

Materials and Workmanship

**How the 'QualiBuild' program
can improve construction
standards on-site**



- QualiBuild project
 - Project partners and its development
 - Background
 - Main focus
 - Ambitious targets
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 - Expected impacts
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 - Strategy
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 - Supporting actions
- Challenges and evolving context-CIRI
 - Results target
 - Vision for the future
- How QB can improve standards on-site
- Conclusions

To Cover





Project Duration

1/11/13 – 30/9/16

(33 Month EU funded project)

Website: www.QualiBuild.ie

Social Media:

 facebook.com/QualiBuild

 @QualiBuild

 QualiBuild

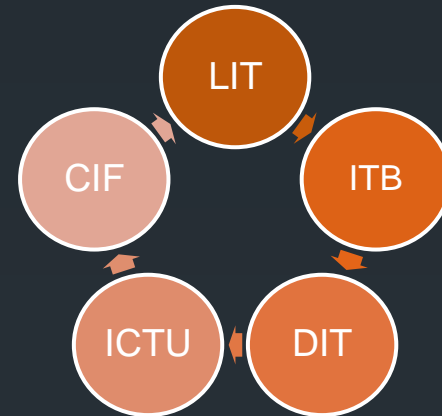
What is QualiBuild



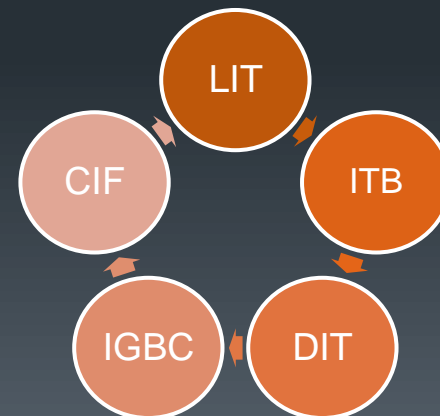
The Partners and its Development



- Pillar I - BUSI
 - Findings from Status Quo Report
 - Overview of Roadmap



- Pillar II - QualiBuild
 - Actions and Plans
- Irish Context



Status Quo Report

- Analysis presented ‘perhaps’ unexpected result i.e. immediate focus needs to be on those **currently employed** in construction sector rather than Government policy of focus on unemployed
- Generally, crafts have **good skills but lack of knowledge** on how to apply these in low-energy building context.
- **Trainers** within the apprenticeship system lacked skills and knowledge in relation to low-energy buildings
- **Curriculum** for **craft training programmes** not up to date
- Training programmes for **renewables** well established
- Training on energy efficiency systems and techniques **mainly industry driven - fragmented**



Background

- BUILD UP Skills QuailBuild is focused on the findings from the Irish Build Up Skills Roadmap that the **gap in providing Quality Building is one of Knowledge** rather than **Skills**
- It focuses on **'neglected'** target groups such as building construction workers and trainers.
- It is based on **a partnership approach** with relevant organisations.
- Real impact will be through **National Roll Out**
- **The building Sector** needs to respond.



Target Levels

Operative level

This is at *operative level or a skill level outside of the formal apprenticeship training structure*, i.e. skills acquired through on site experiential learning, e.g. concrete workers, steel workers, glaziers, roofers.

Craft level

This is at a *qualified craft level where a formal apprenticeship or equivalent training in a building construction related trade has been successfully completed*.

Supervisory level

This is at a *specialist, supervisory or project management level* where a craft worker has progressed to a role such as a system installation specialist, site supervisor, small/medium sized building contractor or similar roles.

Roadmap Strategy to address two pillars



Main Focus

- The Irish Building Sector is the main focus of **QUALIBUILD**
- Quality Building is at the core of QualiBuild
- Building Construction Workers are the main target group of the project

FROM THIS



TO THIS



- Development of a 'Good Construction Practice' Information and Awareness Campaign' will also be developed
- It is intended that Best Practice methods and communication will be developed to provide Quality Energy Efficient Buildings in Ireland with **National Roll Out Plan** setting out objectives for post 2020.

