



3rd EU Exchange Meeting

26 – 28 November 2012

Brussels

Report to participants



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1 Preliminary Note

BUILD UP Skills is a strategic initiative under the Intelligent Energy Europe (IEE) programme (Calls for proposals 2011-2012-2013) to boost the further education systems for the building workforce in Europe and to ultimately increase the number of qualified workers to promote a high energy performance in buildings. The initiative is part the European Commission's Energy Efficiency Plan adopted in 2011.

BUILD UP Skills has two pillars:

- Pillar I supporting the development of national status-quo analysis and national roadmaps (Call 2011 and 2012);
- Pillar II supporting the setup or upgrade of qualification and training schemes (Call 2012 and 2013).

In November 2011, 21 countries started working under Pillar I on their status-quo analysis and national roadmap. 9 additional countries joined the initiative in June 2012. Contrary to most IEE actions, these projects are national and not multi-country projects.

To ensure a high European added value, dedicated activities on European exchange are included in each project. It covers in-depth exchange via meetings of all countries as well as peer review activities between teams of countries.

The EU exchange meetings gather about 100 participants from the BUILD UP Skills projects and are organised by the Executive Agency for Competitiveness and Innovation. In total, 5 EU exchange meetings are foreseen for the period 2011-2013.

The first BUILD UP Skills EU exchange meeting was organised in Brussels in November 2011, the second in Ljubljana in June 2012.

This report provides an overview of the **BUILD UP Skills 3rd EU Exchange Meeting** which took place in Brussels, 26-28 November 2012. Experiences and outcomes of previous meetings were an integral part in the design of this meeting and the report.

Its main contributors are Irena Kondratenko, Johannes Haas, and Karin Drda-Kühn, who accompanied the exchange meeting as invited experts to the EACI team.

The objective of this report is to document the activities of the different sessions ("panorama session", exchange with concerted actions RES and EPBD, bilateral networking, contractors' meeting, parallel working sessions, exchange of BUILD UP Skills initiative with European stakeholders), and to provide summaries and conclusions.

2 Agenda

The three-day event was organised as follows:

Monday 26 November 2012

- Panorama on state of advancement of BUILD UP Skills projects
- Exchange with Concerted Actions (CA RES and CA EPBD)
- CONTRACTORS MEETING (exchanges on communication, reporting to EACI, overall coordination and running of an IEE project)
- In parallel – BILATERAL NETWORKING – "wanted/speed dating session"

Tuesday 27 November 2012

- Parallel workshops
 - (A) From status quo to roadmaps
 - (B) Innovative training
 - (C) Incentives and accompanying measures
 - (D) Entrepreneurial and broader skill needs of building professionals
 - (E) Synergies between the BUILD UP Skills roadmaps and the RES directive obligation (article 14)
 - (F) Mobility of workers and link with EQF
 - (G) BUILD UP Skills EU overview report
 - (H) Accreditation and certification/quality control in the building sector
 - (I) Assessing costs of priority measures and identifying potential mechanisms
 - (J) Endorsement of BUILD UP skills roadmaps
- Plenary showcase (poster session) of workshop outcomes
- Bilateral Networking between sessions

Wednesday 28 November 2012

- Meeting of BUILD UP Skills participants and EU stakeholders
 - Welcome by Patrick Lambert, Director, EACI
 - The BUILD UP Skills initiative: initial results - outlook on next steps, EACI
 - BUILD UP Skills projects: insights on different national situations Examples of Denmark and Romania, Charlotte Forsingdal, Horia Petran
 - Panel discussion: EU Stakeholders views on BUILD UP Skills and reactions to initial findings
 - Domenico Campogrande (European Construction Industry Federation)
 - Rolf Gehring (European Federation of Building and Woodworkers)
 - Tommaso Grimaldi (Secretary General, European Vocational Training associations)
 - Monica Frassoni (European Alliance to Save Energy)
 - Seamus Hoyne (Head of Department, Limerick Institute of technology, BUILD UP Skills Ireland coordinator)
 - EU support for skills development in the building sector

- Strategy for the sustainable competitiveness of the construction sector and its enterprises: Antonio Paparella (Socio-economic analyst, Task manager construction competitiveness and enterprises, Sustainable Industrial Policy and Construction unit, DG Enterprise & Industry)
- Skills development in the building sector : Fernando Vasquez (Deputy Head of Unit, "New Skills for New Jobs, Adaptation to Change, CSR, European Globalisation adjustment Fund" DG Employment and Social Affairs)
- EU energy policy and programmes: Marie Donnelly (Director for Renewables, Research and Innovation, Energy Efficiency - DG Energy)

Description of Sessions

Panorama (Chapter 3): 10 issues / questions regarding self-assessment of the status-qui of national project progress were prepared by EACI and provided on flip charts in the form of grading scales from 0 (no action or progress) to 100 (task completed or 100 % satisfaction). Participating countries were asked to agree on a grading for each issue and mark it by sticking a post-it with country acronym to the respective position on each chart. Completed charts were given to randomly selected peer groups for discussion and plenary presentation of interpretation. Graphs were also photographed, submitted to a rough quantitative analysis and results are included in this report.

Exchange with Concerted Actions (Chapter 4): In the course of the past meetings the importance of a synchronisation of BUILD UP SKILLS efforts with relevant other initiatives at EU level was mentioned by participants and EACI. Representatives from essential Concerted Action Initiatives (CA-RES and CA-EBPD) were invited to report on their status and discuss relevance for BUS Road Maps.

Information on organizational issues (Chapter 5): Delegates from all teams were invited to receive in-depth information on organizational issues by EACI in the "contractors' meetings". Of special interest was information about the coming Pillar II and on possible co-funding sources for actual training courses.

Bilateral Networking (Chapter 6): Following a suggestion from previous meetings, bilateral networking of country teams was supported by reserving 45 min of exchange of experience between different peer groups. The session was facilitated by EACI and provided a valuable direct benchmark for participating teams and generated new ideas for cooperation. No reporting was required.

Parallel workshops - discussion of selected topics (Chapter 7): Parallel workshops with open participation were defined from previous suggestions, prepared and facilitated with participation of all teams. Three participants from different countries and one expert from EACI joined in preparation (discussion and preparation of content, agenda and workshop design) and facilitation of the workshops. One participant volunteered to finalise and submit a two page summary to EACI for inclusion into this report.

Exchange with European Stakeholders (Chapter 8): The meeting concluded with a conference type session with presentations from representatives of the European Commission, of industrial and educational associations and from selected participating countries to give different perspectives on the overall scope of initiatives and expectations towards the global goals for BUILD UP SKILLS.

Feedback and next steps (Chapter 9).

3 Assessment of the state of advancement of BUILD UP Skills projects

(“BUILD UP Skills Barometer”)

The meeting started with a quick self-assessment of the status of the projects (after short discussion within the national team). 10 issues had to be covered by estimating completion of the task or achievement of project objectives on a scale from 0 to 100 (equivalent to a percentage estimate). Post-its with country codes were used to mark the national situation on each chart. Completed charts were given to peer groups for discussion and exchange on the subject, followed by short plenary presentation of the interpretation.

These issues were:

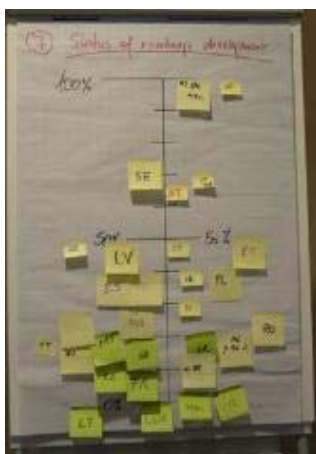
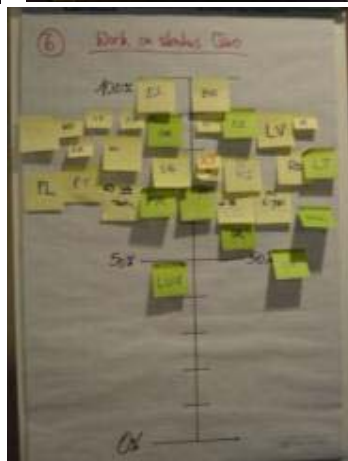
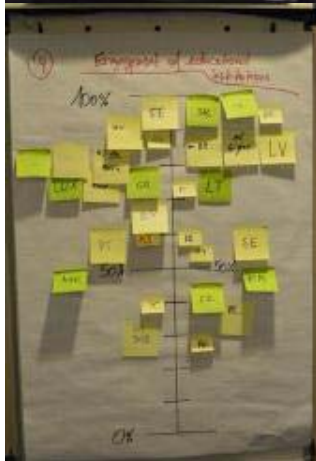
1. Overall Satisfaction with Work
2. Meet Objectives
3. Mobilisation of Stakeholders
4. Engagement of Educational Institutions
5. Engagement of Trade Associations
6. Work on Status Quo
7. Status of Road Map Development
8. Success of Political Attention
9. Clarity of Endorsement Process
10. Peer Review Time

Two additional questions had to be answered with “Yes” or “No”:

1. Has Contact with the European Social Fund (ESF) been established?
2. Is a Participatory Process in the Country common?

Overall the satisfaction with the work is mostly between 60-90%. Even higher is the assessment regarding the expectations to meet the objectives of the project, while the success in the mobilisation of the stakeholders is seen in a more differentiated way. It also showed the progress with the national roadmaps as well as the assessment of the success to get political attention. Furthermore it revealed that there are still a lot of questions in relation to the endorsement process. Peer review time as assessed as valuable (the low ranking countries had not started yet). A very astonishing result brought the answer to the question about the contact with the national ESF representatives: only few national teams were in contact with the ESF so far.

Photos below show the results. Some of the graphs were also used in the subsequent sessions.





4 Exchange with Concerted Actions (CA RES and CA EPBD)

The Concerted Actions are initiatives funded by the Intelligent Energy Europe (IEE) programme that are currently supporting the transposition and implementation of a series of energy related EU Directives.

Of interest to the BUILD UP Skills Teams, at this stage are:

- the Concerted Action on the Renewable Energy Sources Directive (CA-RES). This is supporting the transposition and implementation of the RES Directive 2009/28/EC - <http://www.ca-res.eu/>
- The Concerted Action on Energy Performance of Buildings Directive (CA-EPBD). This is supporting the transposition and implementation of the recast EPBD (Directive 2010/31/EU) - <http://www.epbd-ca.eu/>

This session aimed at describing to BUILD UP Skills Teams which is the nature and the scope of the work undertaken as part of the Concerned Action groups. For this purpose, this session also benefited from presentations of representatives of the CA-RES and CA-EPBD. These presentations are available in the BUILD UP Skills website.

Moreover the EACI provided some guidelines regarding the manner in which collaboration and exchange of information with the Concerted Action responsible at national level is envisaged.

