



**BUILD UP
SKILLS**

ENERGY TRAINING
FOR BUILDERS



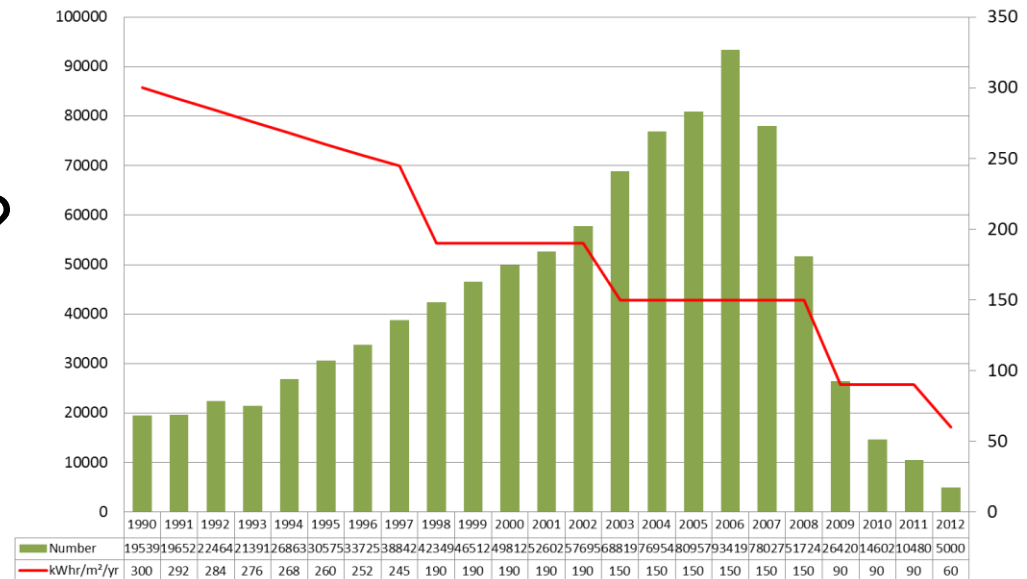
BUILD UP SKILLS

IRELAND (BUSI)

Results to Date

The Context

- Unprecedented downturn in construction in Ireland
- Significant changes to Building Regulations since 2002 defining a new approach to construction
- Training of construction workers has remained largely unchanged
- Are we ready for near zero energy buildings?



Build Up Skills Initiative

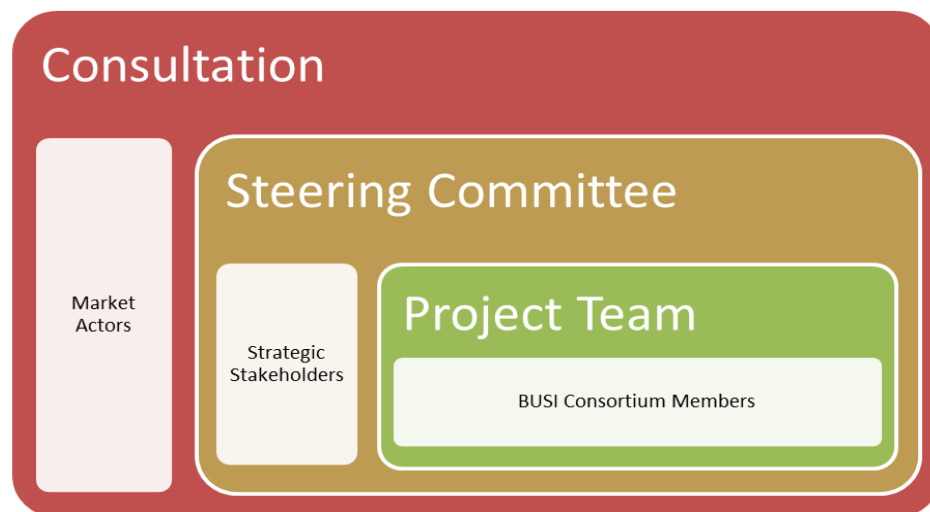
- An EU initiative to support the development of a national roadmap of qualifications for building workers in each member state (21 consortiums initially plus 9 later)
- Focus on skills for energy efficient building and renewable energy deployment towards 2020 energy saving targets
- Targeted at craftspeople, on-site construction workers and system installers
- Emphasis on the continuing education and training of the workforce



