



Build Up Skills Ireland

Report from Regional Workshops in Ireland

Deliverable D3.3 Regional Workshops Reports

Prepared by Ela Krawczyk

23rd June 2013

1 Introduction

This report presents outcomes of the discussions held during the seven regional workshops organised as part of the Build Up Skills Ireland project (BUSI). The aim of the *Build Up Skills Ireland* (BUSI) project is to develop a national qualification roadmap for Ireland, which will set up-skilling, education and training targets for construction workers to ensure that their qualifications, skills and competences are in line with those needed to meet 2020 sustainable energy targets. The project is a part of the Europe wide initiative funded by Intelligent Energy Europe: *Build Up Skills: Energy Training for Builders*, which focuses on the continuing education and training of craftsmen and other on-site construction workers and system installers in buildings in relation to energy.

The aim of the regional workshops was to gather views and comments of the construction workers in Ireland on the proposed national qualifications roadmap, including the overall strategy, proposed training programmes and issues surrounding the implementation of the roadmap. This report presents the details of the consultation carried out and summary of the main outcomes from the workshops.

2 Schedule, Participants and Programme

2.1 Schedule

- DUNDALK: Tuesday, 16th October, Crowne Plaza Hotel, Dundalk
- LIMERICK: Friday, 19th October, LIT, Moylish Park Campus, Limerick
- WATERFORD: Tuesday, 23rd October 2012, Tower Hotel, Waterford
- CORK: Wednesday, 24th October 2012, Maldron Hotel, John Redmond Street, Cork City
- DUBLIN: Friday, 26th October 2012, in DIT Offices in Grangegorman, Dublin 7
- SLIGO: Tuesday, 30th October 2012, Canis Major room, Clarion Hotel Sligo, Sligo
- INDUSTRY PROFESSIONALS: Friday, 23rd November 2012, Blanchardstown Institute of Technology, Dublin

2.2 Participants

DUNDALK

Name	Organisation
Derek Blackweir	Limerick Institute of Technology
Eamonn Reaburn	Building Surveyor
Ela Krawczyk	Dublin Institute of Technology
Frank Maguire	Dundalk Institute of Technology
Mark Keyes	Institute of Technology, Blanchardstown
Noel Hartford	Dundalk Institute of Technology
Noel Mc Kenna	Dundalk Institute of Technology
Alan O'Brien	Dundalk Institute of Technology
Pat Mc Cormack	Dundalk Institute of Technology
Roman Butlyar	
Seamus Hoyne	Limerick Institute of Technology
Sean Kenny	Dundalk Institute of Technology
Simon O Neill	Dundalk Institute of Technology
Tim O'Leary	Dublin Institute of Technology

LIMERICK

Name	Organisation
Damien Dillon	Limerick Institute of Technology
Derek Blackweir	Limerick Institute of Technology
Donal O'Farrell	
Ela Krawczyk	Dublin Institute of Technology
John Grant	
John MacDonald	
Leann Kelly	BERtech
Maurice Falvey	
Pat Gill	Limerick Institute of Technology

Peter Kelly	BERtech
Ray Madden	
Seamus Hoyne	Limerick Institute of Technology
Tim O'Leary	Dublin Institute of Technology
Martin Smith	
Fergus Whelan	Irish Congress of Trade Unions
Ger Moore	Limerick Institute of Technology
Mike McNamara	Building and Allied Trades Union
Greg Irwin	Limerick Institute of Technology

WATERFORD

Name	Organisation
Ciarán Ahearne	
Derek Blackweir	Limerick Institute of Technology
Ela Krawczyk	Dublin Institute of Technology
John Kelly	
Philip Cleary	
Tim O'Leary	Dublin Institute of Technology

CORK

Name	Organisation
Conor McManus	
Derek Blackweir	Limerick Institute of Technology
Ela Krawczyk	Dublin Institute of Technology
Niall Leahy	
Niels Nielsen	Viking Home Improvement
Richie Burke	
Tim O'Leary	Dublin Institute of Technology

DUBLIN

Name	Organisation
Arthur McCormack	
Derek Blackweir	Limerick Institute of Technology
Derek Walsh	FAS
Edmund O'Reilly	Dublin Institute of Technology
Edward Quigg	
Ela Krawczyk	Dublin Institute of Technology
Jacqui Donnelly	Department of Arts, Heritage & the Gaeltacht
John McAndrew	
Liam Smyth	Irish Concrete Federation
Mark Keyes	Blanchardstown Institute of Technology
Nessa Roche	Department of Arts, Heritage & the Gaeltacht
Peter Deegan	Merlon Developments Ltd

Ricky Halpin	University of Limerick
Seamus Hoyne	Limerick Institute of Technology
Terence Keogh	Dun Laoghaire College of Further Education
Greg Macken	
John Murphy	FAS
Fred Hosford	

SLIGO

Name	Organisation
Aiden Meehan	
Brendan Killion	Mayo Energy Agency Ltd
Brendan McGrath	McGrath Carpentry
Bryan Fields	FAS
Dave Monaghan	Heat Pump Services
Derek Blackweir	Limerick Institute of Technology
Ela Krawczyk	Dublin Institute of Technology
John Joe McHugh	Sligo Institute of Technology
John McAndrew	
PJ McHale	
Seamus Hoyne	Limerick Institute of Technology
Shane McLaughlin	St. Jude's Plant & Civil Engineering Ltd.
Tim O'Leary	Dublin Institute of Technology

INDUSTRY PROFESSIONALS WORKSHOP

Name	Organisation
Cormac Allen	Dublin Institute of Technology
Derek Blackweir	Limerick Institute of Technology
Ela Krawczyk	Dublin Institute of Technology
Fintan Smyth	Gyproc and Isover
James Walsh	Low Energy Design
Joseph Little	Joseph Little Architects
Liam O'Gorman	National Insulation Association of Ireland
Mark Keyes	Blanchardstown Institute of Technology
Peter Smith	Ecological Building Systems
Robert Butler	Construction Industry Federation
Tim O'Leary	Dublin Institute of Technology

2.3 Workshop Agenda

The workshops were conducted using the same outline as the one shown in Figure 1. In case of Limerick, Waterford, Cork, Sligo and Industry Professionals workshop, the session "Addressing

knowledge, skills and attitude gap” was conducted as one plenary session rather than a group exercise.



