ITALIAN TRAINING QUALIFICATION WORKFORCE IN BUILDING – BUILD UP SKILLS I-TOWN –

BUS I-TOWN
TRAINING STRATEGY, MAIN ACTIONS, OUTPUTS
ROTTERDAM, BUILDUP SKILLS 10°EU EXCHANGE MEETING
30 – 31 MAY 2017

Co-funded by the Intelligent Energy Europe Programme of the European Union

Contract number: IEE/13/BWI/721/S12.680178
Project duration from 01/09/2014 to 31/08/2017
Elaboration date: 29/07/2014
Objectives and Main steps

Main Steps

- **Training the workers:** the starting point is the national index of qualifications already in use. Initial surveys on existing and emerging knowledge, competences and skills will be carried out within priority areas for identified for green building. Findings from the survey will create the basis for the design of modular training programme and of appropriate training materials.

- **“Train the trainers”:** a key action will consist in training professional teachers in the building sector. Innovative training methodologies and technical contents will be developed on the priority areas identified and transferred to trainers throughout pilot actions to be carried out with supporting partners.

- **Certification and qualification of the building workers:** the recognition and validation system enhanced by the project will be developed considering the standards required by the law decree published on 16 January 2013. The project will set up procedures for assessing both formal and nonformal or informal learning and will establish minimum standards ensuring quality of the training process.

- **Ensuring the long term sustainability of the action:** project sustainability will be ensured encouraging a continuous dialogue with social partners as to the adoption of the project results within the national framework of contracts, promoting the transfer of results towards international partners, especially those related to the migrant workforce present in Italy.

- **Dissemination and communication activities:** all the partners will be committed in promoting project results attending conferences and organising specific workshops. A project website and a dedicated e-learning platform will be implemented as well.

Objectives

The objective of the project is to establish or upgrade large scale institutionalized training schemes for the qualification of craftsmen and other on-site workers in the field of energy efficiency and renewable energy in buildings, according the Action Plan proposed in the Italian Roadmap delivered within the Pillar I of Build Up Skills Italy initiative.

The training courses are meant to be an investment for sustainability by evolutionary processes which will lead to a high quality of skills. The training schemes are based on a well balanced relationship between theory and practice. The educational principle behind the training is “Hands on Learning”.

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Elaboration date: 26/02/2016
ITALIAN NATIONAL SURVEY OF LIFE-LONG LEARNING NEEDS on ENERGY EFFICIENCY OF BUILDINGS, SAFE AND SUSTAINABLE BUILDINGS
901 questionnaires received

SUBJECT AREAS
FOR THE QUESTIONNAIRE SURVEY

- **Subject area A**: recovery and maintenance of building patrimony
- **Subject area B**: urban and environmental regeneration
- **Subject area C**: energy saving and green building
- **Subject area D**: innovative material and techniques

Where the worker is invited to indicate the level of desirability and importance of knowledge acquired

- **Soft skills**
Where the worker is invited to indicate the level of social methodologic and personal competences.

**Wp2 Training needs of workers on energy efficiency and green building**

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FOCUS GROUP  ITALIAN NATIONAL SURVEY OF LIFE-LONG LEARNING NEEDS

4 MEETINGS FOR 60 PARTICIPANTS

MAIN ACTIONS

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THREE SPECIALISTIC PATH
ONE TRANSVERSAL CCU AREA

A. BUILDING
   Trainer

B. ELECTRICAL SYSTEMS
   Trainer

C. MECHANICAL
   SYSTEMS Trainer

TRANSVERSAL AREA

FOUR PILOT COURSES
The training program is based on 4 hours modules

Basic training

Process Training

Product Training

REALIZED:

TORINO (13/14 July) 17 trainers,

REGGIO EMILIA (20/21 October) 44 trainers

NAPOLI (9/10 November) 19 trainers,

ROMA (14 December) 36 trainers

2016

Total attendees 124

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WP3 - TRAINING THE TRAINERS

The project BUS I-TOWN involves 4 training trainers paths

Total trainers involved 69
M. 58  W. 11
Age:
Under 30  1
From 30 to 39  14
From 40 to 49  19
From 50 to 59  19
Over 60  12
Training centers 37
from 12 Regions

NAPOLI
WP3 - TRAIN THE TRAINERS

Italian Training qualification Workforce in building
- BUILD UP SKILLS I-TOWN –

PRO1 | La gestione sostenibile del cantiere

Paola Moschini – Marco Design Studio

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WP2 TRAIN THE WORKERS

EXPERIMENTAL TRAINING

- 10 pilot courses
- 5 courses for workers employed
- 5 courses for young people at the first entry into the construction sector