Ambitious Targets

Performance Indicators	Target within the action duration:	Target by 2020:
Number of training courses triggered by the action	Foundation Energy (Workers): 10 pilot courses Trainers: 4 courses	Foundation Energy (Workers): 2,400 courses Craft Specific: 1,000 courses on specific craft skills Supervisors: 400 courses
Number of people that will be trained	Foundation Energy (Workers): 200 Trainers: 100	Foundation Energy (Workers): 60,000 Craft Specific: 20,000 crafts people Supervisors: 10,000 people courses Trainers 200 Trainers
Number of hours taught in the frame of the courses triggered	Foundation Energy (Workers): 800 Trainers: 240	Foundation Energy (Workers): 51,000 Craft Specific: 51,000 courses on specific craft skills Supervisors: 80,000
Estimated specific cost to qualify each trainee	Foundation Energy (Workers): €600/worker Trainers: €1,500	Foundation Energy (Workers): €400 Craft Specific: €700 Supervisors: €2,500 Trainers: €800
Renewable Energy production triggered	1,340 toe/year	8,040 toe/year
Primary energy savings compared to projections	2015: 2,487 toe/year 2016: 14,921 toe/year	111,905 toe
Reduction of greenhouse gas emissions	2015: 7,230 tCO ₂ /year 2016: 43,380 tCO ₂ /year	350,000 tCO ₂
No of workers on Quality Building Registration System	1,000	40,000
% of workers who perceived quality as important	10%	50%
€funding in place for Training Programmes	€1m	€40m

Objectives to achieve targets

- Training
 - Develop and validate a **Foundation Energy Skills** programme and roll out nationally
 - Develop, Validate and Implement a national ‘**Train the Trainers**’ course for 100 Trainers
- Communication
 - Create and implement a comprehensive **innovative communication campaign** focused on Quality Building
- Quality Systems
 - Develop and implement a **Quality Building Registration System**
- Finance & Sustainability
 - Mobilise **€1m** additional funding by project end
 - Transfer **project outcomes** to relevant agencies for National Roll Out



Expected Impacts

- **Training** the construction sector to provide **Quality**, Energy Efficient buildings
- Improve **Communication** between all sectors.
- Create a **Registration System** to develop skilled construction workers
- **Promotion and Exchange** of the QualiBuild experience Nationally and within the EU.
- A **National Roll Out** with **CPD** development of the construction skills and networks.



Endorsement/Support



Roinn Cumarsáide, Fuinnimh agus Acmhainní Nádúrtha
Department of Communications, Energy & Natural Resources



ÚDARÁS FUINNIMH
INMHARTHANA
NA HEIREANN



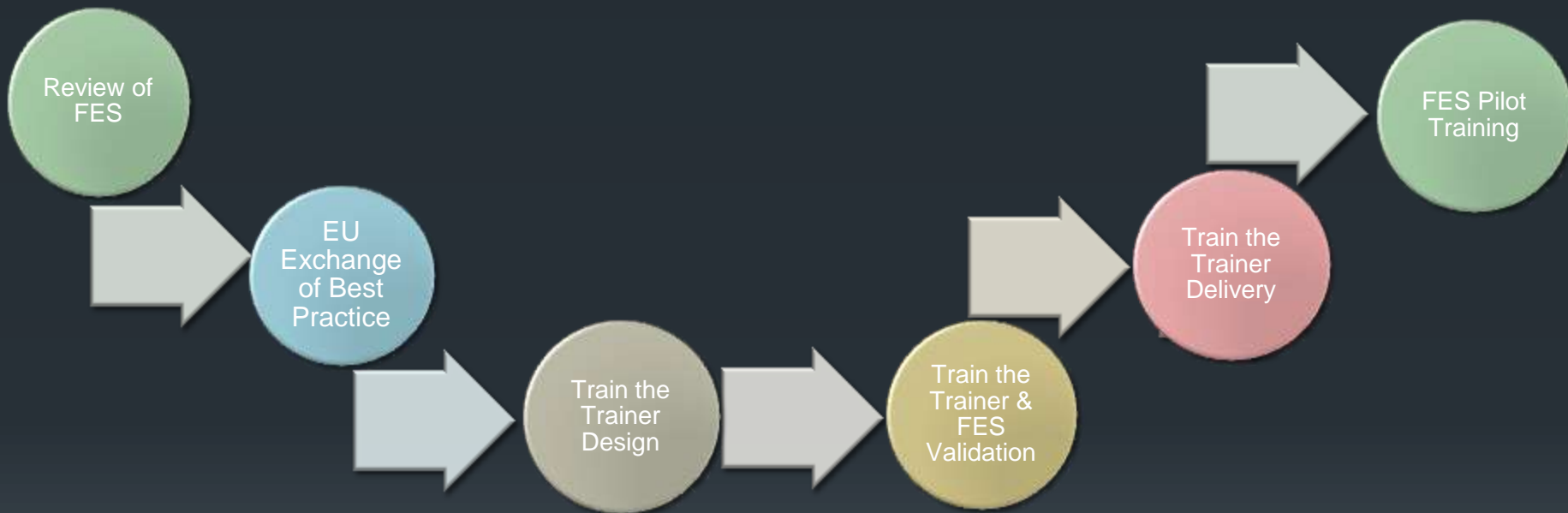
Comhshaoil, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