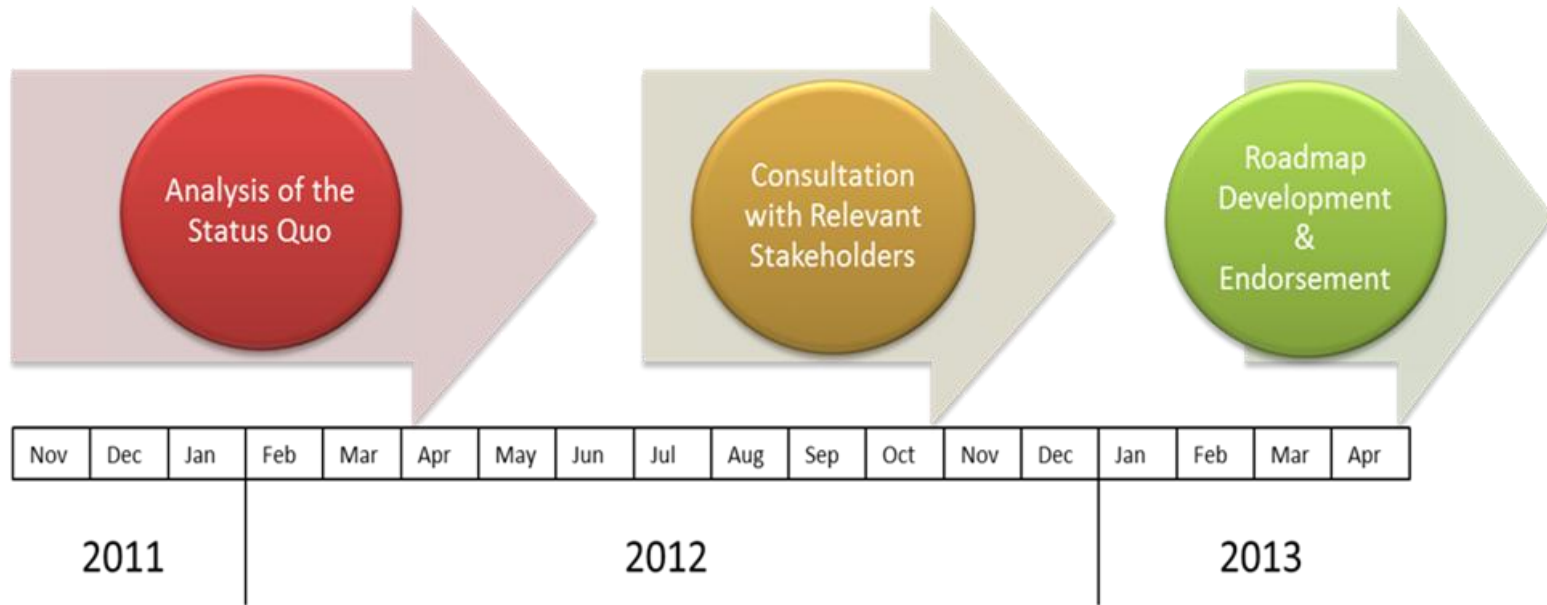
I N T E L L I G E N T E N E R G Y
E U R O P E 

Build Up Skills Ireland (BUSI)

- Irish consortium includes Partners from Education (LIT, ITB, DIT), Industry and Social Partners (CIF & ICTU)
- Supported by Steering Committee involving Government Departments and Agencies (DCENR, DECLG, SEAI, FÁS, IGBC)
- Engagement with all national stakeholders towards agreement of a new national roadmap of qualifications



BUSI Timeline



- Status quo report to highlight the key issues
- Consultation to reach agreement on solutions
- A nationally endorsed framework to establish the way forward

Challenges – Building Sector

- *“ Energy use in buildings account for over 40% of energy consumption in Ireland with the residential sector accounting for over 65% of this total. The highest proportion of this consumption is attributed to space heating, water heating and lighting, all areas of energy use which can be significantly reduced through energy efficient construction/renovation methods.”*

The Context

- What has been perceived up to now as a niche market for “green buildings” or “eco-construction” will not remain a reality. Building regulations apply to all buildings and, therefore, all workers involved in the construction process will need to be equipped with the skills and knowledge to enable their implementation.