Energy in Buildings: Preparing construction workers for the future

CONSULTATION WORKSHOP

16th October, Crowne Plaza Hotel, Dundalk

AGENDA

09.30 – 09.45 *Registration*

09.45 – 10.00 **Introduction**
Seamus Hoyne, Limerick Institute of Technology, & Ela Krawczyk, Dublin Institute of Technology

10.00 – 10.15 **Main findings of the Status Quo report**
Mark Keyes, Institute of Technology, Blanchardstown

10.15 – 11.00 **Introduction and discussion of the draft strategy for fulfilling the training needs**
Short presentation of a draft strategy followed by a plenary discussion

11.00 – 11.50 **Addressing knowledge, skills and attitude gap**
Participants working in 3 groups (G1: Building fabric skills – carpenters/joiners, plasterers, brick & stone layers; G2: Building services skills; G3: supervisors/site managers skills) will address the following questions:
- What should be the scope, content and learning outcomes of the training programmes aiming to bridge the knowledge, skills and attitude gaps in relation to energy in buildings?
- How should such training programmes be delivered in order to develop a multidisciplinary skills and knowledge and foster attitudinal change?

11.50 – 12.15 *Group Presentations*

12.15 – 12.45 *Light lunch (sandwiches, tea & coffee)*

12.45 – 13.30 **Discussion of the issues around the implementation of the training programmes**
Participants would work in the same groups again and discuss the following topics in relation to the programmes that were discussed in the previous group session:
- What are the incentives and drivers that could encourage the training uptake?
- Who bears the costs of the training?
- What are the entry requirements, qualification levels and certification?
- Who should accredit the training and manage its quality control?
- Other issues arising.

13.30 -13.55 *Group Presentations*

13.55 – 14.00 **Next steps and Close**

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Figure 1: Example of Workshop Agenda

3 Summary of the workshop results

3.1 Current gaps in knowledge, skills and attitudes

This section presents the summary of findings related to gaps in knowledge, skills and attitudes that were identified during seven regional workshops. The issues identified were grouped into themes under which the main issues arisen have been listed.

TRAINING

- There is a lack of integrated craft training within one trade, for example basic plumbing followed by advanced training on ex. heat pumps.
- There is a lack of cross-trade training that would facilitate collaboration between trades on site, for example at the moment plumber puts in a heat pump, but electrician cannot set-up controls.
- There is a lack of CPD training for crafts with the exception of the health and safety area.
- The FAS apprenticeship training changes very slowly in comparison with higher level professional programmes.
- There is a lack of up skilling programmes for the apprentice trainers.
- There is a perception that apprentices are taught the same skills as 20 years ago and new technologies are not being introduced.
- Some of the new courses, for example GSD, cover only parts of the relevant material.
- There is no requirement for apprentices to learn IT skills.
- The competences of people reviewing apprenticeship programmes were found questionable, especially in regard to being up to date with current building regulations and new technologies.
- It is important to train general operatives so they have an appreciation of the various trade interactions. General operative training should extend to suppliers and delivery companies where products may be damaged before delivery to site.
- There has been an increase in the private training companies providing courses for unemployed; however, the perception amongst the workshop participants was that the quality of that training was poorer in comparison to main stream training programmes. The training offered by suppliers was deemed of higher quality.
- In an unregulated construction sector it is very difficult to provide effective training.
- There have been many training programmes available over the last few years; however, there are many barriers for the training uptake: high cost of training, funding is mainly addressed at the unemployed workers, and there is not enough money earned from the jobs to pay for training. At the same time there are very few incentives to take up training.

CROSS-TRADE AWARENESS AND COLLABORATION

- Collaboration between trades is required in order to ensure that the key requirements for low energy buildings, such as air-tightness, are implemented.
- The lack of understanding and appreciation of other trades roles on site is an important barrier for low energy building.

CONSTRUCTION TRADE AS A CAREER

- Construction tradesmen require higher quality trade education. To motivate young people to enter the trade apprenticeship the public perception of trades needs to be changed. Embarking on an apprenticeship should offer an attractive career.

GENERAL ENERGY EFFICIENCY AWARENESS AND UNDERSTANDING

- The construction industry does not appear to have made the link between energy efficiency and construction.

RETROFITS

- Understanding of construction techniques is a must for correct and efficient retrofitting of existing buildings.
- Old buildings require solid understanding of materials, products and systems that are appropriate for different building types.

SKILLS

- It has been agreed among the participants that the crafts have the practical skills set, but lack the knowledge how to apply it to implement the new low energy building regulations.
- It was identified that high unemployment amongst construction workers has been impacting negatively on their skills, as many workers do not get to practice them on on-going basis.
- The skills shortcomings were identified mainly in regard to plumbing skills, some technical skills and IT (workers need to be able to use computer for looking up building regulations, products information etc.).

ATTITUDES

- Relaxed attitudes of some of the construction workers in regard to the level of detail to which work is performed (“it’ll do fine attitude”).
- Most of craft workers are proud of their work; however, the pressure from employers to do things quicker and cheaper can lead to shortcuts.

BUILDING PRACTICES

- There is a lack of sufficient communication between trades on site.
- In case of many construction projects work is being carried out directly by trades with no coordinator on site. Such projects require regular control and inspection to identify problems early.
- There is a need for detailed drawings to ensure that all trades involved know what needs to be done and what is required of them and other trades. Currently drawings are usually prepared only to price a job.