More details on the synergies between the BUILD UP Skills National Roadmaps and the requirements of article 14 of the RES Directive on certification schemes for installers of small-scale RES including conclusions and suggested action for BUILD UP Skills Teams can be found on the description of the summary workshops that was hold on this topic.

5 Contractors' Meeting

The aim of this meeting was twofold: exchange on contractual/administrative issues as well as to inform about Pillar II. One participant per BUILD UP Skills country team was invited to the session chaired by Waltraud Schmid (EACI).

5.1 Information on contractual/ administrative matters

- General remark: contracts of pillar I cannot be extended beyond 18 months!

Road Map Template

- The roadmap has to clearly show the priority measures as well as accompanying measures that allow to have qualified workers in sufficient quantity available to meet the 2020 targets in the building sector.
- It is of utmost importance that the roadmap is fully tailored to the country-specific needs and therefore the EACI is not requiring to follow a common template and the template is only optional. Nevertheless all projects have to follow the outline of the roadmap which details the content to be covered by the roadmap.
- The template is available now and will be shortly online.

Status Quo Report

- The overview table which was sent out before the meeting showed that some data, which was requested by the outline of the Status Quo Analysis, is missing for some countries. It was underlined that this is important data, which needs to be completed by all countries. Otherwise the roadmap cannot be finalised successfully. Without a quantified skill gap the roadmap will not be able to demonstrate that it is suitable to close this gap. Without this quantified information Pillar II proposals will not be able to show that they are responding to an important need and are offering a large-scale solution.

National platforms

- There were requests about the future of the national platforms, which have started to offer useful possibilities to dialogue with all stakeholders. W. Schmid confirmed that this issue is recognised and discussed internally but no information can be given at that stage. Ideas are very welcome and should be brought forward to the project officer.

Progress reports / final reports

- There will be feedback on all progress reports from the project officers. Some have received it already. Apologies for the delay.
- The template for (internal) final reports will be available at the latest in February next year. Cost statement templates are already available online on IEE website. They are exactly the same as for all IEE projects.
- Cost statements: With the final report not only costs but also all claimed hours have to be justified. This is particularly important for those consortia with a high number of hours. To be accepted hours have to be necessary for the action, have to be justifiable and reasonable.
- Issues of co-funding should be discussed with the project officer.

Budget shifts, cost statements

- Budget shifts (between cost categories within one organisation or between organisations) below 20% can be implemented without prior approval by the EACI. If (cumulative) shifts go over 20% a formal request for amendment to the contract is necessary and has to be asked at the latest one month before the end of the action. Discuss the situation with your project officer.
- Budget shifts between work packages but within the same cost category are no problem.
- It is recommended to check the budget within the consortium at about 6 weeks before the end of the project so that the deadline for amendment is not missed in case this becomes necessary.
- There were a number of questions about the necessity to shift budget from the CO to partners for the EU exchange meetings as well as the peer review meetings. Different practices are currently used. EACI will clarify this issue with the financial department and will come back to the Cos.
- Cost coverage for 3rd party people: This is possible and to be claimed under other specific costs.
- Costs of 4th person of the consortium at EU exchange meetings: As in previous meetings there are a few possibilities for teams to come with 4 people if well justified. However, this should be covered by own expenses. If budget is left in the end, cost coverage may be negotiated, but not during implementation.

5.2 Pillar II

- All documents will be ready for the next call around December 15th 2012. Promotion and communication activities will take place from January 2013 and will also be part of all Infodays.
- Main aim of Pillar II is to kick-off the implementation of the roadmaps.
- Proposal must show a clear and logical chain from an identified and quantified skill need to the priority measures identified by the roadmap to close this gap. Therefore it is absolutely crucial to have the roadmap available and online reasonably in advance of the deadline (about three months). Coordinators should inform the project officers once the roadmap is available online.
- Most important issues to remember:
 - Pillar II is open for everybody, not only for organisations involved in Pillar I.
 - There will be 2 deadlines: 30 April (Call 2012) and 28 November 2013 (Call 2013); for 30th April 7.5 Mio € will be available; for 28th November the budget is not yet specified but might be similar. The content will be the same. As proposals must build on roadmaps (or equivalent), the first deadline is most likely only for a limited number of countries (see above for availability of roadmaps reasonable in advance).
 - While Pillar I had the aim to cover all countries by one project, this is not the case for Pillar II, which is fully open.
 - Priority will be given to “large-scale and lasting” schemes. The size of the target group in a country will be taken into account for assessing the scale of a measure.
 - Applications can come from one single country or from several countries. In all cases the proposal must be submitted by a team, meaning minimum two organisations. The call for proposals describes the expertise to be covered by the consortium. Generally consortia should be kept small.
 - The duration can be maximum 36 months. Proposers should aim for effective implementation and go for shorter durations wherever possible.
 - The running of the longlasting training schemes has to be funded by other sources than IEE from the very beginning (i.e. national or European Social Funds); however, IEE funding may be used for training of trainers.
 - Funding rate is 75%.

6 Bilateral Networking

Informal Bilateral Networking has been defined as one of the important and valuable opportunities of Exchange Meetings that have not been given enough time in the past due to tense schedules of prepared sessions. Participants asked for more time to meet teams outside their own peer groups. Since this exchange becomes more valuable with time passing (more results to share), a structured process was designed and offered during the Contractors' Meeting for all other participants. No reporting was required and collected.

6.1 Concept

The session lasted for 45 min and offered two rounds of bilateral networking with one break of five minutes to move on. Networking was done by peer groups. Therefore each peer group had the opportunity to meet and exchange experiences, results and future plans with two other peer groups.

One expert from each country (= three experts from each peer group) remaining in the plenary session room was asked to stay on the table, one expert (= three experts from each peer group) moved to another peer group table.

6.2 Reflection

Since this session was not obligatory about ¾ of participants took part. Feedback directly afterwards was very positive by actively engaging countries, especially from "late starters". Analysis of feedback forms (Chapter 9) verified this first impression. Suggestions were made for improvement mostly dealing with more clarity in the preceding announcement to facilitate 100 % participation.

7 Parallel workshop sessions

The parallel workshop sessions took place on 27th November 2012 for all Build Up Skills participants in two blocks of 6 and 5 workshops respectively, from 9:30-12:00 and 13:30-16:00. The day started with short announcements (pitch by one facilitator) for each workshop stating the topic, the objective and what can participants expect/gain from it.

Although participants received in advance workshop descriptions (prepared by the three facilitators nominated for each workshop) and registered in advance, nevertheless the short announcements gave a good overview, offering for those who had not signed yet to choose a session to attend.

Workshops were well attended, some even having round 20 participants. Summary of the discussions and key findings were recorded (flip charts) by a dedicated facilitator from each session. These were presented during the so called "walking gallery" taking place at the end of the day. This informal networking was successful, making it possible for participants to have an overview of all sessions and ask questions to their facilitators.

(A) "From status quo to roadmaps"

Tuesday 27 November 2012 at 9:30 – 12:00 and 13:30 – 16:00.

Facilitators:

(Morning session) Kristof Van Roy (BE), Dorottya Hubjer (HU), Georg Trnka (AT), EACI: Waltraud Schmid and Karin Drda-Kühn

(Afternoon session) Christiane Conrady (LU), Mathieu Veulemans (NO), Agris Kamenders (LV), EACI: Waltraud Schmid

This workshop was dedicated to the process of developing the roadmap, but also to the roadmap as such. It looked into challenges and difficulties national teams are facing (or will face for new comers) with most importantly the involvement of stakeholders, and what to do in case of diverging opinions.

The sessions started with short statements from all countries represented in the workshop on where they were with the national roadmap process, by giving a short comment on the roadmap panorama. The picture is compound (new comers), and worth to mention, the results also depends on how the national teams have structured their Build UP Skills projects.

The same questions were treated during both the morning and afternoon sessions and were 1) purpose of the roadmap and 2) involvement of stakeholders. Conclusions from both workshops can be summed up as follows:

Purpose of the roadmap

- It was agreed that roadmaps, and the purpose of the roadmap, will be country specific
- The roadmap is seen as a strategic document, part of the Build Up skills process, in order to help meeting 2020 targets

Development of the roadmap

- Even though the roadmap and the endorsement plan are two different processes, strong endorsement should be sought from the beginning
- The roadmap should be interlinked with other activities, e.g. Concerted Action and national strategies
- Like the purpose of the roadmap, its development is country dependent

Content of the roadmap - Level of detail

- The roadmap provides a clear strategy on how to fill the identified gaps from the status quo analysis
- Roadmap could highlight points of disagreement of different parties
- Endorsement only for parts of the roadmap can therefore be envisaged
- The roadmap could demonstrate the interlinks between different stakeholders and decisions makers, as well as links between directives and national targets
- The proposed measures should be described as clearly as possible

Practical advice on the development of the roadmap

- During the drafting of the roadmap it is best to draft endorsement plan as well In parallel
- You can start with a discussion paper (fields of action) and then have better focus later on
- Get involvement of the right stakeholders
- Make sure, that the person who is involved has the relevant competences (different levels: political, administrative) at the right time
- Keep all the stakeholders informed
- Raise awareness of stakeholders by taking different initiatives (seminar, conferences, ...)
- See the development of the roadmap from the stakeholders' point of view.

(B) “Innovative training”

Tuesday 27 November 2012 at 9:30 – 12:00

Facilitators: Irmeli Mikkonen (FI), Charalampos Malamatenios (GR), František Doktor (SK), EACI: Johannes Haas (Expert)

Attendance: 23 participants including facilitators

Background

“Energy Training for Builders” is the key objective of Pillar I of the BUILD UP Skills Initiative. In order to enhance the quantity and quality of training, national roadmaps should identify new and innovative training initiatives in such a way that the 2020 targets in the building sector can be met. Innovation is needed in regard to new content, to new target groups, to new training settings and methods and to the creation of favorable conditions to facilitate the actual enrollment.

Objectives of the session

Exchange between BUILD UP Skills country projects to identify and compile a range of ideas and actual good practice examples for innovation in all three of the fields of action below in training design:

- Content to be covered (e.g. technological, organizational)
- Training techniques, methods and settings to be explored
- Measures to be taken to improve participation

Participants were encouraged to come to this workshop with knowledge on *current best practices* (both traditional training and new and innovative initiatives) in their countries on the above topics. The collected experiences and ideas were to be discussed and then to rank suggestions according to relevance and potential and summarize results of roundtable discussion in the workshop for each of the selected topics.

