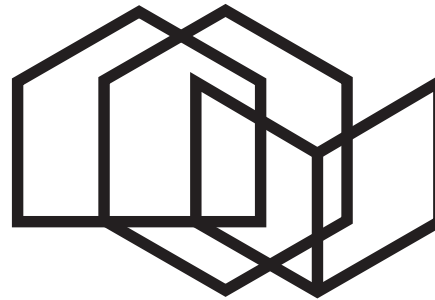


**PROF / TRAC:
PROFessional multi-disciplinary
TRAINing and Continuing
development in skills for NZEB
principles**

General Introduction

WS2 CLIMA2016, WS2
23 May 2016
Aalborg, Denmark



PROF / TRAC



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What is the PROF/TRAC overall goal?

Overall goal of PROF/TRAC is to offer a solution for these barriers by developing and maintaining **an Open Education Platform for Continuing Professional Development** for professionals in the building sector.

This platform addresses **technical experts, architects and managers** > middle and senior professionals

The developed **European qualification scheme** will be part of a life-long-life learning process for continuing development and up-skilling of professionals.



The four main PROF/TRAC objectives

1. Mapping of the required skills and current skill gaps of professionals in nZEB

This includes the mapping and assessment of:

- The professions involved in nZEB construction and retrofitting and comparing the required skills versus present skills.
- The existing qualifications, knowledge sources, education programmes, post-initial training supply and accreditation structures.
- For the mapping of the skill gaps the methodologies, developed national BuildUp skills actions, will be adapted.

2. Development of an Open Training Platform and methods for a systematic and sustainable access to knowledge

Core of project is the development of an easily accessible and open training platform with the following functionalities:

- Information pool about the European training programme, trainers and training organisations.
- Information about professional profiles needed for NZEB construction.
- Information pool of certified buildings professionals
- European Mutual Learning Platform for building professional with online training tools.

3. Development of a Train the Trainers programme for the developed qualification schemes

A central Train the Trainers programme will be organised on an international scale by EU umbrella organisations representing the building sector, engineers (REHVA), architects (ACE) and managers, endorsed by Housing Europe. PROF/TRAC will enable massive up skilling by training a large group of 'frontrunners' in order to create a snowball effect.

4. Development of a repository of the training material for use in education and post-initial education

In order to make the PROF/TRAC action sustainable after the project duration a repository will be created in the Open Training Platform to store, update and maintain the training material.



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The overall approach of PROF/TRAC

The overall approach is based on the following four pillars:

- The use of **successful structures for mapping** of present and needed qualifications and identifying the current skills gaps.

BuildUp Skills

- An efficient use, adaption and **implementation of existing training structures, training materials and qualification schemes** to come to a direct and swift implementation of the action.

IDES-EDU
Powerhouse

- The **direct involvement of the most important European umbrella organisations for the sectors** addressed to gain an EU-wide support from concerned professional branches and to ensure the sustainability of the action after the project duration.

REHVA
ACE
Housing Europe

- A quick and efficient start of a **central train the trainers program to create ‘ambassadors’** who can initiate and organise the national training programs and can train the trainers on national scale and who are able to create a **‘snowball effect’**

members as
national training
providers



Who are we ?

The PROF/TRAC consortium

| | Participant organisation name | | | |
|----|--|--------|----|--|
| 1 | Huygen Installatie Adviseurs | HIA | NL | Coordinator |
| 2 | Federation of European Heating, Ventilation and Air Condition Associations | REHVA | EU | EU associations representing their branch |
| 3 | Architects' Council Europe | ACE | EU | |
| 4 | Housing Europe | HE | EU | |
| 5 | ISSO | ISSO | NL | Knowledge and methodology providers |
| 6 | Valencia Institute of Building | IVE | ES | |
| 7 | Czech Technical University Prague | CVUT | CZ | |
| 8 | Aalborg University | AAU | DK | |
| 9 | DANVAK | DANVAK | DK | Training providers |
| 10 | Croatian Chamber of Mechanical Engineers | HKIS | HR | |
| 11 | Spanish Technical Association of HVAC and Refrigeration | ATECYR | ES | |
| 12 | TVVL | TVVL | NL | |
| 13 | Czech Chamber of Chartered Engineers and Technicians | CKAIT | CZ | |
| 14 | Chamber of Architecture and Spatial Planning of Slovenia | ZAPS | SI | |
| 15 | Italian Chamber of Architects | CNAPPC | IT | |



Mapping of Skills and Qualifications

- Devising a common methodology for the mapping of skills and qualifications, based on the BuildUp skills experiences
- The start of the PROF/TRAC approach:
 - mapping of professions and professionals involved in NZEB construction and retrofitting, the present skills and skills needed.
 - mapping of existing qualifications, knowledge sources, education programmes, post-initial training supply and accreditation and certification structures
 - using the methodologies as developed in BuildUp Skills projects
 - common methodology which will be applicable on national scale and will be actually applied in the seven pilot countries.