BUILDING CONTROL AND SELF-CERTIFICATION

- There was a general consensus amongst the workshop participants that self-certification of works has not worked and there is a need for more inspections on building sites and establishment of an independent inspection system.
- It has been recognised that drawings should be certified for energy efficiency before the start of construction process. This issue is addressed in the new building control act. However, there is still a need for on-site inspection to ensure the work specified is carried out to the required standard.
- There is a need for a paper trail that would allow checking the progress of work and facilitate accountability.
- As trades are employed on the basis of productivity and usually those who provide lowest quotes are employed, inspection and control is essential for ensuring quality.

ROLE OF CONSUMERS

- Consumers have an important role to play in creating the demand for low energy building; therefore they also need to be educated in relation to solutions and materials.
- It was noticed that people who build their own homes tend to research energy efficiency very thoroughly, yet they often employ trades who have less/incomplete knowledge in this area.
- Consumers need to have confidence in ability and skills of construction trades to build and/or retrofit buildings.
- There is a need to educate general public as to the benefits of energy efficiency, so that in turn could generate demand for services and new skills.

ROLE OF PROFESSIONALS

- It has been pointed out that architects and technicians do not provide relevant information for trades.

3.2 Feedback on measures proposed to address the gaps

During the workshops measures to address the gaps discussed in the previous section, developed on the basis of the Status Quo analysis, were introduced to the participants (Figure 2)

Occupational Tier	Qualification Need	NFQ Level	Numbers
Operative Level	Foundation energy training (all construction operatives including concrete workers, steel workers, roofers and glaziers)	5	10,000
Craft Level	Stage 1: Foundation energy training (for all construction crafts)	6	49,000
	Stage 2: Craft specific energy training (for all)		
	• Carpentry & Joinery		16,000
	• Brick & Stone Laying		4,000
	• Plastering		4,000
	• Plumbing		9,000
	• Electrical		<u>6,000</u>
	Total		49,000
Supervisory Level	Domestic Heating Technician	7	1,350
	Ventilation Installation Technician	6	500
	Combined Heat & Power (CHP) Technician	7	180
	Site Supervisors/Foremen	7	3,000
	Domestic Energy Retrofit Project Management	7	<u>2,200</u>
	Total		7,230
	*Note: completion of craft level training assumed		

Figure 2: Slide from the regional workshop presentation outlining measures proposed to address the gaps

The issues arisen during the discussion of these measures were grouped into themes and are listed below.

TRAINING PROVISION

- Training of apprenticeship should be released from the responsibility of one institution, FAS.
- Reskilling courses could be run by Institutes of Technology and CIF (Construction Industry Federation).

TRAINING CONTENT

- The building regulations need to be made part of the education process and any changes in the regulations should be directly accommodated into the courses provided.
- All training should have a module on sustainability in the broader context than only construction to create awareness how energy efficiency fits into the general sustainability agenda.
- Systems thinking should be thought at all levels.

BARRIERS TO TRAINING UPTAKE

- Amongst the barriers for the training uptake by construction workers the following were listed:

- Lack of financial resources for the unemployed workers (even if the training is free of charge, the associated costs like travel may be prohibitive)
- Lack of career prospects.
- Employers could not afford the time that is needed for training of the employees, especially in the current climate where the jobs are priced very tightly.
- Black economy is thriving, where no checks can be implemented.
- Difficulties have been also envisaged in regard to training people who have been working for long time in the construction industry – general view is they may feel that they do not need any additional training as they know their jobs very well.

INCENTIVES FOR TRAINING UPTAKE

- To stimulate the uptake of additional training a registration system is needed that would require the trades to undertake CPD courses as part of their accreditation.
- A short mandatory training on energy in construction for all construction workers would be welcomed. Such initiative could be similar to the Safe Pass course.
- Employers should be incentivised to send their employees for training.
- Licensing system for builders could be part of the solution.
- Training needs to be recognised and lead to further qualifications and consequently to improve earning capacity.
- Receiving credits for the attendance of training course has also been listed as an incentive.
- Using house insurance as a check for the qualification and certification of the contractor, which in turn should encourage training uptake.
- The course should end with a valid certification that is connected to a measurable output and a potential for progression, including remuneration. Currently, there are no progression paths available.
- Introduction of workers licencing and registration was seen as one of the strongest incentives for the uptake of training.

“ENERGY PASS”

- The idea of “Energy Pass” as a mandatory basic training on energy efficient construction was introduced during the workshops. Most of participants considered it to be a good idea in principle, however, the implementation of the scheme should be reconsidered.

CROSS-TRADE EDUCATION

- The programmes should include modules that show how actions of different trades on site affect other trades work in regard to ensuring low energy construction.
- The integration of trades should be strongly emphasised and facilitated through mixed trade training courses.

TRAINING OF TRAINERS

- Trainers who teach the courses should also be trained up. Currently, the apprenticeship trainers have no CPD requirement or any other incentive to learn additional skills or retrain in new technologies.

- Trainers should have craft background, for example be master craftsmen.

FINANCIAL ASPECTS AROUND TRAINING

- There needs to be recognition of the difference of scale and financial resources between the big developer and the small contractor who employs two or three people in regard to pricing of the training programmes or potential support schemes.
- It is important that people attending courses pay at least part of their fee as this means they are “invested” in it, yet the costs need to be set at levels that are not prohibitive.
- The training needs to offer value for money that is easily recognisable.
- A model that not relies on government funding is required.
- Suppliers may contribute to the cost of training. Many of their training programmes cover general introduction to low energy construction at the moment and providing separate mandatory training would mean that their training courses could focus solely on the products.
- Also the potential role of the insurance companies in training financing should be explored.