Workshop programme

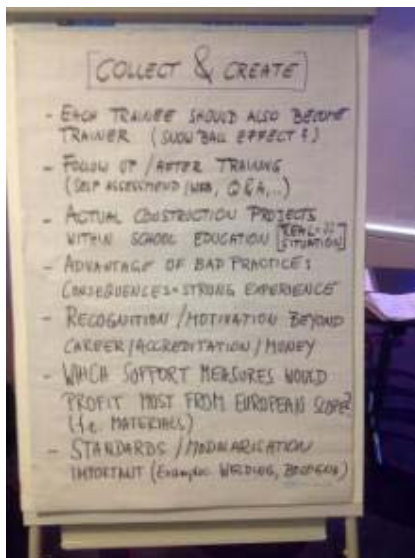
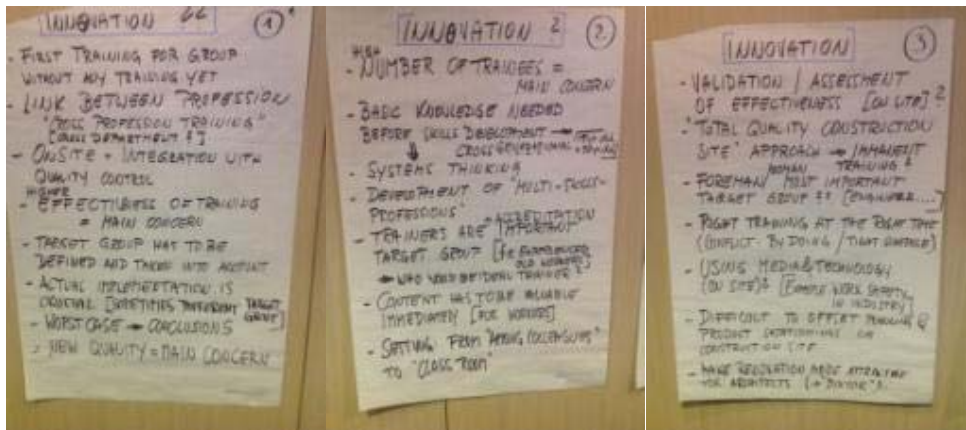
The workshop was planned to be carried out under the 5 parts below.

- 1) Clarify a common understanding of “innovative training” and attempted output including the design of a system to rank and prioritize examples
- 2) Collect good practice examples from participants with innovative elements in all three categories
- 3) Brainstorm on additional ideas and concepts not necessarily already in operation
- 4) Rank and prioritize ideas according to criteria defined in part 1
- 5) Add short description, comments and recommendations to selected concepts

The realisation of the workshop followed the plan with parts 2 and 3 combined and part 5 shortly covered in the summary of the workshop. The workshop participants were urged to keep in mind the following in the work:

- to consider other groups
- to be specific and
- to present good practices and new ideas.

To have a common understanding of innovative training Babis Malamatenios shortly described what's generally understood with innovative training. Further elaboration of innovative training practices and approaches was done in round table discussion and major points were reported on the flip charts (below).



After listing the innovative

approaches and practices the outcome was collected into a few points with some new complimentary creative ideas (left). In this process the focus was on continuation of the training practices (snow ball effect), follow-up procedures, learning by doing on an actual building site and learning from poor experiences. Special attention was paid on motivational (recognition, accreditation), supportive (common training materials) and standardised technological (modernisation) aspects.

In part 2 and 3 combined the participants were asked to write down ideas/practices/approaches on cards (1 per card) in small groups or individually. Member of a group or individuals presented the cards and they were posted on flip charts under three topics (according to the objectives of the workshop):

- 1) Content / Target group of the training
 - total of 15 cards
- 2) Methods / Setting of the training
 - total of 28 cards (similar ones combined)
- 3) Supporting measures of the training (how to improve participation in the trainings)
 - total of 24 cards

The following table shows a condensed version of the overall results (similar cards combined). numbers in parenthesis indicate votes concerning importance by participants, topics are ranked top down according to votes.

Content	Methods	Supporting Measures
Cross-Profession Training, specific CVET Programme (Specialist for RES, Building Energy) (8)	„Reality Training“ – On building site, all process steps documented, hands-on, learning by doing (10)	Certification and quality control – leave responsibility to workers (6)
Concentrate on „Cross-disciplinary“ functions, Incorporating Interskills links – (4)	Training of trainers (and foremen) (7)	Innovative Standards for Training Curricula and Methods (RES and EE) (3)
Specific modul on same topic for different professions (electrical / construction) (3)	Internet based learning and Webinars, New Media and Video instruction, in different languages (6)	Training has to be regionalized (2)
„Bad practice“ examples and consequences - Motivation through linking construction mistakes to insurance cost (3)	Innovative cooperation between VET School and company (dual system), school building can be used for real world training (4)	Implementing career paths, career concepts (1)
Immersive simulation (of entire construction process) (2)	Inter-company training (f.e. for new technologies, for skilled crafts) several professions trained as a group constructing a building – meeting a common goal (3)	Create general awareness for low energy buildings (1)
Make sure that people understand why – including ethical issues (2)	Best practice network to share concrete examples (3)	Trainee to pay a % to add ownership to the training (1)
„Systems of Work“ approach	Self-training tools, Web-based self evaluation to check target group before and after training (2)	Support by Industry / Chamber of Commerce and Ministry of Education and Science (1)
Schools get hands-on experience in energy efficiency building passive-house, doing renovation	Modularity of training programmes (2)	Stamps of quality given by professions to renovated and new houses (1)
Softs skills base set for relevant profession	Methods according to target group (2)	Facilitate training for specific modules in other countries through EU projects
Solar Thermal Designer and Installer	Practical training courses for workers and foremen in small companies (1)	Encouragement of collaboration with professional associations
	Motivational support incorporating client (2)	Development of market need for certified workers
	Short duration training course	Common platform for the coordination of knowledge and information on energy efficiency – Knowledge Center
	Intensive day: Lectures + practice + quality control	National e-learning platform designed for workers, allowing to communicate with each other
	Multi Nations training using IT	Common training material data base
	Syllabus: Basic module in classroom – training in the workplace with experts – reflection and synthesis in classroom	Communicating the advantages of training to company owners
	Training on-site by special quality appointees (f.e. older experienced workers)	Support for the already employed (they carry the skills transfer)
	Visit of specific fair with an integrated game for learning	Dependency on cohort to be trained (f.e. group size, age)
	Life-long-learning on new technologies and topical issues	„What's Up“ – Improve the training communication
	Participants are not only trainees – become trainers for colleagues	Massive state support for RES und Passive-Houses with „Accreditation“
	Combination of training and increased market potential promoting people with skills	Training platform, sharing of educational resources
	Taking snapshots from work process to analyze the work done	Identify the needs for this training
	Methods according to target group	Taking mobility aspect into account
	Follow up courses after initial training (DK)	

Next step was to rank and prioritise the ideas collected under the 3 topics. Each participant was given three stickers to express their priorities of the practices/ideas/approaches presented (above). the following ideas received the highest rankings (over 2 votes) under the three topics:

Content:

- Cross-professional training, specific CVET programme
- Best practice networks to share concrete examples

Methods:

- Practical training (real life situations) on bulding sites
- Train the trainers (and foremen)
- Cooperation between VET schools and companies, school building as training site

Supporting measures:

- Certification and quality control –leave responsibility to workers
- Innovative standards for training curricula and methods (RES and EE)

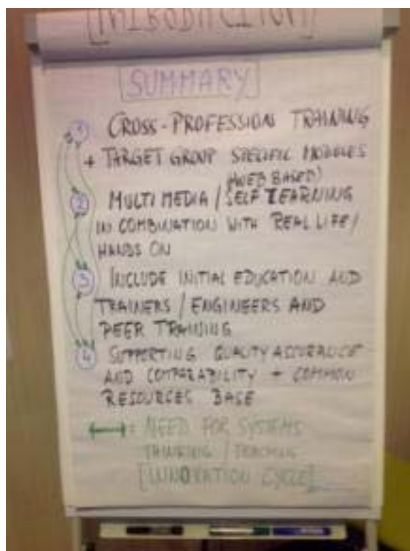
The work was summarised under four entities (suggestions to training developers/providers), which are interdependent and cross-cutting:

1. Cross-profession training + target group specific modules
The cross profession training is important to be carried out in each training session: i.e. plumbers, carpenters, brickies and electricians etc. are in training at the same event to get that multi-disciplinary approach and insight which appears to be currently lacking from existing programmes.
2. Multimedia / (web-based) self-learning in combination with real life/hands-on training
3. Including initial (vocational) education and trainers/engineers; peer training

4. Supporting quality assurance and comparability, common resources base

For the training to be really successful and to have currency right across Europe will require stringent quality assurance to ensure that all learning outcomes of a programme are delivered and that they can be assessed. The common resource base, while being coherent and accessible to all countries, should also reflect each country's uniqueness in culture and systems.

Overall a new and innovative approach to training and upskilling is absolutely necessary and that the way we have been doing it up to now is generally accepted as not being good enough. A new multidisciplinary approach with a 'systems thinking' philosophy inherent, is what is now required to gain the maximum from any proposed training programme. The training has to start with the trainers as they may not have upskilled for a number of years and for those that have upskilled there is still the requirement for 'team teaching'.



The overall result and suggestion/advice to training development was captured into:

Need for systems thinking/ teaching
(Innovation Cycle)

(C) "Incentives and accompanying measures"

Tuesday 27 November 2012 at 9:30 – 12:00

Facilitators: Ms Sylvaine Herold, Alliance Villes Emploi and Jonathan Louis, ADEME, France; Ms Triin Valjataga, Foundation KredEx ; Estonia, Mr Iosif Spyrides, Cyprus Institute of Energy, Cyprus; Supported by Mr Gianluca Tondi, EACI and Ms Irena Kondratenko, Expert

Background

The roadmap developed under Pillar I of the BUILD UP Skills Initiative should explain how to overcome barriers and identified skills gaps in the various professions in such a way that the 2020 targets in the building sector can be met. The roadmaps should identify – according to the needs of the different sectors – priority measures (e.g. new qualification schemes and/or update of existing schemes) for each relevant profession to meet the defined targets. Moreover, Pillar 2 aims to facilitate the introduction of new and/or the upgrading of existing qualification and training schemes based on these roadmaps.

Within the background above and based on the first results achieved by the BUILD UP Skills teams is evident that, once the training programmes and courses are available, a series of additional actions to promote and incentivise the participation at the training courses should be put in place, to make sure that these courses are properly attended.

These actions could cover for instance:

- Promotion of incentive schemes linked to certification/qualification schemes (e.g. linkages with public subsidies);
- Arrangement of specific incentive mechanisms to encourage the participation of craftsmen and installers to training courses;
- Activities to encourage SMES to invest in training;
- Implementation of promotional/communication activities and other accompanying measures to facilitate the participation to qualification programmes and courses.

Objectives of the session

Exchange between the BUILD UP Skills country projects on experiences, best practice solutions, overcoming barriers and ways forward with priority measures.

Target Groups

The session will focus on two target groups:

- building companies with less than 10 employees; this represents, in some countries, a significant part of all companies and of the building workforce;
- Unemployed workers to be trained for "green" jobs.