Development of a European Training and Qualification Platform

The core of the project where the *European open training platform* for Continuing Professional Development is organised :

- design and setup the IT structure of the platform
- development and promotion of a European qualification scheme
- sharing free access and up-to-date information on the training programmes, professional profiles, training providers and certified trainers
- a sustainable platform for mutual learning, knowledge exchange and networking
- creating a virtual pool and data base with trained and skilled experts on the PROF/TRAC open training platform and repository



Train the Trainers Programme

PROF/TRAC will organize a central 'Train the Trainers' program to set the common framework and to train and create ambassadors for the project.

- 1st TtT event in Prague, February 15 – 17, 2016
- 2nd TtT event in Croatia, September 19 – 21, 2016
- 3rd TtT event in Valencia, spring 2017
- 4th and 5th events will be webinars

The ambassadors (trained trainers) will be qualified and equipped with skills to start up training programs on a national level and 'train trainers' on a national scale, creating a snow ball effect.

After having followed the EU level Train the Trainers program, the trained trainers, together with the training providers, will develop and implement the national training programs for their pilot country, based on the specific training and qualification needs as mapped for each pilot country.



Pilots

- Seven pilots in Denmark, The Netherlands, Spain, Italy, Czech Republic, Slovenia and Croatia
- Trainers/experts from each pilot country have composed a specific training program (i.e. In the national pilots), based on the specific training and qualification needs as mapped for each country during the 1st TtT session in Prague



Why pilots?

- The specific role of the pilots is to monitor and to evaluate the approach of the project. It should give feedback to the central training program and to the training material collected in the repository

Who should attend the national trainings?

- Engineers, architects and managers



Development of a roadmap to training NZEB professionals

First step:

Mapping of the skills and current skill gaps in nZEB

- ▶ Adapting methodologies of national BUILD UP Skills actions
- ▶ Developed by ISSO, REHVA and ACE members for 6 countries
- ▶ Methodology available for any new comer training provider
- ▶ Done in 7 member states



Methodology skills mapping

1. Prof/Trac Consortium defined:

- ▶ Professions
- ▶ Skills levels
- ▶ Relevant nZEB Technologies on Energy Management / Production / Reduction
- ▶ Interdisciplinary skills, such as communications, economics

2. National experts mapped the *current* and *needed* skills on nZEB

3. Outcome is a skills gap, at a certain skills level



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Example of Dutch results

Professional

| CODE | TECHNOLOGY, INTERDISCIPLINARY SKILLS AND PROFESSIONS | Mechanical Engineer | | | | | Building aut. Engineer | | | | | | | |
|----------|--|---------------------|------|-----|---|---|------------------------|---|---|---|---|---|---|---|
| | | current | nZEB | Gap | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| M | ENERGY MANAGEMENT | | | | | | | | | | | | | |
| EM1 | Smart grid systems | 2 | 2 | 0 | | | | | | | | | | |
| EM2 | Domotic systems | 2 | 2 | 0 | | | | | | | | | | |
| EM3 | Building management systems | 2 | 3 | 1 | | | | | | | | | | |
| P | ENERGY PRODUCTION (on-site and nearby) | | | | | | | | | | | | | |
| EP1 | Geothermal energy | 3 | 3 | 0 | | | | | | | | | | |
| EP2 | Biomass | 2 | 2 | 0 | | | | | | | | | | |
| EP3 | Biogas | 2 | 2 | 0 | | | | | | | | | | |
| EP4 | District heating and cooling | 3 | 4 | 1 | | | | | | | | | | |
| EP5 | Heatpumps | 3 | 5 | 2 | | | | | | | | | | |
| EP6 | Solar power systems for electricity generation | 3 | 2 | 0 | | | | | | | | | | |
| EP7 | Solar thermal systems for cooling generation | 2 | 4 | 2 | | | | | | | | | | |
| EP8 | Solar thermal systems for domestic hot water | 3 | 4 | 1 | | | | | | | | | | |
| EP9 | Mini wind power | 2 | 1 | 0 | | | | | | | | | | |
| EP10 | Combined Heat and Power (CHP) | 3 | 3 | 0 | | | | | | | | | | |