3.3 Comments on scope, content and learning outcomes

The Status Quo analysis identified gaps that can be directly addressed through training measures. One of the main aims of the regional workshops was to gather feedback on potential scope, content and learning outcomes for new training courses that could be introduced to address these gaps. Participants were asked the following questions in the context of three skills areas (Building Fabric, Building Services and Site Management):

- What should be the scope, content and learning outcomes of training programmes aiming to bridge the knowledge, skills and attitude gaps in relation to energy in buildings?
- How should such training programmes be delivered in order to develop a multidisciplinary skills and knowledge and foster attitudinal change?

The main issues that have arisen during discussions are presented below.

3.3.1 Building Fabric

SCOPE & CONTENT

- General principles and basic building science.
- Impact of different types of construction methods for building energy efficiency.
- The impacts and consequences of one trade’s work on site for other trades.
- Knowledge of basic fabric and structure.
- Terminology for effective communication between trades and professionals.
- Knowledge of key issues for low energy buildings, such as airtightness, movement of moisture/condensation, ventilation, insulation, U-values, thermal bridging.
- Changes in building regulations and how to implement the new standards in the construction process.
- Knowledge of building materials and construction methods.

- Use of case studies to illustrate good practice.
- Leadership and ethics.

LEARNING OUTCOMES

- Learning outcomes should be divided in regard to three categories: need to know, nice to know and if there was time to cover it.
- Upon the completion of training, crafts should be able to answer the following questions:
 - What is low energy?
 - Where the building details go wrong? And what is the good practice to prevent that?
 - How to apply building physics for low energy construction?
 - How their work affects the work of other trades and vice versa?
- Attendees need to become more reflective about the consequences of their actions.

LEARNING MODES/AIDS & TRAINING DELIVERY

- There is a need for a practical guidance that could be delivered in the form of a manual.
- Course should be a mixture of theory in classroom and practical demonstrations in the workshops.
- New technologies can be used for the delivery of training, such as DVDs or online tutorials.
- The courses should be delivered to groups of mixed trades, however, relevance to different trades should be emphasised.
- Standardised examples of poor and good practice relevant for different trades should be used across the country.
- Concerns were raised that training may not be effective if there are no opportunities to practice new knowledge and skills in work situations.

LOGISTICS OF PROGRAMMES DELIVERY

- Training courses should be made available at local and regional level.
- For crafts in employment training could be provided in the workplace.
- There would be a need to repeat/refresh the course on regular basis, especially since building regulations are being changed at regular intervals.

OTHER ISSUES

- Concerns were raised that it would be difficult to provide practical guidance for retrofitting projects as these are very diverse in nature.
- Quality, content and learning outcomes need to be standardised across all courses.
- Participants suggested that word “green” should not be part of courses as it may have unwanted associations.
- Participants emphasised that attitude is a big part of getting the work on building fabric right in low energy buildings; therefore training should also address the culture and attitude gap.
- Knowledge of materials and how they fit together is also very important.

3.3.2 Building Services

SCOPE & CONTENT

- The basic training content for the trades in building services should be similar to the content for the building fabric trades. It should focus on knowledge development rather than skills. However, there should be also additional training specific for building services, for example on how to run pipework/cables around joist to maintain air-tightness etc.
- Building information modelling and ability to use new technologies for that purpose.
- Fire proofing should also be part of the training.
- Boilers and heating controls.
- Knowledge on how energy is used and lost in a building.
- Other areas that should also be covered include internal environment and occupants' health.

LEARNING MODES/AIDS & TRAINING DELIVERY

- Similarly like in the case of building fabric, training should be provided to the mixed trades groups, with good balance between practical and theoretical elements.

LOGISTICS OF PROGRAMMES DELIVERY

- Similar issues to those listed for training delivery for building fabric crafts were discussed, including the use of video and online training, possibility of distance training and mixture of classroom and workshop based training.
- If majority of training was to be delivered long-distance, for example, online, such training should start and end with a residential day.
- Feedback from attendees should be collected and used to improve courses.
- Training programmes should be delivered locally to reduce associated costs for trainees, such as transport and accommodation.
- Training programmes should be delivered in the evening and at weekends to avoid losing work time.
- The foundation courses would be well spread geographically, while Tier 2 courses can be offered in more specialised centres.
- Online training, although considered a good option, had some drawbacks, such familiarity of trainees with computers and no opportunity for debates and conversations that normally takes place in the classroom.

OTHER ISSUES

- Participants suggested that a module for clients would be welcome to create a better understanding of the process and develop ability to check the work, at least to a certain degree.
- The example of health and safety training was often cited as a way to affect attitude.
- There needs to be a non-blame attitude on site, so in case of mistakes people can own up to them and such mistakes can be rectified.

- Before people embark on training courses their skills, knowledge and practical experience should be assessed to ensure that people in one group are trained up to the same level.
- The training message should say “you have been doing things well, but now we need to change how we do things overall”.

3.3.3 Site Management

SCOPE & CONTENT

- A range areas was identified to be addressed through training programmes for site managers:
 - Communication
 - IT
 - Business
 - Training skills
 - Understanding of the building a system rather than just a composition of individual parts (systems thinking)
 - Sufficient understanding of technical issues to assess the quality of the job carried out by trades
 - Knowledge of current building regulations and other appropriate legislation
 - Knowledge of building technology
 - Construction terminology
 - Project management and planning
 - Understanding of implications of changes in design and specification and being able to communicate these to the client
 - Ability to read drawings and direct trades appropriately
 - Building physics, especially for retrofits
 - Personal responsibility and ethics
 - Knowledge of fabric, materials and technology
 - Knowledge of safety issues
 - Monetary cost of employment
 - Elements of all training for other crafts that are necessary for the site manager to do his/hers job correctly
 - Knowledge of a grant system
 - Identifying failures and trouble shooting of problems on site
 - Issues related directly to energy efficiency, including embodied energy, life cycle costing and reduction of carbon footprint
- Basic module as a starting point that will be followed by additional CPD units to increase knowledge across a range of areas.