Focus for discussion for the two target groups

The issues addressed within this session will be:

- Exchange on best practices relating to countries:
 - o Existing legislation on training incentives/qualification schemes
 - o Promotional and communicational activities.
- Ways for improving the legislation and activities (motivation!);
- Experiences with effectiveness of promotional and communicational activities for the target groups and ways for improving;
- Listing priority measures (what could be in the countries' roadmaps).

Suggested preparation for BUILD UP Skills participants

Be prepared to present (orally) 1-2 best practices from your country on existing legislation or other incentive mechanisms for the training of craftsmen and installers (tax system, public subsidies linked to certification schemes, etc.).

Moreover, any information/example on successful promotional/communication activities on training would be welcome.

During the previous day, Gianlucca Tondi (EACI) met with the three Facilitators chosen for the workgroup via Webex and email during the course of the previous week. The group again met on the day before the Workshop and after brief discussion finalized the structure for this workshop. During this time it was decided that:

The workgroup should discuss two main target groups

- SME's and Micro Companies and their employees
- Unemployed Workforce

As a basic structure and as subjects of discussion, each facilitator would attempt to describe a practice from his/her own country as an example of measure or incentive towards the industry/employer/worker. This is expected to relate to other EU member states however, this offers a chance to observe the similarities and differentiations in workforce and employers, cultures and attitudes towards training, as well as the categorization of priorities among member states.

The workshop finally kicked off with a slight introduction to our subject and a rationale of our choice of target groups. We also indicated the intention to differentiate incentives and measures as Incentives could be in the form of subsidies, while measures could very well be legislation and compulsory regulations. The workgroup members generally agreed that in many ways, incentives are not always very effective especially when dealing with the workforce and employers. Generally, legislation and regulation along with proper monitoring may prove highly effective especially in the sector in hand.

The Estonian BuildUP skills team then described some practices towards the matters utilizing frameworks currently in effect.

Best practices of target group 1 – SMEs:

- Through the national register (Register of Economic Activities) there is a requirement for building companies to have a specialist in charge (at least level 4 in European Qualifications Frame; working experience at least 3 years);
- The cost of first-level vocational exam for the person graduating the vocational school is covered by the state;

The above practices are indeed encouraging measures in several ways. Considering the fact that throughout the EU the building and particularly the construction sector is dominated by micro enterprises, the measure ensures some level of skills and competences through the endorsement of the EQF. As such companies, would be required to employ at least one skilled worker, possibly as a supervisor. Throughout, the group this practice was considered as a good starting point, noting however, the differences which currently exist between the member states in the definition of each EQF level/stage.

Similar practices do exist in France, as mentioned by the French BuildUP skills project representative, who do utilize a register where certain requirements for companies must be fulfilled. This register however, is linked directly with subsidies and grants which may be available by the governments. Certification and Accreditation may be a subject of further discussion.

Through this discussion, it was generally acknowledged by all participants employers are not easily encouraged by incentives to train their workforce. It is therefore through regulation and measures or perhaps financial incentives, that the training may be implemented. The regulation will of course be active by 2020 while the EPBD and RES directives are currently under implementation however, currently there is not enough market demand in order for the workforce to voluntarily undergo the required training for 2020. Therefore a suggestion of market creation may be necessary through incentives until 2020, in order for the workforce and employers to commence with the training.

The „Pay as you Save“ Scheme which is currently implemented in Ireland, as well as in the UK (under a different name) is scheme that is creating market where the building owners pay for the installation of Energy Conservation and RES systems with moderate payback periods through the utility bills savings.

At this point the discussion switched to the target group of the unemployed workforce which is expected to be easier to voluntarily undergo the required training for the 2020 skills requirements.

The Estonian consortium representative, then presented a scheme undergoing in Estonia where the state provides financial incentives to the workforce for training.

Best practices of target group 2 – unemployment:

- 2500 EUR per year per training cost is covered by the state.

Although, the scheme may initially be costly, as noted by other participants it may actually be a very effective incentive provided that it is monitored and regulated ensuring that the workforce is actually attending adequately while proof of improvement is also considered vital.

Cyprus on the other hand provided information on several currently available schemes which are currently updated to meet future market demands in several sectors and based on employment estimates. Cyprus Authorities through the Human Resource development authority provide several training programmes for both initial and continuing education at several levels. Depending on the scheme as well as other factors, incentives may exist for either the workers under training or the employers during the training course.

At this point the group agreed that there must be a balance in the training schemes between employed and unemployed workers, since there is a danger of currently trained unemployed replacing the untrained employed workforce.

Concluding, we must provide several factors that must be considered before applying incentives and measures.

- Proper monitoring of the incentives schemes as well as the Measures/Regulations
- Ensuring useful training for each profession individually
- Measures usually work more efficiently than incentives. Incentives may be useful for Transition periods or Market creation.

(D) "Entrepreneurial and broader skill needs of building professionals" workshop discussion summary

Tuesday 27 November 2012 at 9:30 – 12:00

Facilitators: Phil Scott (UK), Javier Gonzales-Lopes (ES), John Ebejer (MT), EACI: Vasco Ferreira

Introduction

The aim of the workshop was to identify if there was a need to address broader professional skills in addition to the technical aspects of the "blue collar" construction sector.

With the majority of the construction workforce consisting of micro companies the workshop discussed whether a lack of low level business and entrepreneurial skills might act as a barrier to construction workers engaging with the energy efficiency and renewable energy agenda.

The facilitators split the workshop into 2 groups; the first to address the need for broader skills and the second to address need for entrepreneurial skills. The discussions were focused around three questions:

1. Through your work on the Status Quo have you identified a need to address broader/entrepreneurial skills and do they act as a barrier to the green agenda?
2. What is the situation within your country?
3. What broader/entrepreneurial skills are required?

Discussion

Both workshops required a significant amount of guidance to stay on topic and produce useful actions.

Workshop 1 – broader skills

A number of broader or soft skills were identified namely;

- Teamwork, the ability to work in teams including multidisciplinary ones
- A broad understanding of energy issues to be able to give informal advice to clients on matters not within one's own area of speciality
- Organisation and administration skills; the ability to make effective use of limited time and other resources will result in more efficiency and possibly reduced prices
- Communication and people skills: to be able to develop a client base, small companies need to be approachable and able to deal with people
- Open mind/open to criticism: energy issues require technical people to change the ways they do things in line with new technology or new knowledge. This requires an open mind to be able to change and improve.
- Ability to look up information, to enable practitioner to be aware of new technology and what is available on the market.
- IT skills: increasingly IT is being used on construction site to communicate instructions and also plans.
- Marketing and sales skills

Workshop 2 – entrepreneurial skills

The entrepreneurial workshop discussed skills for the blue collar workforce.

The main topics of discussion in this group focused on:

- Defining low level business skills to encourage blue collar worker progression.
- Whether entrepreneurial skills are required and can they be delivered.
- Should broader skills really be business skills?
- How the likely marketplace operates for micro companies and does the lack of business skills limit the investment in the energy efficiency and renewable energy sector.

Other points mentioned:

- Should broader skills be integrated into mainstream courses on energy efficiency training? In the main broader skills should be integrated into existing energy efficiency courses because all workers, to varying degrees will require such broader skills. Broader skills training on its own should also be provided for those who want to advance to middle-management position, leading other workers. For middle management positions, broader skills should be considered a must.
- The training (be it on energy efficiency as well as on broader skills) should be targeted towards those people who are more likely to be receptive. There are two 'types' of workers, those who are eager to learn and advance and those who are perfectly happy doing what they are instructed on the work site. Training should be targeted to the former.

Proposed actions that could be taken:

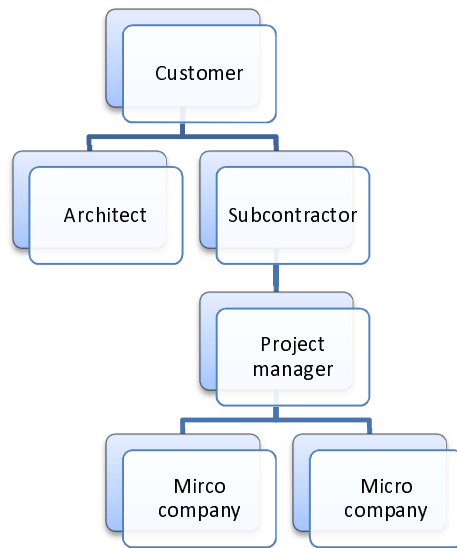
- Having a certification for companies to recognise knowledge and skills namely 'Energy in Building Entrepreneur'. This could be for companies with a specialty on one aspect of energy in buildings (ex. PV installer) but with broad knowledge on energy efficiency (for example understanding the effective use of canopies in warm climates). This will be a marketing tool for the company. Such certification will need to be given by an agency (public or private) which is credible and which sets the required criteria.
- Providing certificate of attendance for individuals who attend energy in buildings awareness courses. When choosing companies for work related to energy efficiency, potential clients will see which companies has its workforce trained (For example, a company with 80 or 90 % of its workforce having these certificates of attendance would be preferred to those having say less than 5% attending these courses.)
- Suppliers of RES and EE products could provide courses for workers who will be installing their products. They could also require that their products are installed only by persons who successfully completed the course. This already happens. These courses tend to be shorter and more focused. In this manner, product suppliers could be involved in communication to the workforce on wider issues relating to RES and EE.
- Providing courses on broader skills for foreman/middle management
- On-the-job coaching

Outcomes

The sessions produced two major outcomes:

1. There is a need for holistic energy efficiency training based around knowledge instead of competence.
2. In countries where the quality and training infrastructure is more developed there is a need for wider business skills, including:
 - Selling
 - Communication
 - Marketing
 - Customer service
 - Project management
 - Legalise
 - Basic finance and budgeting
 - Procurement
 - Human resource
 - Leadership
 - Health and Safety

Other findings included an analysis of the micro company business model, including the liability of quality often sitting with a subcontractor or project manager and therefore the blue collar workforce maintain little impetus to train and take ownership of quality and training – see *diagram below*.



The impact of this model also means that micro companies are usually low paid and therefore motivated by price instead of quality.

Conclusions

Given the amount of guidance required from the facilitators the topic of this session was perhaps not clearly understood by the delegates which attended.

However, the key findings (developing generic business skills and a more holistic approach to energy training) have received interest from some of the delegates – although it is worth noting that some delegates were more concerned with primary issues around quality and migration of workers.

It was also decided that innovation and entrepreneurial skills were not really relevant for this level of worker.

In the final stages of the workshop and in discussion with colleagues at the presentation session the idea of a pan-European framework of flexible business units (tailored to energy efficiency and including generic modules on holistic retrofit) was discussed and received significant interest.

Follow up

This work is being undertaken at a national level within the UK already and the outcomes shall be circulated to all BUILD UP Skills delegates once completed to further collaborative frameworks.