Challenges - Policies and Strategies

- *“.....building regulations have been amended significantly over the past 10 years, establishing a new approach to construction and renovation to prescribed energy performance standards.”*
- *“ by definition self-regulation is virtually impossible where a lack of knowledge or understanding exists on the part of those responsible for implementation.”*



Current Activity

- Residential sector still accounted for 68% of total building construction production output in 2011
- It is estimated that 80% of activity in the sector is in Repair, Maintenance & Improvement (RM&I)
- The potential for savings in the non-domestic building sector has been illustrated by successes arising from the Public Sector Programme and Better Energy Workplaces, a scheme that has been over subscribed in contrast to the Better Energy Homes equivalent

Conclusions – Building Sector

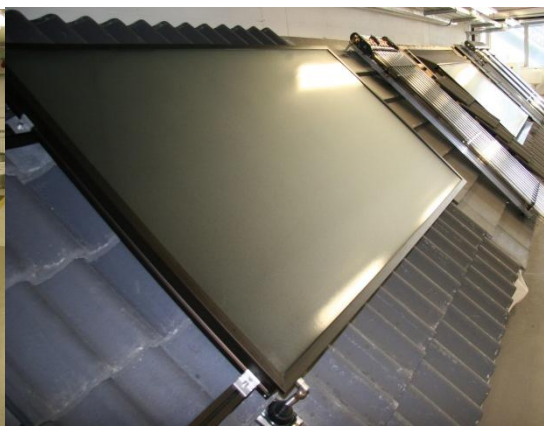
- *“ The 2020 targets for energy savings for buildings will not be achieved solely through volume of buildings retrofitted; the level or combination of measures applied will be a very significant contributing factor to the energy savings achieved.”*
- * Deeper measures = increased complexity of retrofit, i.e. the need for higher levels of skills

Conclusions - Policies and Strategies

- *“.....funding for the up-skilling of construction workers have been limited to the unemployed, as part of labour market activation initiatives. There has been no acknowledgement of the importance, hence, the need to up-skill construction workers that are still employed, despite the introduction of new building standards for energy performance.”*