Skills

Skills gap from level 2 to 3



Development of a roadmap

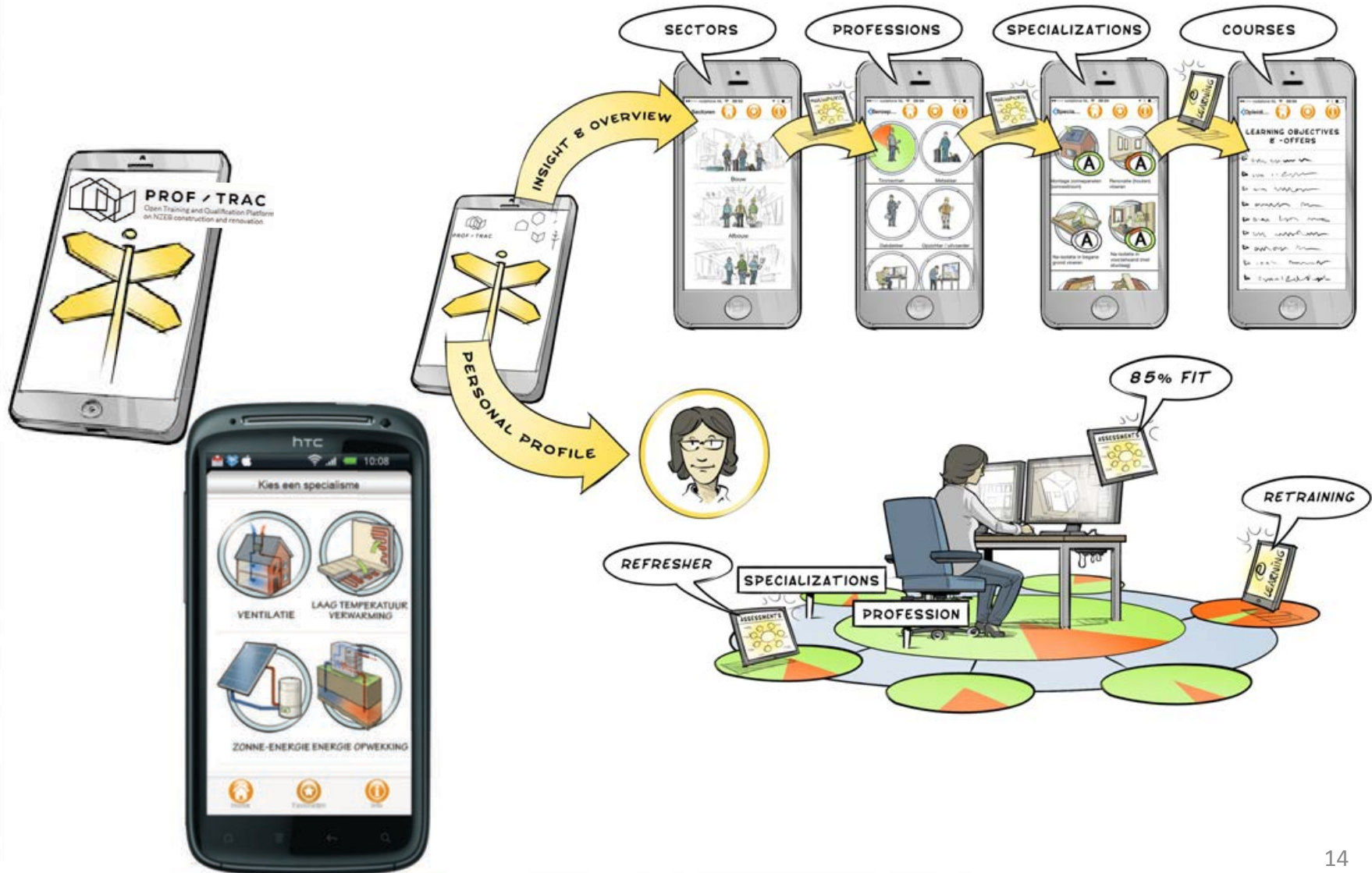
Second step:

- Roadmaps are being developed on a national and EU-wide level.
- The national roadmaps focus on successful national implementation of nZEB trainings for professionals.
- The EU roadmap will do the same for the EU, but focus on similarities or corresponding outcomes of the member states

EU Roadmap will be finished July 2016.



The PROF/TRAC skills mapping app



Visualization of Professions



ARCHITECT



ELECTRICAL ENGINEER



SPECIALIST
building management
systems



SPECIALIST
biogas



SPECIALIST
combined heat & power
(CHP)