8 courses already completed for a total of 120 participants
PROFILES OF WORKERS:
BUILDING WORKERS
HEATING AND WATER SYSTEMS
ELECTRIC AND ELECTRONIC SYSTEM
WOOD WORKERS

• The courses are organized in order to cover the specificities of Italian regions:

<table>
<thead>
<tr>
<th>Number of courses by type of user / macro-region in Italy</th>
<th>NO</th>
<th>NE</th>
<th>NC</th>
<th>C</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>New workers at the first entry into the construction sector</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Workers who already have experience in the construction</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

• Structure of the course
Each course has a duration of 16 hours structured as follows:
  2 hours for initial CCA evaluation
  12 hours for theoretical / practical training
  2 hours for final evaluation
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MAIN ACTIONS

WP2 TRAIN THE WORKERS

TORINO
RESEARCH AND DIDACTIC OUTPUTS
SURVEY IN THE FIELD OF LIFE-LONG LEARNING NEEDS

In the spring of 2015, through the work of the Formedil building schools and Ecipa CNA, 901 questionnaires were received. The survey was administered to everyone, above all to blue collars of the building and plant installation sectors. This survey highlighted the following:

1. a training need that matches innovation processes;
2. a lack of professional technical training among workers, artisans and technicians;
3. a need for updating in the fields of energy efficiency, sustainability and green building;
4. an intervention area to involve all human resources of the sector.

The new green competences and new credits must be recognised in a homogeneous system of documentation, assessment and certification.

In the sector new roles are needed, but above all it is essential to turn the existing roles, already with general competences, into new profiles having the latest techniques and a “green” way of thinking.

For this reason a map that supports the necessity of life-long learning, requalification and specialization has been made up, offering differentiated opportunities of professional development.
Wp2 Training needs of workers on energy efficiency and green building

HOW TO DOWNLOAD THE REPORT AND MATERIAL ON NEEDS

WWW.BUS-ITOWN.EU
GOOD PRACTICES.
AN AREA OF COLLABORATION WITH
BRICKS PROJECT

www.bus-itown.eu
## BASIC TRAINING PROGRAMS AND CONTENTS

<table>
<thead>
<tr>
<th>BA01</th>
<th>Introduction to energy efficiency and environmental friendly buildings: definitions and main features</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA02</td>
<td>The European legislative framework in the field of energy efficiency and sustainability</td>
</tr>
<tr>
<td>BA03</td>
<td>The national and regional legislative framework in the field of energy efficiency and sustainability</td>
</tr>
<tr>
<td>BA04</td>
<td>Technical standards on energy efficiency of the building systems</td>
</tr>
<tr>
<td>BA05</td>
<td>The sustainability rating of buildings: systems, tools and market trend</td>
</tr>
<tr>
<td>BA06</td>
<td>Sustainability rating systems: LEED and BREEAM protocols</td>
</tr>
<tr>
<td>BA07</td>
<td>Sustainability rating systems: ITACA and CASACLIMA protocols</td>
</tr>
<tr>
<td>BA08</td>
<td>Life cycle assessment in the construction industry</td>
</tr>
</tbody>
</table>
### PROCESS TRAINING PROGRAMS AND CONTENTS

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR01</td>
<td>The sustainable management of the construction site</td>
</tr>
<tr>
<td>PR02</td>
<td>Procedure for the quality assessment of the construction: the commissioning of building services and systems</td>
</tr>
<tr>
<td>PR03</td>
<td>Procedure for the quality assessment of the construction: the materials</td>
</tr>
<tr>
<td>PR04</td>
<td>The assessment of thermal and acoustic performance of building components</td>
</tr>
<tr>
<td>PR05</td>
<td>Technologies and materials for the opaque building envelope: walls</td>
</tr>
<tr>
<td>PR06</td>
<td>Technologies and materials for the opaque building envelope: roofs and slabs</td>
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<tr>
<td>PR07</td>
<td>The dry construction systems</td>
</tr>
<tr>
<td>PR08</td>
<td>Technologies and materials for the transparent building envelope: curtain walls</td>
</tr>
<tr>
<td>PR09</td>
<td>Technologies and materials for the transparent building envelope: window system</td>
</tr>
<tr>
<td>PR10</td>
<td>Innovative heat boilers and chillers</td>
</tr>
<tr>
<td>PR11</td>
<td>Air-conditioned building: innovative systems and components</td>
</tr>
<tr>
<td>PR12</td>
<td>Photovoltaic and solar thermal systems</td>
</tr>
<tr>
<td>PR13</td>
<td>Building Management Systems: Introduction to home automation</td>
</tr>
<tr>
<td>PR14</td>
<td>Innovative lighting systems</td>
</tr>
<tr>
<td>PR15</td>
<td>Interface between mechanical, electrical and special systems and building structures</td>
</tr>
</tbody>
</table>