E) “Synergies between the proposed roadmap and the RES directive obligations, article 14” workshop discussion summary

Tuesday 27 November 2012 at 9:30 – 12:00

Facilitators: Horia Petran (RO), Helder Goncalves (PT), Petr Sopoliga (CZ), EACI: Antonio Aguilo-Rullan

1. Obligations of the Renewable Energy sources directive on installers of small RES systems

Article 14 of the 2009 RES Directive on Information and Training requests Member States to ensure that certification schemes or equivalent qualification schemes for installers of small-scale renewable energy systems become or are available by 31 December 2012. These schemes may take into account existing schemes and structures as appropriate, and shall be based on the criteria laid down in Annex IV of the Directive. Each Member State shall recognise certification awarded by other Member States in accordance with those criteria.

For more information <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0028:en:NOT>

2. What is the Concerted Action for Renewable Energy Sources Directive?

The Concerted Action on the Renewable Energy Sources Directive (CA-RES), funded by the Intelligent Energy Europe (IEE) programme, is currently supporting the transposition and implementation of the Directive 2009/28/EC. Participants are from organisations that have the mandate for the implementation of the directive (e.g. ministries). Technical research institutes and consultants do not participate. Within the CA-RES a total of 10 working groups have been set-up. In particular Working Group 5 focuses on Article 14 of the RES directive on information strategies and training and accreditation of installers of RES in buildings.

The CA-RES has a national contact point for each of the participating countries. The name of the organisations participating in the CA-RES can be seen in <http://www.ca-res.eu/index.php?id=28>. Details of the contact persons will be circulated to BUILD UP Skills Teams. The national contact is the entry point to find out more information regarding the on-going discussions in Working Group 5. However, this does not necessarily mean that each of the countries is participating in the discussions in WP5. In order to find out if your country is participating in WP5 please refer to the list of national contact points. Should this be the case, she/he will be able to provide you the contact name of the responsible for WG5.

For more information on the Concerted Action on the Renewable Energy Sources Directive <http://www.ca-res.eu/index.php?id=107>

3. Why is this topic important?

Pillar 1 of the BUILD UP Skills initiative aims to set up national qualification platforms and roadmaps to successfully train the building workforce in order to meet the targets for 2020 and beyond. Moreover, Pillar 2 aims to facilitate the introduction of new and/or the upgrading of existing qualification and training schemes based on these roadmaps.

Simultaneously, the CA-RES working group 5 has been holding discussion during the last 4 CA-RES plenary meetings among those responsible for implementing the RES Directive. As part of the CA-RES WG5 work, documents and information relevant to the BUILD UP Skills projects have been produced; in particular material has been produced that is of relevance of the national roadmaps being produced as part of the BUILD UP Skills projects.

In order to maximise the synergies among both the CA-RES and BUILD UP skills and to avoid duplication of works it is important that a communications exist among CA-RES and BUILD UP Skills.

On one hand the work done by the CA-RES WG5 can be integrated into the national roadmaps which BUILD UP Skills teams are producing. On the other hand, BUILD UP Skills projects are in a position for providing added value to the obligations of Art 14 of the RES Directive. For instance, Art 14 mentions making certification schemes or equivalent qualification schemes available, but it does not oblige how the demand for certified or qualified installers will be increased.

4. Summary of the discussions

As part of the 3rd EU exchange meeting a discussion was held on the synergies between the proposed BUILD UP Skills National Roadmaps and the requirements of article 14 of the RES Directive with the objective of facilitating a more harmonised approach between the BUILD UP Skills Initiative and the RES Directive obligations so that efficient qualification systems are developed. A total of 12 countries participated in this discussion. The summary of this discussion are presented here.

4.1 Previous interactions between national BUILD UP Skills teams and RES directive national responsables

As part of the workshop preparation a short questionnaire was elaborated to assess the extent of which interactions between BUILD UP Skills Teams and national responsible of implementing Article 14 of the RES Directive were effective. The answers were collected during the workshop and the output is summarised below:

- All of the 12 BUILD UP Skills teams participating in the workshop were aware of the status of implementing the requirements of Article 14 of the RES Directive
- Almost all of them the 12 BUILD UP Skills teams participating in the workshop have involved the national responsible for implementing the RES Directive either in the National Qualification Platform or in a limited group of stakeholders (including the project consortium).
- The most relevant topics that are common to both BUILD UP Skills projects and the implementation of Art 14 of the RES directive are:
 - The qualifications schemes (with detailed definition of basic competences) and the Certification / Accreditation Structure are considered as the most relevant topics
 - Other relevant topics for which exchange of information is suggested include: training programmes, connections and synergies between energy efficiency and RES and the development, implementation and rolling-out of support measures to stimulate the demand for qualified workforce (e.g. communication and incentives).
- During the consultations with RESD responsables, about half of the workshop participating teams have showed that the developments of art. 14 implementation were influenced by the consultation process within BUILD UP Skills projects, however, the different timeline was a cause of not making this influence more effective.

4.2 What are the requirements of Art 14 of the RES directive and how can the work done by the CA-RES WG5 input into the BUILD UP Skills Projects?

One of the main outputs from the work done in CA-RES is the development of a detailed list of competences for the five relevant systems using RES according to the requirements set-up in Annex IV of the Directive, i.e. small-scale RES systems including biomass appliances, shallow geothermal systems, heat pumps, solar photovoltaics and solar thermal.

It was discussed how and to which extent this list of competences could be integrated in the national roadmaps to be developed under BUILD UP Skills initiative (e.g. as an informative annex or part of the priority measures to be detailed).

Also possible enforcement of the certification systems developed under art. 14 of RESD was analysed starting from the examples of other sectors like HVAC or electricians mandatory certification or accreditation schemes. The impact on the mobility of workers and practical ways to ensure mutual recognition is a sensitive aspect which has to be addressed when qualification schemes are developed.

Another output from CA-RES work could be an inventory of support measures subject to certification schemes and the gaps identified in the development of qualification systems for RES installers.

4.3 Added value of BUILD UP Skills within the context of Art 14 of the RES Directive

The exchange on the list of competences developed within CA-RES should be followed-up at national level with BUILD UP Skills teams. The National Platform created as part of BUILD UP Skills projects should be used as the consultation forum with the aim of providing constructive feed-back to the WG5 of CA-RES with an updated (if this is the case) list.

It was highlighted that a lack of correlation between the BUILD UP Skills actions and the fulfilment of MS obligations for the end of 2012 may lead to inefficient qualification systems, which would be hardly or costly improvable with future measures provided by the developed roadmaps to 2020.

The priority measures to be defined in BUILD UP Skills national roadmaps are to take into account the need for a mind changing process in the workforce qualification systems and the necessity to define adequate tools to create the demand for the qualification of workforce. Thus training schemes, support measures and incentives (e.g. for end-user companies) as well as monitoring mechanisms should be provided within the roadmaps in order to support the effective application of the qualification systems for RES installers (be they mandatory or voluntary).

Moreover, exchanges between industry and education sectors should be (more) initiated in order to build future partnerships for the qualification of the workforce.

5. Conclusions and suggested action for BUILD UP Skills Teams

The following suggested actions for BUILD UP Skills teams were concluded in the workshop:

- BUILD UP Skills national teams to consult the national organisations participating in the CA-RES in order to find out more information on the work already done and on the exchanges made within WG5 of the CA-RES, in particular:
 - the qualitative gaps analysis, could be compared with the results obtained in the Status Quo analysis in order to identify overlaps or additional input.
 - the list of competences developed within the framework of the CA-RES should be explored and the ways to include this in the roadmap should be identified.

It is therefore recommended to absorb information from the CA-RES representatives and if necessary to update the list of competences after consultation and validation within the BUILD UP Skills National Platforms.

- The quantitative gaps identified in the Status Quo analysis reports could offer an estimation of the intended dimensions for the RES installers' qualification schemes established according to art. 14 requirements.
- Whilst art. 14 of RESD asks to put accreditation in place for RES installers, the priority measures to be developed in the BUILD UP Skills roadmaps do not call for enforcement. Thus, the consideration of incentives and other support measures would be an added value of BUILD UP Skills and the creation of demand for quality and seeking for practical ways to build partnerships between the construction industry / technology providers and the education sector would be very important aspects to be developed further in the roadmap application.
- Where relevant and when this is possible, the key BUILD UP Skills deliverables should be integrated in the mid-long term strategies of national energy and building related policies.
- There is a large opportunity to explore synergies between energy efficiency and renewable energy technologies on certification or qualification schemes. A harmonised 'quality' approach on different technologies is more obvious for the market and would facilitate more demand.

Notes:

A list of the national contact points participating in the CA-RES will be provided to BUILD UP Skills Coordinators. To obtain more information on the discussions that are taking place within the CA-RES Working Group 5 on Information and Training please ask your national contact point.

(F) “Mobility of workers and link with EQF”

Tuesday 27 November 2012 at 9:30 – 12:00

Facilitators: Katrin Rasch (DE), Umberto Lepri (IT), Sarka Vaidotas (LT), EACI: Nathalie Cliquot

The mobility of workers in the building sector is already of importance within EU member states. Beyond the practical experience with both positive and negative features, the key element for (successful) mobility seems to be the mutual understanding of acquired competences¹. Due to its contribution to the issue, the EQF became a main topic during the session.

Hereinafter, first results of what mobility means in practice are given. Afterwards information on the EQR and its linkage to the aspect of mobility are provided. Following-up, the question of what it means for national projects to be in line with the EQR is answered. Thereby it has to be mentioned that the workshop was supported by Mr. Carlo Scatoli, an expert from the *Directorate General for Education and Culture* (European Commission). He shared his knowledge and experience on the EQR and the implementation of National Qualification Frameworks (NQF) throughout Europe. Last, some ideas for the promotion of mobility across countries with focus on the building sector are presented.

WHAT DOES MOBILITY MEAN IN PRACTICE?²

In the beginning, participants exchanged on positive and negative features of mobility which are summarized in the table below:

Positive features of mobility
<ul style="list-style-type: none"> ▪ Mobility enables workers to gain both intercultural competencies and international experiences. ▪ Gaining new experiences and new knowledge helps to learn about cross-national similarities and differences. In doing so, an exchange on existing working conditions (exchange of measures) can take place which might help (1) to improve working conditions and/or (2) establish mutual trust. ▪ Mobility of workers helps to meet the needs of (other) labour markets. This means that individuals will find employment abroad and/or improve their job opportunities by gaining experiences and knowledge (see above). For countries with a lack of skilled workers, immigrating workers might contribute to close an existing gap.
Negative features of mobility
<ul style="list-style-type: none"> ▪ Social dumping, that is workers are paid below the national salary level but with the average salary of their home country. ▪ Missing integration of immigrants, either due to a lack of social integration (language issues, acceptance) or due to missing interest (cross-border workers). In this context, the perspective of mobility duration (long-term vs. short-term) seems to be of relevance. ▪ Companies' willingness to invest in education is strongly influenced by the factor of mobility. Thus, in many countries construction companies rather prefer to train their employees on the job to avoid the loss of high investments in human capital in case the worker leaves the company.

