5. Short NZEB fundamentals and retrofit courses. H&S with transversal skills for workers on site and sustainability skills aimed at the unemployed.	ETB NZEB 3-day training courses, and four-year apprenticeships. Very few options between these two. Short manufacturer training in the external wall insulation systems	There is limited or no training available apart from WWETB Retrofit Supervisor programme	Building service course in TUD (Dublin) requires updating. Course in general needs updating with terms of retrofitting. Specialised CPD courses are very important to bring people in practice (level 8 and level 9 up to retrofit standard)
<i>Where are the skills gaps?</i>	Shortage of plasterers require the need for internal and external wall	Skills gaps in fabric first: essential window and doors training. Accredited external and internal	Lack of demand as the sector is young and the One stop shop companies are not aware or do not have a culture of	

*What are the future opportunities for training and education?*

installers. Heat pump installer assistants required.

insulation training needed. External wall insulation systems with agreement certs (22), however training is fragmented and expensive. Need low-cost or grant funded training for career progression.

CPD  
Strong sense that the target group for training need to be e.g., Crafts with some experience and ability to step up to Supervisor roles

CPD and refresher training. Pre apprenticeship programme at levels 4-5 in construction skills as a step to apprenticeship. Recognised 1–3-day manufacturer and provider courses. RPL and Work based learning to be acknowledged. Training tasters to show school leavers and unemployed what careers are available.

Available NZEB course could be expanded to a 4-week course. Training in SR54 (with NZEB examples) would be useful for project managers and installers. Crafts nearing retirement can train to be trainers as a career progression. Network of retrofit engineers and Installers. A network of one-stop-shops was also recommended.

Focus on existing crafts who can be upskilled into this role or potential older crafts people who want to move into more supervision/management roles  
Management and Communication skills will be critical  
Increase their technical skills – more formal than that gain via on-the job

Training of the use in energy technology is required. Training at Level 8 / 9 to design energy system for the retrofitting of a building and ventilation system. Retrofitting of buildings with smart technologies (demand side controls, charging points,). Largely ignored is that commercial and industrial buildings need to be retrofitted.

*What does a career look like in the future for this group*

Young people are more aware of opportunities as they are connected to the global world and need life-long learning opportunities. Provide a toolkit to show what careers are possible if a person takes certain subjects in school. Construction and agricultural skills to encourage take up of green careers. Career as an external insulation contractor rather than a plasterer, as this emphasises green and clean skills recognising climate change interests. Retrofitting career offer opportunities. IT skills with careers in using drones and robotics onsite

Career progression: become proficient in installing individual measures e.g., walls, roofs, heating etc. Then move on to smaller craft certs. Then become fully certified in a craft. Then can move on to Project Management and surveying.

Will have to become part of One Stop Shop or Retrofit companies' culture to upskill their employees

Energy Retrofit professionals in designing and analysing thermal properties in the building and designing smart buildings using automation and carrying out optimum energy analysis

***How do we communicate to the industry to attract people into the sector or upskill?***

Young people need clarity on what are green jobs. Need a job description for retrofit (renovation/upgrade) and what careers are being offered. Starter packs for school leavers to include what is retrofit. Ask the young people what they like to see for a career

Graduate fairs. Education in schools  
Large incentivised schemes.  
Attracting people from school and from abroad. Communicating with women to show great opportunities in the retrofit sector in surveying auditing, project management etc.  
Advertising campaign to encourage women into the retrofit sector  
Incentivised schemes to employers to release staff for training  
Encouraging trades people near to retirement to become trainers.  
This would be an attractive career path for many.

Pride in progression into these roles as a supervisor/commissioning/sign off.  
Emphasise the interesting energy renovation sector. Requires a "Soft" stick e.g., CIRI to push companies to put CPD processes in place. General sense that a legislative approach would be counter-productive to the sector at the moment since it is a new field.  
Careful messaging needed (How well, rather than How Much; Energy Renovation as well as New Build; Emerging Sector, Long term jobs)

Use marketing incentives and need to determine how to market better directed at young people or school leavers. People who have left the country, can we get them back, foreign workers, Professionals from different fields