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## PRODUCT TRAINING PROGRAMS AND CONTENTS

| PDT 01 | Visit to construction site |
| PDT 02 | Workshops in the lab/site: The thermal insulation |
| PDT 03 | Workshops in the lab/site: The green roofs |
| PDT 04 | Workshops in the lab/site: Construction of dry systems based on wood/drywall |
| PDT 05 | Workshops in the lab/site: The laying of the window system |
| PDT 06 | Workshops in the lab/site: Installation of geothermal systems |
| PDT 07 | Workshops in the lab/site: Installation of radiant systems |
| PDT 08 | Workshops in the lab/site: Installation of solar thermal systems |
| PDT 09 | Workshops in the lab/site: Installation of photovoltaic systems |
| PDT 10 | Workshops in the lab/site: Installation of building systems automation |
| PDT 11 | Workshops in the lab/site: interface between mechanical, electrical and special systems and traditional building structures |
| PDT 12 | Workshops in the lab/site: interface between mechanical, electrical and special systems and dry structures |
Classroom frontal lessons, Presentation of case studies and Checklist, Video lessons, Workshop (e.g. with Bticino Academy on Domotics and Building automation, Blower door test)
Evaluation tests of learning at the end of each module
E-learning platform

I-TOWN - has developed a modular training program about the energy efficiency and sustainable building, starting from making available educational materials for the trainers and the people operating in these fields.

LEARNING MATERIAL ARE AVAILABLE ON THE REPOSITORY E-LEARNING PLATFORM
LEARNING MATERIAL AVAILABLE ON 
e-learning platform

EVERY MODULE PROVIDES

Agenda
Lesson’s slides
Video lessons
Support materials:
  • Didactic sheets on case studies
  • Material for classroom exercises or building site workshop
  • Didactic sheets with application sequences
  • Glossary
Self-assessment test

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All the didactics tools and video are charged on
www.bus-itown.eu
AN AREA OF COLLABORATION WITH BRICKS PROJECT

- Builders association, Association plant and technicians (ANCE e ASSISTAL)
- Trade union organizations (Feneal UIL, Filca CISL, Filea CGIL)
- Artisans Professional Associations (CNA-ECIPA e ANAEP A Confartigianato)

Institutional Tables between Social Partners, Ministries, Regions, Provinces to promote and finance activities that implement the results of Build Up Skill BUS I-TOWN project. Interprofessional funds for training of workers (FONDIMPRESA, FONDARTIGIANATO)

Certification of Skills + Analysis of new Training Plans

- FORMEDIL (BUILDING SCHOOLS NETWORK)
- UNIVERSITIES (POLITO TORINO, UNINA NAPOLI)
- SINERGIE . (TRAINING ORGANIZATION)
Marketing and dissemination of the results
Project website
Partner websites
Social media (Twitter and Facebook)
Sector technical magazines
Scientific and technical publications
Info days
Comparative workshops with other European projects
Social partners meetings
Exhibitions (SAIE, ENERGYMED, MILANO TRIENNALE)
Ediltrophy - masonry race at regional and national level
Marketing and dissemination of the results
Marketing and dissemination of the results
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Partnership I-Town

FORMEDIL, Ente Nazionale per la Formazione e l’Addestramento Professionale nell’Edilizia, coordinatore
ANCE, Associazione nazionale dei costruttori edili
ASSISTAL, Associazione Nazionale Costruttori di Impianti e dei Servizi di Efficienza Energetica (ESCo) e Facility Management
POLITO, Politecnico di Torino
RENAEL, Rete Nazionale delle Agenzie Energetiche Locali
SINERGIE, Società Consortile a Responsabilità Limitata
UNINA, Università degli Studi di Napoli Federico II Dipartimento di Ingegneria Industriale
CNA-ECIPA, Ente Confederele di Istruzione Professionale della Confederazione Nazionale dell’Artigianato