WHAT IS THE EQR?

The EQF is to be understood as an instrument relating different national qualification systems and/or national qualifications³ in Europe to each other. To achieve this, in a first period the EQR was devel-

¹ The understanding of acquired competences does not include the recognition of qualifications.

² It must be stated that a discussion on different aspects of mobility from different perspectives (workers, companies, producers of technologies, training providers, public authorities setting up training qualification requirements/ qualification schemes) focussed mainly on the worker due to limitation of time.

³ Since EU member states do not necessarily have to set up a NQF, there is also the possibility to link national qualifications to the EQF. In general, EU member states have agreed to establish a NQF.

oped as a meta-framework consisting of eight qualification levels covering general and higher education as well as vocational education and training. Each level is defined by a set of descriptors (knowledge, skills, competence) "indicating the learning outcomes relevant to qualifications at that level in any system of qualification"⁴. In a second period, all European countries were invited to define and relate their national qualification systems and/or national qualifications to this neutral reference system.

Furthermore, with the recommendation on the establishment of the EQR the identification and validation of non-formal and informal learning outcomes is promoted. By doing so, the EQR also supports the principle of learning throughout life (lifelong learning) which aims at making visible and valuing "the full range of knowledge and competences held by an individual, irrespective of where or how these have been acquired". To put this in other words: Qualifications are based on learning outcomes. The learning process for acquiring necessary knowledge, skills or competences can also be non-formal or informal.

The implementation of the process has started in 2008 and all countries that decided to participate have to finish the referring as well as the introduction of their national qualification frameworks (NQF) by 2012.

WHAT IS THE LINK BETWEEN MOBILITY AND THE EQR?

In the recommendation of the European Parliament and the Council of 2008 the aim of the EQR is to "facilitate transnational mobility for workers and learners and contribute to meeting the requirements of supply and demand in the European labour market"⁵.

The approach of making different national qualifications systems and/or national qualifications transparent enables transnational communication and the formation of a basis for mutual trust. In doing so, conditions of mobility are improved and mobility of workers is supported.

WHAT DOES IT MEAN FOR NATIONAL PROJECTS TO "BE IN LINE WITH THE EQR"?

Because the EQR approach is based on learning outcomes, newly developed as well as upgraded qualifications consequently have to be described in terms of learning outcomes. For that reasons, national projects (1) must have an understanding about existing qualification levels in their country⁶ and (2) clearly relate qualifications to one level. This means, by using learning outcomes the qualification standard has to be defined for newly developed and/or upgraded qualifications. Here, an exchange with institutions contributing to the development of the NQR as well as a basic understanding of the EQF⁷ is considered to be of importance.

HOW TO PROMOTE MOBILITY?

Besides the Europass that aims at the understanding of skills and qualifications of the workforce throughout Europe two ideas arose during the session:

- (1) Similarly to the *European Computer Driving Licence* (ECDL) a tool for the documentation of acquired qualifications focusing only on the building sector might be developed. Because mobility seems to be highly relevant in the sector, a document designed especially for the needs of the sector would help to understand qualifications better and improve the mutual trust between countries.
- (2) The EQR can also be used as an instrument for the progression of lifelong learning if understood as a possibility to highlight possible career paths for individuals. Assuming that its level becomes more complex and makes greater demands on the learner, the EQF can be regarded as a career ladder an individual can move up.

⁴ Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualification Framework for lifelong learning.

⁵ Ibid.

⁶ Again, EU member states are not expressly recommended to set up a NQF.

⁷ See for more details http://ec.europa.eu/eqf/home_en.htm

(G) "BUILD UP Skills EU overview report"

Tuesday 27 November 2012 – 13h30-16h00

Facilitators: Nathalie Cliquot (EACI), Vasco Ferreira (EACI), Simonas Gausas (expert)

Participants: Kristof Van Roy, Matija Duic, Petr Zahradnik, Jaakko Sorri, Risto Ivanov
Katrín Rasch, Harris Doukas, Tatjana Vilutiene, Tom Majeres, Helder Gonçalves, Roger Eriksson
and Philip Stott

Context and objectives:

The key results and highlights from BUILD UP Skills national status quo reports are being compiled into an EU overview report.

Given the variety of methodologies for the national status quo reports, the EU overview report does not intend to aggregate figures and data but rather to identify common trends and best practice examples related to the education and training of workers in the building sector.

The EU overview report should also help raising awareness on the scale and direction of training needs for building workers in the participating countries. This could be used to further mobilise stakeholders for establishing large-scale training schemes.

Several issues should be addressed during this session, for example, the mapping of main trends for each country and the identification of the most important occupations, the existing training programmes and the future skills needs.

The objectives of the session were:

- present the mapping of common characteristics and investigate how these influence the training needs.
- identify the common barriers indicated in the national reports, and discuss possible solutions.
- present relevant good practice examples (e.g. existing training schemes, incentives, etc.) to be included and highlighted in the report.
- draft common conclusions and recommendations.

Participants from countries where the national status quo analysis took part in the session as this could help them assess the quality of their preliminary findings.

Before the meeting, registered participants in this workshop received:

- an overview table with the quantified data extracted from the reports

Main outcomes of the session

The session was divided in 4 parts: introduction, presentation of the major trends identified in the Status Quo Analysis reports, examination of training provision and skills needs for key occupations and a final discussion on the most frequently mentioned barriers to training.

The introduction consisted of the presentation of EU overview report objectives, summary of limitations, mainly consisting of the methodological differences. It was also mentioned that all results presented during the workshop require validation, and that national teams will be asked for providing additional/ refined data.

The major EU trends of the EU building construction sector identified in the national Status Quo Analysis reports were listed and discussed:

1. Construction sector is a rather important economic sector
2. It is dominated by micro companies
3. Is being affected by the financial crisis
4. An important share of the workers are low skilled and come from neighbouring/other countries
5. There is an important share of grey/black economy

The 1st and 2nd trends were found to be common to all the countries present in the discussion. Other trends were common to some countries but not all.

Participants were then asked to discuss within small groups how these important trends will influence the future training needs.

The fact that the sector is dominated by micro companies was found to be rather important when considering the need to convince companies and workers to be trained. This seems to be also linked to the apparent low demand for energy efficiency and renewable energy in buildings by the market. Quality and compliance in construction was also mentioned to be a good driver for training.

An introduction on VET provision and skills needs was delivered. Participants were asked to map their countries in terms of current CVET needs and existing training for the key occupations (plumbers, electricians and bricklayers). Participants were asked to indicate where the current provision and needs in their country are in respect of each occupation (high or low).

Then followed a discussion on the training strategy for the most important occupations requiring training: plumbers, electricians and bricklayers. Group discussions showed substantial differences across these occupations. For example, consensus emerged that plumbers, if compared to other occupations, seem to be well advanced in terms of training provision, quality assurance, etc. Meanwhile training for electricians face serious challenges in identifying the right target groups for training (as this occupation has many specialisms within it). However one of the key common conclusions across the groups was that there is higher need for horizontal (i.e. cross-trade) and not specific training. Participants signalled the need of the industry for the smooth construction processes across different stages and it was stressed that the key for this is cross-trade awareness and communication between different workers. Obviously the group has made only small initial step towards occupation-specific training strategies and those need to be developed further within national roadmaps.

Finally, a short presentation on barriers was delivered and each participant was asked to identify the main barriers to training in their countries. These were grouped in the several groups, and it was found that attracting companies to training and financing the training schemes are the key challenges.

(H) "Accreditation and certification/quality control in the building sector"

Tuesday 27 November 2012 – 13h30-16h00

Facilitators: Bojan Milovanovic (HR), Jan Cromwijk (NL), Andrzej Rajkiewicz (PL), EACI: Irena Kondratenko (Expert)

Construction of buildings and its refurbishment requires from workers and companies new skills and knowledge, which are often not subject of public education. The suppliers of goods for these sectors provide training usually limited to the installation of technology without teaching about relations with different appliances and overall design of buildings. There are many entities dealing with vocational educational training, but the curricula are often not standardized in order to receive the comparable skills among all graduates. Therefore some EU members have introduced the accreditation schemes for educational institutions, which provide training for working people.

The participation of the workshop agreed that everybody working on the construction place should be trained. This is of value for suppliers of goods and public authorities which are developing the support schemes as well as for end-users of energy efficient buildings and renewable energy installations. However, one should recognize the following barriers in relation to achievement of the aim

- attitude (personal of each participant of the construction process)
- technical (scope of necessary skills is very large)
- political (sometimes lack of understand and of support)
- high cost of training for SMEs

One of the instruments of improvement of quality of works could be the certification of construction companies and RES installers. The good experience in this field is development of so called QUALITY BRANDS to attract constructors and RES installers with the positioning of their companies on the market and increase of credibility through fulfillment of requirements set up by the QUALITY BRAND scheme.

From another side, the pressure on increase of quality of works may come from the side of the end-users, if they would be better educated through wide awareness campaigns launched by public bodies, informing about fundamentals concerning good quality of constructors and installers and works done by them.

Quality control

The quality of construction works related to the energy efficient housing or refurbishment as well as to RES installations, which are observed by experts and by end-users is not the best.

The new constructions and refurbishments as well as the RES installations should be done properly according to the mandatory/legal requirements and giving the expected energy performance.

There exist formal procedures of works approval, however they are usually not accompanied by technical tests. When the technical test are applied (air-tightness test, thermo vision camera test), they show very often that in spite of formal approval of the works by licensed inspectors the expected or designed energy performance are not in place.

This is caused from one side by the not proper accomplishment of construction or installation works by workers, but also by the not sufficient quality control during the construction process done by the supervisors of works (so called inspectors). This is again caused several gaps:

- in the education of workers and inspectors
- lack of understanding of dependencies between the quality of works and energy performance of constructions and installations
- lack of political support and understanding to diminish this problem

Therefore it would of value to implement some good training practices, such as:

- training on bad experience with utilization of specially created data base (with photos and videos also) of bad quality constructions and installations

- learning of cooperation between constructors and res-installers to avoid the results of misunderstanding among them, which may cause technical damages
- strengthening skills of inspectors, through creation for them special trainings on how to supervise the energy efficient constructions and refurbishment as well as RES installations in order to achieve the designed energy performance

The good instrument for motivation of constructors and installers to improve the quality of works could be to set in the contracts the additional guarantee for works done, which will be connected with the achievement of the designed energy performance measured over the guarantee time and/or with the passing of technical tests (air-tightness test, thermo vision camera test).