LEARNING MODES/AIDS & TRAINING DELIVERY

- Online learning was seen as a strong possibility for this group.

- Different training programmes for different types of projects: commercial, domestic, retail and industrial.
- For new people the course should be 3 years long part-time (2 nights a week).
- Courses should be made up of modules and allow for different lengths depending on the experience of an individual.
- Assessment should be based on real work rather than theory.
- Training should look in detail at a “standard house” from a point of view of good and bad practice and house as a system.
- The language around training should be change to make the courses more attractive, for example instead of CPD a training day could be called a “toolbox talk”.

ENTRY REQUIREMENTS AND AWARDS

- Participants on the site management courses should have craft background.
- Recognition of prior learning should be reflected in the entry requirements.
- The courses should lead to a minor/major award that would be recognised by a client/licencing authority.

OTHER ISSUES

- CPD courses should be mandatory for this group.
- There is a need to change a mind-set amongst the supervisors that would lead to the acceptance of new reality, where training and being up to date with new developments is essential.

3.4 Comments related to the Roadmap implementation

The final part of the regional workshops consisted of the discussion of issues related to the Roadmap implementation. The main issues raised are outlined below.

INCENTIVES AND DRIVERS FOR TRAINING UPTAKE

- The basic training needs to be mandatory to ensure that all construction workers have at least basic knowledge of energy efficient construction.
- A national register of suitably trained and qualified tradesmen outlining their qualifications and experience is needed so clients could use to identify the right people for their project.
- The demand from a knowledgeable public could encourage up take of training.
- There is a need for a market for skills that would be obtained through training, if there are no jobs after the training is completed it will be seen as waste.
- Insurance policy to be linked to the qualifications of the company’s employees, as that would potentially reduce the exposure of insurance industry to claims.
- There is a strong need for an independent inspection of buildings.
- Payment for a building contract based on the performance of the building in regard to its energy usage after the completion of the work (bonuses or part of the payment withheld until the performance could be assessed).
- Government investment in energy efficiency of their building stock.

- It has to be made clear to the participants how the skills obtained will add value to their work or chances for career progression.
- Trade associations could apply pressure on their members in regard to basic energy efficiency training.
- Tax incentives for employers and employees.
- Banks giving loans for retrofits could insist that all the work is to be carried out by certified builders before the loan is granted.
- A national retro-fit programme via PAYS is likely to create a market and drive training uptake.
- The overall agreement was that training uptake is highly dependent on legislation and regulation.

TRAINING COSTS

- The views of participants varied in regard to who should bear the cost of training. The following proposals were forwarded:
 - Government should fund up skilling, as it is the main benefactor from energy efficient construction (reference to fines if 2020 targets were not reached).
 - For employed trades – the employer should pay; however, there should be tax incentives for employers to offset some of the training costs.
 - EU funding
 - Employed trainees should make a contribution or pay the whole fee.
 - The training costs should be split between the employer and the employee.
 - Government could pay Institutes of Technology to carry out training for free to provide training for the initial 60,000.
 - The trainees, as they will benefit most from the training.
 - Membership fees for trade associations could be used to fund part of the training.
 - Government could incentivise companies to send employees on training courses.
 - There is money available to up skill the unemployed – it could be used to also to train up the employed workers.
 - If training was linked to the building licence, percentage of the registration fee could go towards training.
 - Building materials suppliers could contribute to the fee for training directly related to their products.
 - Tax on building products could be used for training.
 - Energy companies could make contribution to the training costs.
- Participants identified a problem with unemployed trades who do not receive unemployment benefits, as they cannot access training grants for the unemployed. Similarly, the self-employed who have no work are also not entitled to benefits and cannot access training grants.
- All participants agreed that trainees need to contribute something to the fee, as free courses do not work.
- Participants were concerned that employers who pay for training may have to pay double, if the employee leaves the job and they have to train a new employee.
- General consensus was that the cost should be split between the state, employers and employees.

TRAINING DELIVERY

- Institutes of Technology have the required skills, knowledge and facilities to deliver the training.
- The training needs to be affordable and delivered locally.
- The online delivery of training is better suited for the site managers than the crafts.
- The foundation training could be delivered by all Institutes of Technology and the higher levels of training by Institutes specialising in craft specific courses.
- A lead-in period is required as all construction workers cannot be trained at the same time. The workers currently employed should be first to be trained up.
- Potential to use mobile labs for the Tier 1 training.
- The existing resources and facilities should be used to deliver the training.
- The programmes should be delivered by tradesmen rather than professionals to create better rapport between the trainees and the trainer.
- On-site training was considered difficult and having potential health and safety issues.
- Once the training has been delivered feedback from the employer should be requested to assess whether employees knowledge increased, what impact it had on productivity, attitude and skills.
- The initial training should be built into the apprenticeship programmes.

ENTRY REQUIREMENT, QUALIFICATIONS AND CERTIFICATION

- The programmes will need to get ETS credits and be differentiated from those provided by private trainers.
- The programmes should be internationally recognised.
- At the entry points for the higher level programmes prior learning should be recognised.
- In order to tender for public works contractors should be accredited.
- The training must provide a recognised certificate and result in the licensing of builders.

TRAINING ACCREDITATION AND QUALITY CONTROL

- The quality and abilities of trainers were considered to be an important issue. The question that arose was who is going to train the trainers?
- Training up trainers for the energy efficiency programmes delivery was seen as a priority.
- Trainers should be accredited by an independent body.
- To ensure the quality of programmes and maintain transparency and credibility the programmes should be independently reviewed.

OTHER ISSUES

- One of the questions raised was how up skilling would affect rates of pay.
- At present the time is good for the review and overhaul of the apprenticeship programmes as the numbers are low.
- Concerns were raised around the supplier training as it may be biased by a push towards specific products.