SOLAS

An tSeirbhís Oideachais Leanúnaigh agus Scileanna
Further Education and Training Authority



WP3 Overview



WP3 – Train the Trainer

Train the Trainer Programme, 4 module Special Purpose/Supplemental award

1. Towards Zero Carbon Buildings, 2. Building Fabric, 3. Building Services/Ventilation, 4. Pedagogical Approaches

Approach

- **Blended learning programme** to accommodate trainers in full-time employment
- **One day regional workshop and one day site visit** per module – 4 locations for each workshop
- Complemented by **learner manual and online activities** for each module
- **100% continuous assessment** through online activities, written assignments and reflective learning journals



WP 3 Aims

Action Keywords



Energy efficiency

Quality Build

System thinking

Attention to Detailing

Continuous Air-tightness

Controlled Ventilation

Comfort Levels

Tasks-WP4

Review Existing
Registration
Systems
(Month 6 to 8)

Registration
System
Consultation
(Month 10 to 13)

Registration
System Piloting
(Month 13 to 26)

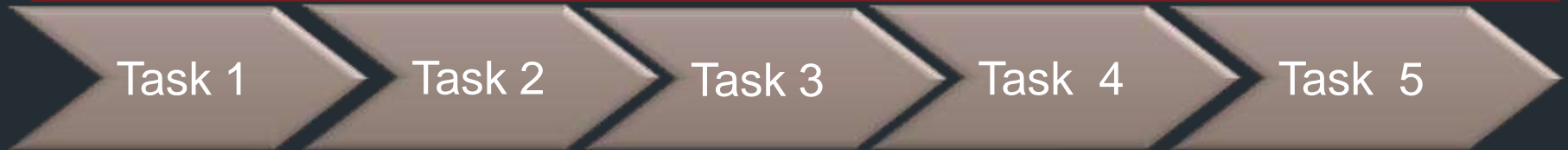
Registration
System Future
Development
Proposals
(Month 18 to 26)

Registration
System Model
Development
(Month 8 to 10)



Work Plan Timeline

WP4



Review

FÁS:
CSCS:
RECI:
RGII:
ABE:
OFTEC:
SEAI:
NSAI:
Guild of Master
Craftsmen;
RIAI:
SCSI:
Others:

Model development

- A central place to store, review, print and recall
- Provide easy access and navigation for all users,
- integrated with Online fees collection
- Provide a complete 'quality building training' history
- Be simple to use and follow

Robust consultation

- Employers
- Construction Industry bodies
- Unions
- Government bodies
- Educationalists
- Trainers

- Workshop events

Piloting

- List of activities
- FES trainers from WP3
- Voluntary emphasis
- Linked to WP5 communications campaign

Future Development

- Building Control Act reforms
- Linkage with voluntary scheme of registration of builders



WP4 Consultation

Consultation at National and EU level

- National Skills Academy-CITB
- German Craft Trades Congress (Deutsche Handwerkstag).
- Danish construction craft
- German-Irish Chamber of Commerce

Piloting



WP4 -Consultation

National

Dundalk

Waterford

Cork

Limerick

Sligo

Dublin

National Workshops

Denmark

UK

Germany

Aim & Objectives of WP5

- Develop a Quality Building Information and Awareness Campaign
 - Overcome the poor image associated with building in Ireland
 - Create opportunities to focus on a new, better, quality construction approach
 - Focus on changes being made to improve quality control and the systems thinking approach to low-energy buildings
 - Focus on quality and efficiency of new construction and retrofitting practices.
 - Outreach to target groups amongst industry, craft workers, and building owners and occupiers
 - Provide information and guidance to decision makers involved in procuring construction services.
 - Focus on the need to use competent companies, products and systems and how to recognize such operators and quality



What is Quality Building?