(I) "Assessing costs of priority measures and identifying potential financial mechanisms"

Tuesday 27 November 2012 – 13h30-16h00

Facilitators:

- Ms Marjana Šijanec Zavrl, Building and Civil Engineering Institute ZRMK, Slovenia
 - Mr Seamus Hoyne, Limerick Institute of Technology, Ireland
 - Mr Igor Panchevski, Energy Agency of Republic of Macedonia, Former Yugoslav Republic of Macedonia
- Supported by Mr Gianluca Tondi, EACI

The session focused on three key topics. These were

- Methodologies for estimating the costs of relevant training courses/programmes
 - Accessing EU Cohesion and other Funds e.g. ESF: Policies, Actors and Methods
 - Utilising alternative sources of finance outside of state/employer/employee funds e.g. the insurance industry
- Methodologies for estimating the costs of relevant training courses/programmes

Through an interactive group exercise key cost parameters associated with the development, implementation and management of training programmes were identified. These were then categorised and prioritised based on the perceived importance of that category in the training process.

1. Train the trainers
2. Programme Development
3. Training equipment
4. Certification/Accreditation
5. Trainer Salaries
6. Marketing
7. Programme Materials
8. Registration System (Database, platform)
9. Coordination (administration)
10. Exams
11. Running Costs (facilities costs,
12. Time/Site costs (time spent, work missed)
13. Application/intake process (evaluation, interview etc.)

The group felt that accessing funding to meet the 'Train the Trainers' demand was vital. It was also noted that different components could be financing using different mechanisms and sources.

The greatest focus (in terms of number of mentions of the particular topic) within the group was on items 1 to 5 but marketing was also seen as an often forgotten but necessary requirement.

- Accessing EU Cohesion and other Funds e.g. ESF: Policies, Actors and Methods

Having assessed the costs the next stage of discussion focused on accessing the range of EU Funding mechanisms that exist. The main focus was on the European Social Funds (ESF). While some expertise existed within the group in relation ESF the majority of the group, and the BUS Community have limited knowledge of the ESF structure, mechanisms and implementation at European or National level.

Following discussion the main conclusion was that the BUS Community should work with the EACI to make a joint submission to the Commission to ensure that BUS related activities are not excluded

from future ESF priority areas at a minimum. Ideally, specific thematic areas in this area should be included at a European or National level.

It was also recommended that EACI and the Commission organise an information session (webinar, seminar as part of next EU Exchange) where BUS partnerships could increase their knowledge and understanding of the ESF structures and systems, and other funding programmes.

There was a broad discussion in relation to other EU Funding sources available with the general outcome being that each BUS partnership should investigate what funds may be available in their own country. Opportunities range from INTERREG, Leonardo da Vinci, Gruntvig, specific regional funds etc.

The following day (Wednesday) CECODHAS Housing Europe noted that they had prepared an information brochure on the 2014-2020 Structural Funds Programme Period. This is available (<http://www.housingeurope.eu/issue/2730>) and is a good starting point for those seeking to understand the ESF and other Structural Funding Programmes.

- Utilising alternative sources of finance outside of state/employer/employee funds e.g. the insurance industry

There was limited discussion on this topic due to time restrictions. However it was not that the potential to access alternative sources of funding will depend primarily on the situation in each country. Examples of funding which might be explored include

- Suppliers/Industry Associations – sponsorship, review of materials, supply of equipment/materials
- Insurance Companies/Financial Institutions
- Paritarian Funds
- Personal funding from the trainee
- Construction Companies

It was generally agreed that the following principles are important to consider when developing the funding model for the roadmap

- Trainee should generally be expected to make some contribution to the cost of the programme
- Funding sources should not be dependant on a single funding source
- Funding from industry should be managed to try and avoid promotion of particular technologies/brands/suppliers

(J) “Endorsement of BUILD UP skills roadmaps”

Tuesday 27 November 2012 – 13h30-16h00

Facilitators: Dragomir Tzanev (BG), Åke Blomsterberg (SE), Charlotte Vartou Forsingdal (DK), EACI: Antonio Aguilo-Rullan and Karin Drda-Kühn (Expert).

Topic 1: Meaning of endorsement for the participants according to the background of their countries

Facilitators:

- Common definition of “endorsement” in the BUILD UP Skills context?
- Identification of possible conflicts on national level, which may hinder the endorsement process?

The objective is to arrive at a commitment by relevant actors, such as authorities and other stakeholders, to carry out and implement the proposed visions and actions of the national roadmap. The endorsement process must be a process beyond the BUS project Pillar I in each country.

Endorsement is coupled to the national BUS roadmaps, ranges from recommendations to political decisions and means involvement and motivation of all necessary stakeholders. There are different levels of commitment. The roadmap must include action plans with objectives, timetables and recommendations for funding sources. Possible conflicts on national level are ministries having conflicts of interest etc.

Topic 2: Actions and methods needed to reach endorsement

- What kind of endorsement document(s) is needed?
- Which actions/methods are needed to reach endorsement?
- Who should/can/will support endorsement i.e. type of stakeholders?

Most countries will use a letter of commitment, which will either have different wording depending upon type of endorser or there will be one version for all endorsers. Reference will be made to the roadmap. The official signing of the letter of commit could take place at a major meeting or conference.

An interesting approach for prioritizing the different actions in the roadmap is to make a scoring table. The importance of each action is ranked and the likelihood of each action to be endorsed is ranked. The BUS platform could preferably be integrated in an overall energy efficiency and renewable energy platform. To encourage endorsement other benefits e.g. lowered unemployment could be presented. To facilitate endorsement the market needs should be taken into consideration. It is useful to be able to refer to successful projects, where the on-site workers and management was already trained according to the proposal in the roadmap.

Endorsers could be from several or all of the following categories; authorities, ministries, certification bodies, professional chambers, construction industry, training bodies, financiers, non-profit organizations, politicians. As soon as possible one has to determine which organizations should, can and will endorse the vision and/or some of the suggested actions of the roadmap.

Topic 3: Continuation of National Platforms beyond the BUS initiative.

- Can we somehow ensure that the BUS platform will proceed after the project?
- How can future project holders under Pillar II involve and make use of the platforms?
- Could the continuation of the platforms be part of Pillar II?

Most countries find that besides from giving the stakeholders the possibility to influence and give input to the project the creation of platforms have also given the stakeholders the possibility to meet and have fruitful discussions. Since the stakeholders often have different or even in some cases conflicting interests it is estimated that the stakeholders would not have taken the initiative them-

selves to meet. However the feedback is that the stakeholders are very much in favour of the platforms and find it fruitful to meet when there is a coordinating neutral party, who arranges and invites for meetings and workshops etcetera. Most countries therefore see a point in continuation of the platforms after Pillar I. Some proposed that it would be a good idea if the continuation of the platforms would be considered in the roadmap. The situation is of course different in the different countries but it should be considered if the platforms could continue as advisory boards.

Topic 4: Investments in Qualification

- Who pays for further investments in qualifications, knowledge, and supportive actions?
- How do we motivate other stakeholders to participate?

Although financing of training courses is a pressing issue itself, it cannot be considered without reference to stimulating the market demand for high-quality construction works with integration of EE & RES solutions in buildings. Even in countries with 100% state financing of training courses there is little interest, especially by micro and small enterprises. Only a surge in the construction market will motivate companies and employees to invest time and resources in up-skilling.

The major instrument for financing of training schemes and courses is the ESF and BUS participants are strongly advised to contact national managing authorities in relation to the distribution of funds for the next EU budgetary period. An idea for a webinar on ESF functioning was approved by the major part of the participants. In the area of stimulation of market demand in the construction sector, synergies should be searched also with ERDF. Quality regulations for obtaining financing should be promoted, especially for specific EE & RES credit lines supported by national governments, EBRD, EIB, etc. Costs of trainings could be shared between governments, employers and employees, as different innovative training methods should be tested in order to facilitate engagement. Levies on construction products could be applied to finance trainings, as is the case in many EU countries. Existing training schemes, including courses by product manufacturers and distributors, should be utilized and aggregated in a coherent framework. The administrative control on quality should be strengthened relating both to certification of trainers and training courses and to actual construction works. Other instruments such as lists of certified service providers and free consultation centres could also be explored.

8 Exchange of BUILD UP Skills participants and European Stakeholders

After an introduction by **Patrick Lambert**, Director of the Executive Agency for Competitiveness and Innovation, in charge of the Intelligent Energy Europe programme, **Waltraud Schmid** (Head of Sector projects EACI) and **Nathalie Cliquot** (Project Officer EACI) presented the initial results of the BUILD UP Skills initiative.

In particular, they highlighted that BUILD UP Skills had already successfully mobilised around 500 organisations working in national projects in 30 countries (EU+ NO+HR+MK). The creation of national qualification platforms represented a major effort in all countries with the involvement of public authorities, industry and trade associations, trade unions, continuing education organisations.

Preliminary findings from the various Status quo analysis received show that:

- By 2020 8%-27% additional workers may be needed in the building sector
- On average in the range of 36% - 44% of the current workforce will need to be trained (* based on 18 status quo reports received)
- Countries face similar barriers and challenges

In the next steps, IEE funding will be available for setting up or upgrading qualification schemes and measures.

Two BUILD UP Skills project had the opportunity to present in details their preliminary findings. Charlotte Forsingda, from the Danish Energy Agency presented the situation in Denmark. Horia Petran from the National Institute for Research and Development in Construction, Urban Planning and Sustainable Spatial Development described the BUILD UP Skills initial results in Romania.

A panel session, chaired by **Vincent Berrutto** (Head of Unit, Energy Efficiency EACI) gathered various EU stakeholders to provide their views on BUILD UP Skills and their reaction to initial findings.

Monica Frassoni from the European Alliance to Save Energy (EUASE) insisted on the need for a clear legislative framework that encourages all market actors to work with energy efficiency in mind and go in the same direction. Although funds are available, they are currently not sufficiently used (for instance at the end of 2011, 4 billion euros of EU funds that could be used for energy efficiency renovation were unspent) as there is no sufficient clarity on the way forward. Some companies, including members of the European Alliance to Save Energy, are already active in providing training to workers.

Rolf Gehring from the European Federation of Buildings and Woodworkers explained that one of the main issue in the construction sector was precarious work. This type of work does not facilitate access to and recognition of training. He insisted on the necessity to build bridges for instance with the research community on new technologies and building technologies while also dealing with other training challenges. He mentioned the possibility to combine various trainings to building workers (energy performance and asbestos removal for instance). He also stressed the importance of the Social dialogue and the various EU policy support to build bridges such as the EU Skills panorama.

Domenico Campogrande from the European Construction Industry federation (FIEC) invited BUILD UP Skills participants and projects to feed into the European Skills Council, which is an opportunity to better assess and continue anticipating the needs of the sector. The national building sectors are differ-

ent in Europe and tailored approaches for training are needed. He gave the example of innovative training practices that are already effective today (eg. In Spain, workers are trained on site and trainers move from site to site in a special training bus). He suggested exploring the use of the paritarian funds to finance the training as they exist in many EU countries. He called for improved exchanges between European commission's services to address the issue of skills in the construction sector.