Actions – Existing VET Provision

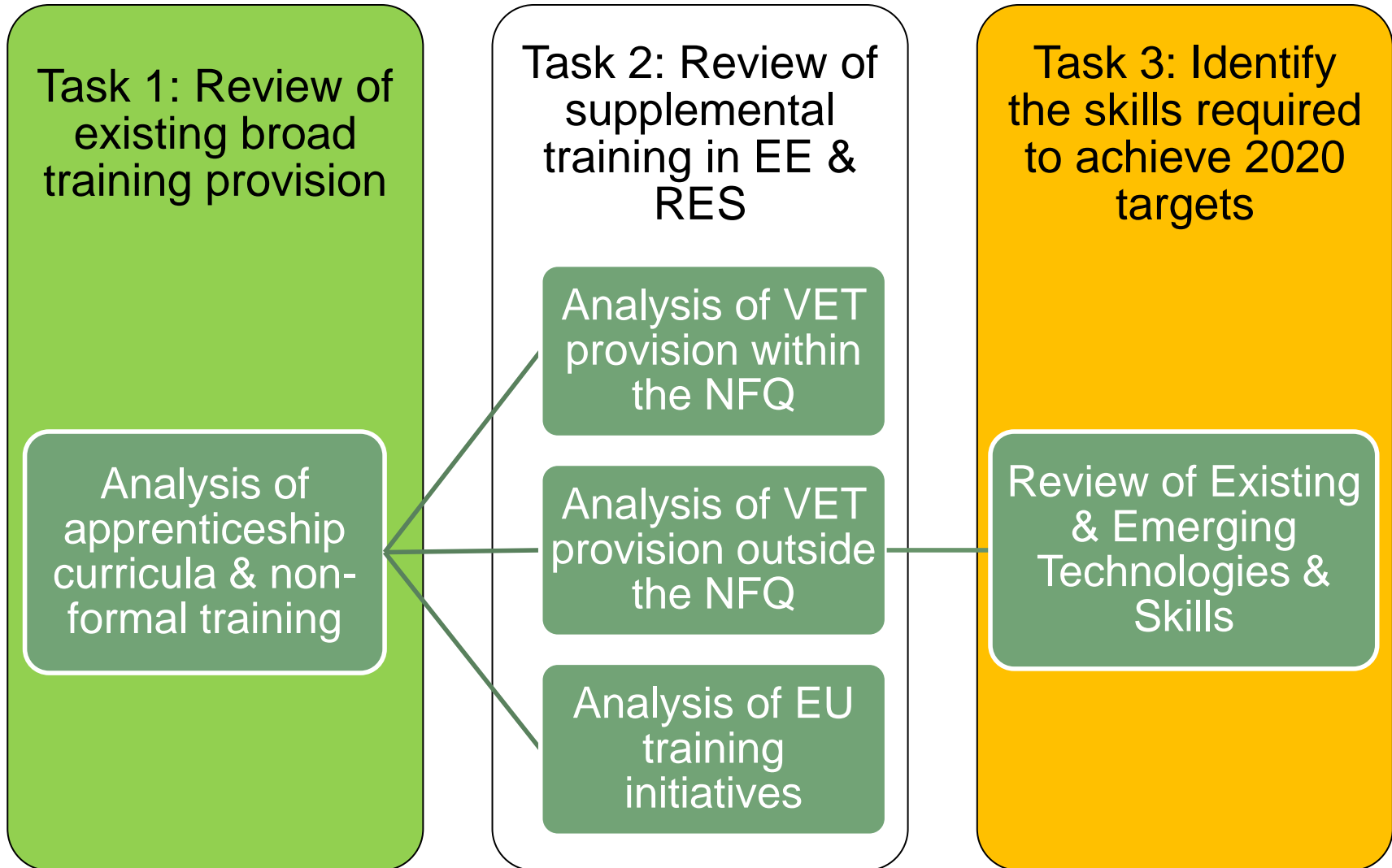
- “In an attempt to address some of the skills gaps that have arisen in the areas of building energy efficiency and renewable energy technology, a number of add-on or supplemental training programmes have been introduced since 2007/2008. These programmes are provided by a combination of FÁS, Institutes of Technology, private training providers and some manufacturers/suppliers that provide product/technology specific training modules”*



Add-on Training in EE & RES

- **Renewable Heating:** Solar Thermal, Heat Pump & Biomass training for Plumbers
- **Renewable Electricity:** Solar PV, Small-Scale Wind micro-generation for Electricians
- **Thermal Insulation & Air Tightness:** up-skilling programmes for construction workers
- **Passive House:** separate training for building envelope and mechanical systems (ventilation)
- ***Significantly, a number of leading manufacturers and suppliers have felt the need to develop product/system specific training**