This depends on your needs for building, for training or if you are a trainer.

Select the profile on the right that most suits you and find out more about quality building.



QUALIBUILD NEWS [More](#)

- 25.04.2014**
This is an example of a news story linked to the full article
- 25.04.2014**
This is an example of a news story linked to the full article
- 25.04.2014**
This is an example of a news story linked to the full article



SIGNUP FOR FULL ACCESS TO

- Database of training events
- Case Studies
- Register of Workers
- Content Builder and more

[SIGNUP FOR FREE](#)



CASE STUDIES

Information about the case studies and the benefit of having access to these

[VIEW CASE STUDIES](#)



IMAGE GALLERY

Click on any image to view the full size version

[VIEW ALL GALLERIES](#)

UPCOMING EVENTS [More](#)

- Event Date: 26.05.2014**
Title of event goes here
Event Location
- Event Date: 26.05.2014**
Title of event goes here
Event Location
- Event Date: 26.05.2014**
Title of event goes here
Event Location
- Event Date: 26.05.2014**
Title of event goes here
Event Location

FES TRAINING

Information and overview of the FES Training programme

[FES TRAINING](#)

TRAIN THE TRAINER

Information and overview of the Train the Trainer programme

[TRAIN THE TRAINER](#)



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Learn at ease in the comfort of your own home. Our E-learning courses are suitable for builders and trainers.

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CONTENT BUILDER

Use the easy content builder to bookmark interesting articles, news items and content to print or download later.

[FIND OUT HOW](#)



LASTEST UPDATES

- News: QualiBuild news story
- Event: Upcoming training event
- Register: New workers added to register
- News: Another recent news story

[View All Updates](#)

SITEMAP/POPULAR PAGES

- About QualiBuild
- Train the Trainer
- Quality building news
- Database of Training Events

[FULL SITEMAP](#)

NEWSLETTER

Sign up for our newsletter to keep notified of updates to the site and new training events.

[SUBSCRIBE](#)

www.qualibuild.ie



Tools

- Dedicated website
- Flyers and other printed materials
- Articles in trade/mainstream media
- Interviews (print, radio, tv/web
- Video materials
- Educational materials (from other WP)
- Social media
- In-person at events (building shows – trade and consumer), coffee talks, etc.



Strategy- Figures, 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)		
	<ul style="list-style-type: none"> • Carpentry & Joinery • Brick & Stone Laying • Plastering • Plumbing • Electrical 		16,000 4,000 4,000 9,000 <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		

Training Actions

- Introduce short **Foundation Energy Training** for all construction workers.
- **Review apprentice curricula** for construction crafts to incorporate knowledge and new skills related to low energy buildings.
- Develop **a specialist training** for each relevant craft.
- Develop **a specialist training for arising technician** roles.
- Review, update and **develop if needed new programmes for construction managers and site supervisors** that will equip them with necessary skills to manage implementation of low energy buildings.
- **Train the Trainers.**



Supporting Actions

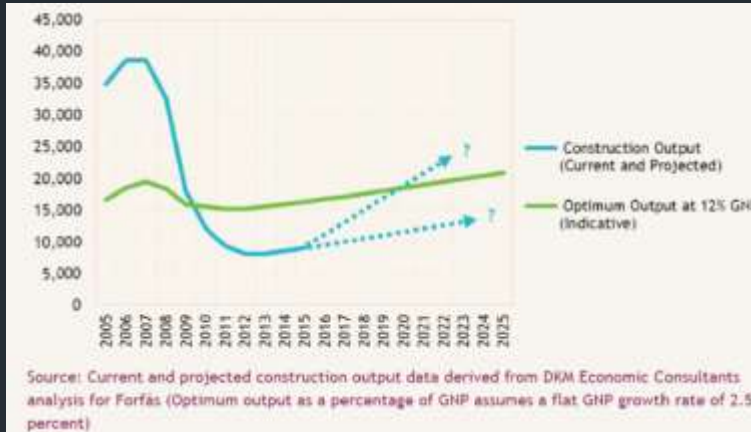
- Introduce Industry driven market led training requirements.
- To support implementation of the Building Contractors register
- Provide for the **upskilling of Building Control Officers**
- Develop a 'Good Construction Practice' Information and Awareness Campaign
- Encourage a deeper engagement and exchange of information between the recognised professionals and construction workers in regard to their cooperation in achieving low energy buildings.
- Identify and develop sustainable funding mechanisms that will facilitate the provision of the training required



Challenges and Evolving Context

IRELAND'S CONSTRUCTION SECTOR:

OUTLOOK AND STRATEGIC PLAN TO 2015



STATUTORY INSTRUMENTS.