MEDIA RELEASE

For Immediate Release
Friday, 05 October 2012

Energy Skills Workshop For Cork's Construction Sector

- Up-skilling and training will create new employment opportunities, according to BUSI

Builders, renovators, contractors and other stakeholders involved in Cork's construction industry are being invited to participate in a free energy workshop in The Maldrone Hotel in Cork City on Wednesday, 24 October.

The purpose of the workshop, entitled "*Energy in Buildings: Preparing Construction Workers for the Future*", is to support the training and up-skilling of construction workers as part of wider efforts to create employment in the sector and to assist Ireland in achieving the EU 2020 energy efficiency targets. Under the National Energy Retrofit Programme (NERP), more than 112,000 Cork buildings and one million buildings nationwide must be retrofitted by 2020.

Build Up Skills Ireland (BUSI) Project is hosting the upcoming workshop as part of its development of a Roadmap for the upskilling and training of construction workers in Ireland. BUSI, which is funded by the EU Commission Build Up Skills Initiative, is being managed by Dublin Institute of Technology (DIT), Blanchardstown Institute of Technology (BIT), Limerick Institute of Technology (LIT), The Irish Congress of Trades Unions (ICTU) and The Construction Industry Federation (CIF).

Project coordinator **Seamus Hoyne of L.I.T. and The Tipperary Energy Agency** commented: "The Roadmap for Ireland will seek to outline actions that will provide construction workers with skills and knowledge necessary to build highly energy efficient buildings, while at the same time ensure their better career prospects in Ireland and abroad. To secure industry input into the Roadmap we are conducting a series of six consultation workshops around Ireland, including Cork. Discussions at these events will focus on overall strategy for fulfilling the training needs, more specific issues like courses' content and qualifications and barriers for the implementation of the roadmap."

Mr. Hoyne noted that the Roadmap must be endorsed by key strategic National stakeholders by April 2013 and will set the platform for revision of existing programmes and development of new programmes.

He explained: "Energy use in buildings accounts for over 40% of total final energy consumption in Ireland. The National Energy Retrofit Programme (NERP) sets out a target of 1 million Irish buildings, including approximately 112,400 Cork buildings, to be retrofitted by 2020 in an effort to reduce the country's total energy consumption by 20%. With the high contribution to energy savings expected from the retrofitting of existing dwellings, there is a need for competent contractors and supervisors to oversee works and technicians with an in-depth knowledge of heating system design, integration and control."

Recent figures show there are approximately 70,000 workers currently still operating in the Irish construction sector. The residential sector accounts for 68% of the value of building construction output with approximately 80% of this activity in repair, maintenance and improvement.

"Outside of the continued downturn in the Irish construction industry, one of the biggest challenges facing the sector is that many of those operating within it are not sufficiently trained in how to build highly energy efficient buildings," stated Mr. Hoyne, who added: "The rapid evolution of the building standards for energy performance has resulted in a skills gap

across the current workforce. The challenge of deep retrofitting also presents knowledge and skills gaps. At present there is limited coordinated effort nationally to address these gaps.”

Mr. Hoyne said that at operative and craft level, all workers involved in building construction and renovation will require training. The projections for the volume of training required are 10,000 Operatives and 49,000 Crafts/Trades people. An additional 7,000 may go on to do additional training to act as project supervisors.

“The demand for such skills will be intrinsically linked to the level of energy policy implementation. Establishing quality standards for professional practice and upskilling is vital and participation should be promoted and funded for those in employment to support the sustainability of the construction industry tasked with implementation of building standards,” he concluded.

In addition to the upcoming Cork workshop, Build Up Skills Ireland (BUSI) Project will host five other workshops in Crowne Plaza Hotel in Dundalk (16 October), Limerick Institute of Technology (19 October), Tower Hotel in Waterford (23 October), DIT Offices in Grangegorman, Dublin 7 (26 October) and the Clarion Hotel in Sligo (30 October). Each workshop takes place from 9.30am to 2.00pm.

For more on the BUSI project or to register for the free October 24th workshop in the Maldron Hotel, John Redmond Street, Shandon, Cork City, contact BUSI on 01-4023749 or email elzbieta.krawczyk@dit.ie.

-ENDS-

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Energy in Buildings: Preparing construction workers for the future

INVITATION TO CONSULTATION EVENTS

Build Up Skills Ireland (BUSI) initiative aims to ensure that craftsmen and other on-site construction workers and system installers have the necessary skills and knowledge to implement the EU 2020 energy efficiency targets.

As part of the BUSI project we are developing a Roadmap for Ireland outlining actions that will provide construction workers with skills and knowledge necessary to build highly energy efficient buildings, while at the same time will ensure their better career prospects in Ireland and abroad.

Better training means better job opportunities – have your say!

To get industry input into the Roadmap we are conducting a series of consultation workshops around Ireland. Discussions at these events will focus on overall strategy for fulfilling the training needs, more specific issues like courses' content and qualifications and barriers for the implementation of the roadmap. **Please join us to ensure that you have your say and your views are heard and to make sure that you are influencing the change in this important area for construction industry in Ireland.**

EVENTS

Please contact Ela Krawczyk by email elzbieta.krawczyk@dit.ie or by phone 01-402 3749 to confirm that you and/or a nominated representative from your organisation will be able to participate in one or more of the following events:

DUNDALK: Tuesday, 16th October 2012, Hamilton Suite A, Crowne Plaza Hotel in Dundalk

LIMERICK: Friday, 19th October 2012, in the Aula Maxima Hall at Limerick Institute of Technology, Limerick (Moylish Park Campus, <http://www.lit.ie/Campus/Moylish/default.aspx>).