Tommaso Grimaldi from the European Vocational Training Association (EVTA) insisted that building bridges between energy and vocational education organisations would be key to the success of the BUILD UP Skills initiative. He also raised the issue of the image of the job in the construction sector, which does not help to value training. He described the importance of better skills anticipation and assessment of training needs, as well as the identification of qualifications/profiles that need to be improved or created to better inform the education sector.

Seamus Hoyne, coordinator of the BUILD UP Skills Ireland project, invited participants to adopt system thinking when trying to solve the issue of the energy performance of buildings and designing training. He gave the example of the IEE TRAINENERGY project which included background information to understand energy across different trades. He also provided estimations on the training costs identified in the Irish Status quo analysis. In Ireland, 75000 workers would require training, which would cost between 85-100 million euros. The total investment for renovating the target of 1 million buildings in Ireland is estimated at 15-17 billion €. This means the training costs are less than 1% of the renovation costs. He invited other BUILD UP Skills participants to contact their national authority in charge of the European Social Fund.

Another session, chaired by **William Gillett** (Head of Unit, Renewable Energy, EACI) gathered representatives from various European Commission's services.

Antonio Paparella, from DG Enterprise presented the European Communication on the strategy for the sustainable competitiveness of the construction sector and its enterprises.

Fernando Vasquez from DG Employment and Social Affairs gave an overview of the policy instruments for skills development in the building sector including the EU Sectoral Skills Councils and the Eu skill panorama. He also presented financial instruments including the European Social Fund.

Finally, **Marie Donnelly**, Director for Renewables, Research and Innovation, Energy Efficiency at DG Energy, concluded the event and called upon the participants to invest smartly. Europe pays 217 billion EUR per year for fuel imports from Russia and others. The most intelligent way to reduce Europe's dependency from energy imports is to reduce its energy consumption by tapping on the significant energy saving potential existing in all sectors of the economy. Even in times of economic crisis investment decisions are taken every day in Europe and these decisions should be smart. Investments in building renovations will return 10 times because they reduce energy imports, boost the economy and create jobs. This needs skills and here BUILD UP Skills is key to increase the capacity in the construction sector.

9 Feedback and Next Steps

The meeting offered ample opportunities to exchange experiences and to learn from each other. The advancement of the projects allowed much more in-depth discussions than in previous meetings, making this networking forum very valuable. Also the peer group interaction has developed into an integral element of BUILD UP Skills. The BUILD UP Skills Barometer gave an impression on the overall progress of the work and particularly revealed that in many countries the dialogue with national ESF representatives has not yet started. Giving the repeatedly voiced importance of the ESF for the implementation of the roadmap all participants should reinforce efforts in this direction.

Some participants used the opportunity to express their satisfaction with the meeting, others raised the concern that the platforms, now established and proving to be useful, will soon finish, though they would a valuable support for the implementation of the roadmaps as well.

The next BUILD UP Skills Exchange Meeting will take place in the week of 22-26 April (preferably 22-24) most likely in Vienna or Berlin. Participants are asked to block this week and will be informed as soon as possible about time and venue.

10 Participants list (BUILD UP Skills projects and EACI)

SURNAME	NAME	ORGANISATION	Country
Bittersmann	Gerhard	Styrian Energy Agency	Austria
Fechner	Johannes	17&4 Consulting Ltd.	Austria
Trnka	Georg	Austrian Energy Agency	Austria
De Groote	Maarten	Flemish Energy Agency	Belgium
Van Roy	Kristof	Foundation for Vocational Training in the Construction Industry	Belgium
Vercauteren	Steven	Belgium building research instituten	Belgium
Wouters	Peter	Belgian Building Research Institute	Belgium
Ivanov	Stiliyan	Bulgarian Construction Chamber	Bulgaria
Katzarova	Antoaneta	National Agency for Vocational Education and Training	Bulgaria
Tzanev	Dragomir	EnEffect Consult SP LTD	Bulgaria
Brnada	Irena	Regional Environmental Center, Croatia	Croatia
Duic	Matija	Croatian Chamber of Trades and Crafts	Croatia
Milovanovic	Bojan	Faculty of Civil Engineering, University of Zagreb	Croatia
MAXOULIS	CHRISTOS	CYPRUS SCIENTIFIC AND TECHNICAL CHAMBER	Cyprus
SPYRIDES	IOSIF	CYPRUS INSTITUTE OF ENERGY	Cyprus
Fibiger	Jan	Architecture and Building Foundation	Czech Republic
Sopoliga	Petr	ENVIROS, Ltd.	Czech Republic
Zahradnik	Petr	SEVEN, The Energy Efficiency Center	Czech Republic
Bodal	Pia	Communications Partners	Denmark
Forsingdal	Charlotte	The Danish Energy Agency	Denmark
Lauridsen	Vagn	Danish Technological Institute	Denmark
Linnas	Reet	Tallinn University of Technology	Estonia
Peterson	Indrek	Estonian Association of Construction Entrepreneurs	Estonia
Valjataga	Triin	KredEx	Estonia
Maenpaa	Janne	Training Centre for the Construction Industries RATEKO	Finland

Mikkonen	Irmeli	Motiva Services	Finland
Sorri	Jaakko	Tampere University of Technology	Finland
Arizankovska	Jadranka	Economic Chamber of Macedonia	Former Yugoslav Republic of Macedonia
Ivanov	Risto	Association for business and consultancy KREACIJA	Former Yugoslav Republic of Macedonia
Panchevski	Igor	Energy agency of Republic of Macedonia	Former Yugoslav Republic of Macedonia
Faucher	Philippe	French Association for Adults Training	France
Herold	Sylvaine	Cities Employment Alliance	France
Louis	Jonathan	French Environment and Energy Management Agency	France
Nicolae	Olariu	Association of New and Renewable Energy Sources	France
Nirup	Christina	French Environment and Energy Management Agency	France
Majewski	Elisa	German Confederation of Skilled Crafts	Germany
Rasch	Katrin	Research Institute fur Vocational Education and Training in the Crafts Sector at the University of Cologne	Germany
Dede	Ioanna	National Organization for the Certification of Qualifications and Vocational Guidance	Greece
Doukas	Haris	National Technical University of Athens	Greece
Malamatenios	Charalampos	Centre for Renewable Energy Sources and Saving	Greece
Hujber	Dorottya	EMI Non-profit Ltd. for Quality Control and Innovation in Building	Hungary
Karvazy	Eszter	National Labour Office	Hungary
Palotai	Peter	National Labour Office	Hungary
Hoynes	Seamus	Limerick Institute of Technology	Ireland
Krawczyk	Dr Ela	Dublin Institute of Technology	Ireland
ESITINI	MAURIZIO	National Association of Plant Constructors	Italy
Moreno	Anna	Agency for Energy, new Technology and Economical Sustainable Development	Italy
Reitano	Luca	Confederal body for the vocational training in Crafts and Small-Medium-sized Enterprises	Italy
Endriksone	Helena	Latvia Association of Civil Engineers	Latvia
Kamenders	Agris	Riga planning region	Latvia

Teteris	Gatis	Vidzeme planning region	Latvia
Encius	Robertas	Certification Center of Building Products	Lithuania
Sarka	Vaidotas	Lithuanian Builders Association	Lithuania
Vilutiene	Tatjana	Vilnius Gediminas Technical University	Lithuania
Conrady	Christiane	Interestgroup myenergy luxemburg	Luxembourg
Majeres	Tom	Chamber of skilled crafts	Luxembourg
Semiray	Ahmedova	Interestgroup myenergy luxemburg	Luxembourg
Sikora	Alexis	Institute of formation in the building sector	Luxembourg
Borg Bellanti	Ian	Malta Chamber Foundation	Malta
Ebejer	John	Ministry for Resources and Rural Affairs	Malta
Pantea	Anamaria	Malta Intelligent Energy Management Agency	Malta
Cromwijk	Jan	Education and development fund	Netherlands
Hofman	Marco	ISSO	Netherlands
van der Weijden	Jaap	J.Th. van der Weijden Holding BV	Netherlands
Hauge	Guro	Federation of Norwegian Construction Industry	Norway
Leegard	Jorgen	Federation of Norwegian Construction Industry	Norway
Veulemans	Mathieu	Norwegian Building Authority	Norway
Jarzemska	Monika	The Polish National Energy Conservation Agency	Poland
Prymas	Jacek	Warmia and Mazury Vocational Training Center	Poland
Rajkiewicz	Andrzej	SAPE Polska	Poland
Beirao	Diogo	Portuguese Energy Agency	Portugal
Goncalves	Helder	National Laboratory of Energy and Geology	Portugal
Oliveira Panao	Marta	National Laboratory of Energy and Geology	Portugal
Pereira	Cristina	National Agency for Qualification and Vocational Education	Portugal
Horia	Petran	National Institute for Research and Development in Construction, Urban Planning and Sustainable Spatial Development "URBAN-INCERC"	Romania
Lungu	Catalin	Romanian Association of Building Services Engineers	Romania

Doktor	Frantisek	Congress and educational center	Slovakia
Lukac	Zsolt	The Association of Construction Entrepreneurs of Slovakia	Slovakia
Sternova	Zuzana	Building Testing and Research Institute	Slovakia
Gumilar	Vladimir	Slovenian Construction Cluster	Slovenia
Šijanec Zavrl	Marjana	Building and Civil Engineering Institute ZRMK	Slovenia
Vrhovnik	Barbara	Chamber of Craft and Small business of Slovenia	Slovenia
Cadenas	Alfonso	Technological Institute Of Construction	Spain
Gonzalez Lopez	JAVIER	Labour Foundation For Construction	Spain
Gonzalez Martin	Ana	Labour Foundation For Construction	Spain
Rodríguez López	Raquel	National Institute of Qualifications	Spain
Blomsterberg	Ake	WSP	Sweden
Eriksson	Roger	Swedish Energy Agency	Sweden
Naglitsch	Lotta	The Swedish National Agency for Education	Sweden
Tullstedt	Lars	The Swedish Construction Federation	Sweden
Chivers	Jacqui	ConstructionSkills	United Kingdom
Hemmings	Jill	SummitSkills	United Kingdom
Stott	Phil	Asset Skills	United Kingdom
Drda-Kühn	Karin	Media-k GmbH	External expert to EACI
Gausas	Simonas	Visionary Analytics	External expert to EACI
Haas	Johannes	Fachhochschule Joanneum	External expert to EACI
Kondratenko	Irena	Passiefhuis-Platform	External expert to EACI
Aguilo-Rullan	Antonio	EACI Project Officer	
Berrutto	Vincent	EACI Head of Unit, Energy Efficiency	
Cliquot	Nathalie	EACI Project Officer	
Ferreira	Vasco	EACI Project Officer	
Gillett	William	EACI Head of Unit, Renewable Energy	
Lambert	Patrick	EACI Director	

Schmid	Waltraud	EACI Head of Sector Projects
Tondi	Gianluca	EACI Senior Project Officer
Belalidou	Marianna	Sympraxis Team
Belalidis	Thanos	Sympraxis Team