S.I. No. 80 of 2013

Building Regulations 2011

Forfás

Ireland's second National Energy Efficiency Action Plan to 2020



Nearly Zero Energy Roadmap for Dwellings

Timeline		2005	2008	2011	2013-2020
Part L ¹	% Improvement	Baseline	40% and renewables requirement	60%	Nearly Zero Energy Dwellings
	Primary Energy ¹ (Avg Dwelling) kWh/m ² /annum	150	90	60	45
	CO ₂ ¹ (Avg Dwelling) kg/m ² /annum	30	18	12	10
EPBD	BER (Avg Dwelling)	B3	B1	A3	A2

Register of Builders



Comhshaoil, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government



Results target

- Foundation Energy Skills & Train the Train programme nationally validated with
 - 200 crafts workers trained on Foundation Energy Skills Programme
 - 100 trainers trained
- Training content available for National Roll out
- Quality Building Registration System designed & integrated with other relevant systems
 - 200 workers registered on pilot system
- Quality Building Communications Campaign implemented on multiple levels engaging with >10,000 people
 - Media (web, radio, social media, publications etc.)
 - Events (seminars, conferences etc.)
 - Craft and Professional 'coffee meets'
- National Roll Out Plan agreed with additional finance secured
- Evaluation of perceived importance of quality amongst workers





To go



from this



to this

A Foundation Energy Skills Programme
A Train the Trainers programme
A Quality Building Training Registration System
A Quality Building Communications Campaign



A Vision - Quality Building Pass



Accessed by secure registered PIN

Individual

- Personal details
- Training History
- CPD courses
- Qualifications

Accredited Trainers

- On successful completion
- Dates

Verify Online

- Employers
- Client

How can the 'QualiBuild' program improve construction standards on-site

- Greater attention to detail
- Better attitude towards work
- Better standard of pay and conditions
- More multidisciplinary approach
- Better awareness by the public
- Awards for high quality
- More regulated therefore more accountability
- CPD requirement in the register
- Less insurance claim hence potentially lower premiums



- Empowering the public e.g., PH clients
- Raising of the bar leading to rising tide of awareness/acceptance
- Significance of DLRC decision on PH much more than a regulation
- Connecting the dots-great work around the country by the ICWI
- Closing the knowledge gap but is it only a perception ?

“Education isn’t the filling of a pail but the lighting of a fire”

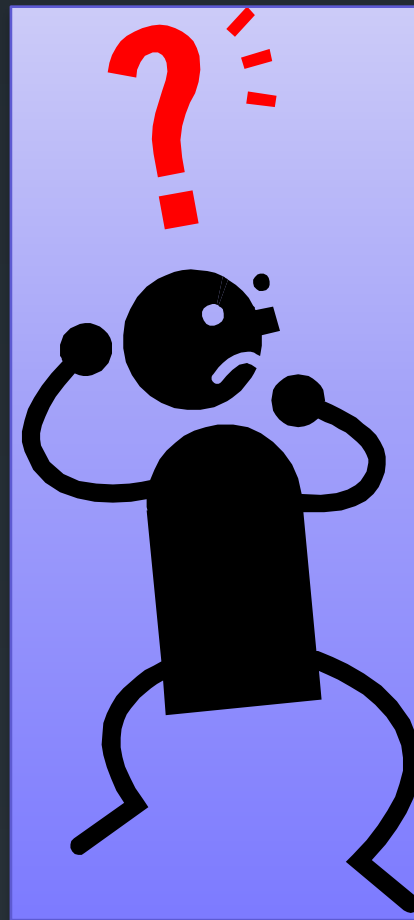
Is there a greater threat from bad detailing now than there was in the past?



Conclusions

- QualiBuild creates opportunity to focus on previously 'neglected' target group
- Provides direction in filling the Knowledge gap
- Encourages national partnership develop between relevant organisations-Built Environment
- Legislative Actions –voluntary to mandatory
- Presented opportunity to integrate actions into Government Policy
- Learn from lessons on SHWA
- Opportunity to get it right-yes we can





Contact

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