WATERFORD: Tuesday, 23rd October 2012, Tower Hotel, Waterford

CORK: Wednesday, 24th October 2012, Maldrón Hotel, John Redmond Street, Shandon, Cork City

DUBLIN: Friday, 26th October 2012, in DIT Offices in Grangegorman, Dublin 7
(<http://www.dit.ie/about/grangegorman/contactus/>)

SLIGO: Tuesday, 30th October 2012, Canis Major room, Clarion Hotel Sligo, Sligo

**All workshops are free of charge and start at 9.30am and finish at 2pm.
We will provide refreshments and light lunch.**



10th September 2012

Build Up Skills Ireland: Creating a National Roadmap for Energy Training in Construction

Workshop Invitation

In 2009 in Ireland, the Residential and Commercial/Public Sector accounted for approximately 43% of energy consumption. Hence, improving energy efficiency and renewable energy uptake in buildings are important elements of meeting sustainable energy targets. It is recognised that to achieve these targets those working in or entering the construction sector will require new energy skills and competences.

To address this need, Intelligent Energy Europe is funding an EU wide initiative *Build Up Skills: Energy Training for Builders*, which focuses on the continuing education and training of **craftsmen and other on-site construction workers and system installers** in buildings in relation to energy. The aim of the *Build Up Skills Ireland* (BUSI) project is to develop a national qualification roadmap for Ireland, which will set upskilling, education and training targets for construction workers to ensure that their qualifications, skills and competences are in line with those needed to meet 2020 sustainable energy targets.

As a part of this project, the BUSI partners will be holding a half-a-day participatory workshop on Tuesday, **2nd October 2012**, from 9.30am till 2pm, in DIT Offices in Grangegorman, **Dublin 7** (Dublin Institute of Technology, <http://www.dit.ie/about/grangegorman/contactus/>). The aim of the event is to give the participants an opportunity to actively contribute to the development of the national qualifications roadmap, by gathering their views and inputs on an overall draft strategy for fulfilling the training needs, discussing more specific qualifications and training schemes and issues surrounding the implementation of the roadmap.

We hope to have approximately 40-50 participants in attendance from a variety of backgrounds related to energy issues in construction in Ireland, including construction workers, trainers, representatives of construction companies, unions, trade bodies and others interested parties. We hope that you will be able to join us for this session. More information about this event and other regional workshops can be found @ <http://ireland.buildupskills.eu/national-project-calendar>.

We should appreciate if you could contact us (by email elzbieta.krawczyk@dit.ie or by phone 01-402 3749) at your earliest possible convenience to book a place at the workshop. Please do not hesitate to contact me if you have any questions or extend this invitation to someone who may be interested in it.

Yours sincerely,

Dr Ela Krawczyk
Head of The Futures Academy at DIT





Energy in Buildings: Preparing construction workers for the future

CONSULTATION WORKSHOP

19th October, LIT, Moylish Park Campus, Limerick

AGENDA

- 09.30 – 09.45 *Registration*
- 09.45 – 10.00 **Introduction**
Seamus Hoyne, Limerick Institute of Technology, & Ela Krawczyk, Dublin Institute of Technology
- 10.00 – 10.15 **Main findings of the *Status Quo* report**
Seamus Hoyne, Limerick Institute of Technology
- 10.15 – 11.00 **Introduction and discussion of the draft strategy for fulfilling the training needs**
Roundtable discussions
- 11.00 – 11.30 **Addressing knowledge, skills and attitude gap: BUILDING FABRIC**
Roundtable discussions
- 11.30 – 12.00 **Addressing knowledge, skills and attitude gap: BUILDING SERVICES**
Roundtable discussions
- 12.00 – 12.30 **Addressing knowledge, skills and attitude gap: SUPERVISION & MANAGEMENT**
Roundtable discussions
- 12.30 – 13.00 *Light lunch (sandwiches, tea & coffee)*
- 13.00 – 13.55 **Roadmap implementation**
Roundtable discussions
- 13.00 – 14.00 **Next steps and Close**



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Energy in Buildings in 2020: Preparing construction workers for the future

Consultation Workshop

26th October 2012, DIT Grangegorman, Dublin



Agenda

- 09.45 – 10.00 **Introduction**
- 10.00 – 10.15 **Main findings of the *Status Quo report***
- 10.15 – 11.00 **Introduction and discussion of the draft strategy for fulfilling the training needs**
- 11.00 – 11.50 **Addressing knowledge, skills and attitude gap**
- 11.50 – 12.20 *Group Presentations & Discussion*
- 12.20 – 13.00 *Light lunch*
- 13.00 – 13.55 **Roadmap implementation**
- 13.55 – 14.00 **Next steps and Close**