Qualitative Gap Analysis

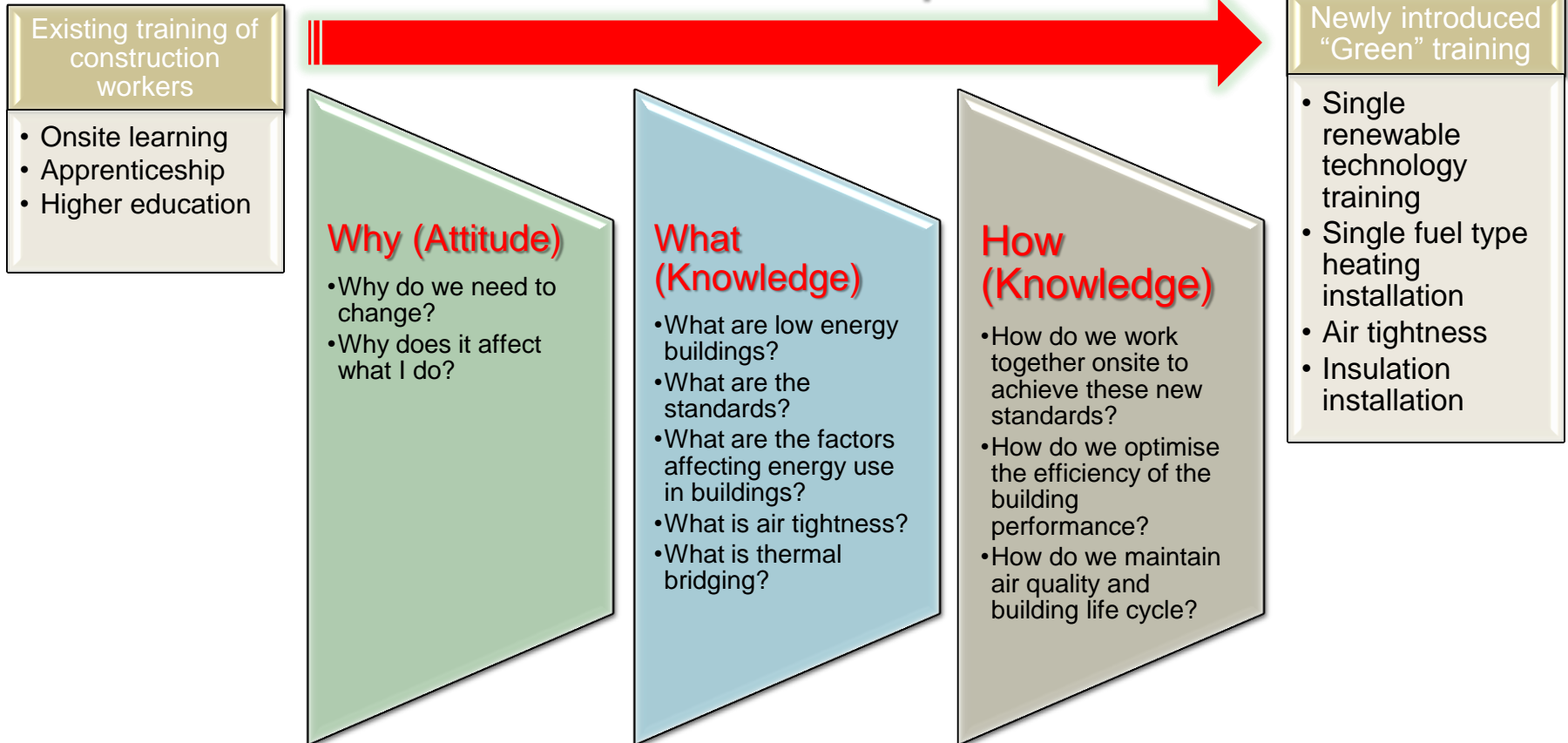


Findings – Skills v Knowledge

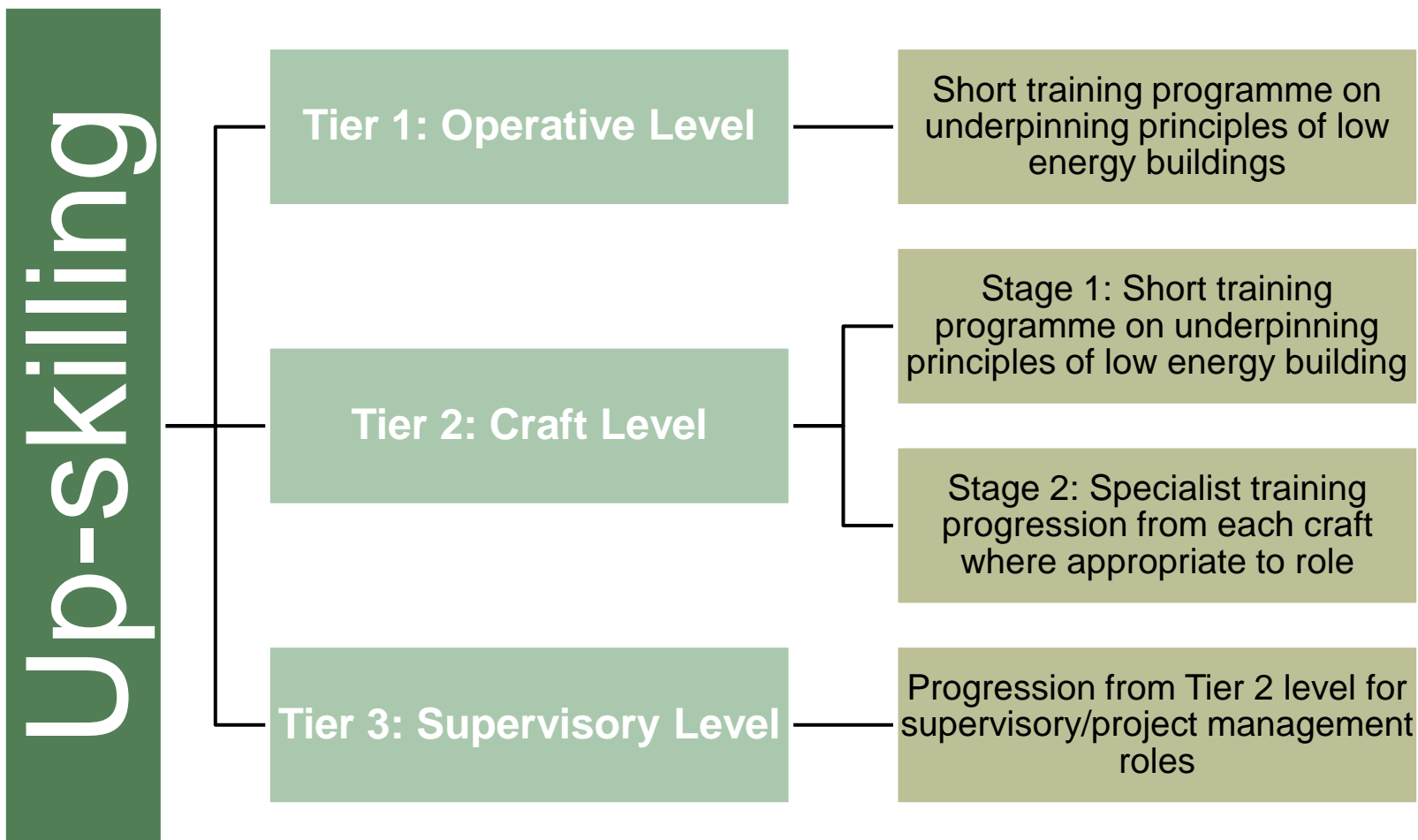
- *“The skills required are primarily traditional technical skills with additional components and up-skilling to address specific skills required for new and emerging technologies” (Skills for Green Jobs – European Synthesis Report, CEDEFOP 2010)*
- *“The main gap that exists is one of knowledge – knowledge of the underpinning principles of low energy buildings – and the challenge of bringing about an **attitudinal** change among workers who, based on their years of experience, believe that they already **know** the ‘**right way**’ to do their job.”*

Knowledge & Attitude

The Gap



Bridging the Skills Gap



Conclusions – Skills Needs

- Once learners have completed initial ‘foundation’ training they *“will have gained knowledge of the underpinning principles of energy efficient systems, thereby allowing a greater focus on the acquisition of specialist skills, particularly in the case of product/system specific training”*

Findings – Skills Needs

- *“ It is noteworthy that all those currently employed in the construction and renovation of buildings require some level of up-skilling and those entering the sector should have the similar training incorporated into their formal apprentice education.”*
- *“Trainers in this sector are usually employed on the basis of trade related qualifications..... the majority have been employed in education prior to the implementation of new building standards, therefore may have limited awareness or experience of the changes that are occurring onsite. There is no formal structure to support the continuing professional development of the trainers.....”*

Coordination – Existing VET Provision

- *“ The rapid evolution of the building standards for energy performance has resulted in a skills gap across the current workforce. The efforts by individual training providers to develop and offer programmes that seek to address this gap have not been efficiently coordinated nationally, which has limited their impacts.”*
- ***Build Up Skills offers an ideal opportunity to facilitate the nationally coordinated effort that is required***



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THANK YOU

For your attention

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