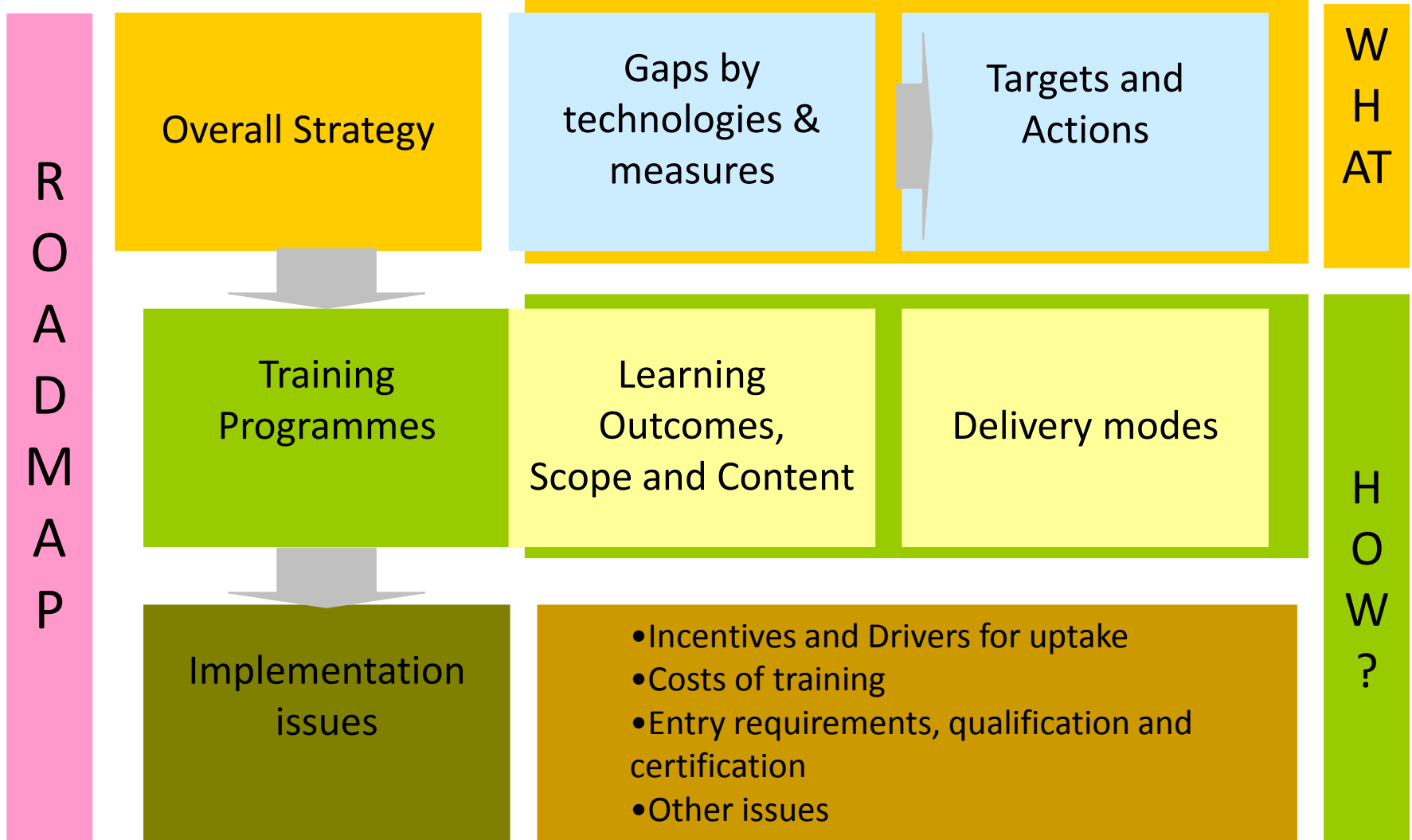
Aims of the workshop

- Provide an **opportunity** to people in the construction industry to have their **input** into developing the national qualifications **roadmap** setting out up-skilling, education and training targets to ensure the workforce have sufficient skills, competences and knowledge needed to implement current and future building standards to 2020 (near zero energy buildings).
- To discuss how the current knowledge, attitude and skills gaps can be addressed through training programmes.
- To examine issues surrounding the implementation of the roadmap.

Expected outcomes

- Views and opinions on the proposed draft strategy.
- Specific proposals related to scope, content and learning outcomes of training programmes addressing the gaps.
- Recommendations on how these programmes should be delivered.
- Views on issues such as: incentives and drivers for training uptake; who bears the costs of the training; entry requirements, qualification levels and certification; training accreditation and quality control; and any other issues that may arise.

Outline of the discussion



Draft strategy:

Current gaps by technologies/measures

Area	Building Fabric	Ventilation	Space Heating/Cooling, Water Heating, Controls	Lighting	Renewable Energy Systems	Building Energy Management
Skills	Exist	Some new skills needed	Exist	Skills in lighting design needed	Exist	Skills needed for design and integration
Knowledge	Knowledge of underpinning principles of low energy buildings needed	New knowledge required of emerging systems	Knowledge of optimisation and integration of multiple systems needed	Product and software knowledge needed	Expert knowledge of optimisation and integration needed	New knowledge associated with systems & technologies needed
<p>Systems Thinking - knowledge & awareness across all disciplines to achieve prescribed performance</p>						

Draft strategy: Discussion

- What are your views regarding current gaps in knowledge, skills and attitudes?

Draft strategy: Targets and actions

Occupational Tier	Qualification Need	NFQ Level	Numbers
Operative Level	Foundation energy training (all construction operatives including concrete workers, steel workers, roofers and glaziers)	5	10,000
Craft Level	Stage 1: Foundation energy training (for all construction crafts)	6	49,000
	Stage 2: Craft specific energy training (for all)		
	• Carpentry & Joinery		16,000
	• Brick & Stone Laying		4,000
	• Plastering		4,000
	• Plumbing		9,000
	• Electrical		<u>6,000</u>
	Total		49,000
Supervisory Level	Domestic Heating Technician	7	1,350
	Ventilation Installation Technician	6	500
	Combined Heat & Power (CHP) Technician	7	180
	Site Supervisors/Foremen	7	3,000
	Domestic Energy Retrofit Project Management	7	<u>2,200</u>
		Total	
	*Note: completion of craft level training assumed		

Draft strategy: Discussion

- What are your views on the proposed measures to address these gaps?
- What are the barriers for the implementation?
- Any other comments?

Addressing gaps

Group 1:
Building Fabric

Group 2:
Building Services

Group 3:
Supervisor/Manager

Questions to be addressed

What should be the scope, content and learning outcomes of training programmes aiming to bridge the knowledge, skills and attitude gaps in relation to energy in buildings?

How should such training programmes be delivered in order to develop a multidisciplinary skills and knowledge and foster attitudinal change?

Roadmap implementation

- What are the incentives and drivers that could encourage the training uptake?
- Who bears the costs of the training?
- What are the entry requirements, qualification levels and certification?
- Who should accredit the training and manage its quality control?
- What are other issues relevant to the implementation of the roadmap?

Next Steps & Close

- Using the results of the workshop to feed the development of the national roadmap
- Draft roadmap available for comments
- Arising issues to be addressed through a questionnaire