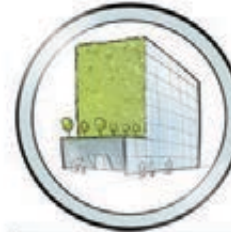
BUILDING AUTOMATION
ENGINEER



FACILITY MANAGER



SPECIALIST
insulation



SPECIALIST
micro climates



SPECIALIST
envelope systems



MECHANICAL
ENGINEER



PROJECT DEVELOPER



SPECIALIST
smart distribution
hot water



SPECIALIST
daylight systems



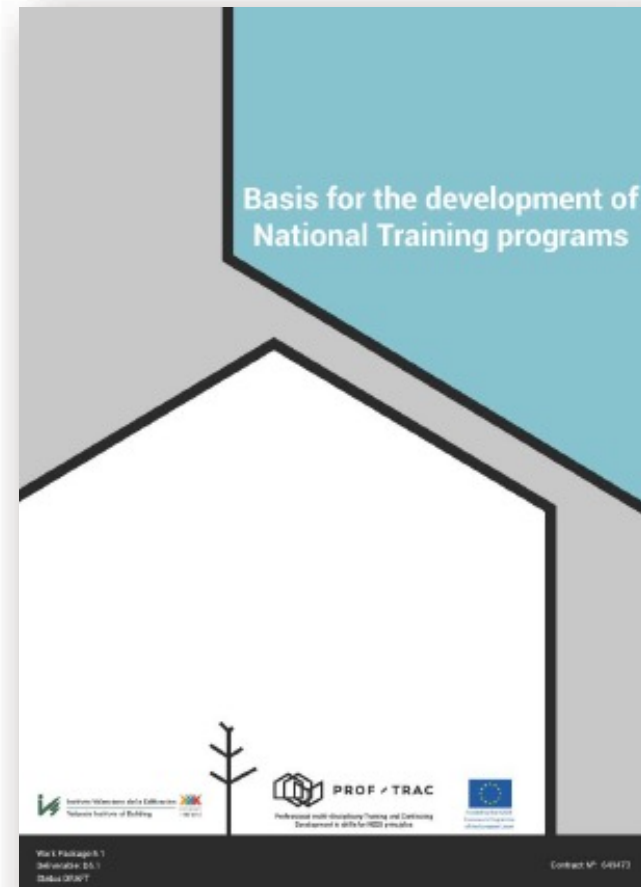
SPECIALIST
electric heating
systems

PRO

First outcomes:

PROF/TRAC Guide: Basis for the development of National training programs

- Guide: Basis for the development of National training programs
- This educational guide will be available for training providers to be used as a support to design the pilot actions (courses)



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First outcomes:

PROF/TRAC Database – keyword structure

| Profession | Code | Topic(T) | Subtopic | Code | Type of project | Code | Building use | Code | Type of the material | Code | Language | Code |
|-------------------|------|---------------------------------|---|-----------|------------------|------|-----------------------|------|----------------------|------|------------|------|
| Architect | P1 | Energy management | | EM | New construction | E1 | Office buildings | B1 | PPT | M1 | Danish | L1 |
| Engineer | P2 | | Smart grid systems | EM1 | Renovation | E2 | Apartment houses | B2 | Lecture notes | M2 | Dutch | L2 |
| Project manager | P3 | | Domotic systems | EM2 | | | Single-family houses | B3 | Reports/publications | M3 | English | L3 |
| Project developer | P4 | | Building management systems | EM3 | | | Educational buildings | B4 | Video tutorials | M4 | French | L4 |
| Building manager | P5 | Energy production | | EP | | | Other | B5 | Workshops | M5 | German | L5 |
| Building owner | P6 | | Geothermal energy | EP1 | | | Hospitals | B6 | Guidelines/Toolkits | M6 | Italian | L6 |
| Financial manager | P7 | | Biomass | EP2 | | | Wholesale and retail | B7 | Software | M7 | Spanish | L7 |
| Procurer | P8 | | Biogas | EP3 | | | Sport facilities | B8 | Case studies | M8 | Bulgarian | L8 |
| PROF-TRAC trainer | P9 | | District heating and cooling | EP4 | | | | | Databases/resources | M9 | Croatian | L9 |
| | | | Heatpumps | EP5 | | | | | MOOCs | M10 | Czech | L10 |
| | | | Solar power systems for electricity generation | EP6 | | | | | | | Estonian | L11 |
| | | | Solar thermal systems for cooling generation | EP7 | | | | | | | Finnish | L12 |
| | | | Solar thermal systems for domestic hot water and/or heating generation) | EP8 | | | | | | | German | L13 |
| | | | Mini wind power | EP9 | | | | | | | Greek | L14 |
| | | | Combined Heat and Power (CHP) | EP10 | | | | | | | Hungarian | L15 |
| | | Energy reduction | | ER | | | | | | | Irish | L16 |
| | | | Insulation | ER1 | | | | | | | Latvian | L17 |
| | | | Air tightness building | ER2 | | | | | | | Lithuanian | L18 |
| | | | Micro climates | ER3 | | | | | | | Maltese | L19 |
| | | | Envelope systems | ER4 | | | | | | | Polish | L20 |
| | | | Hot water systems | ER5 | | | | | | | Portuguese | L21 |
| | | | Window and/or glazing systems | ER6 | | | | | | | Romanian | L22 |
| | | | Heating and cooling emission systems | ER7 | | | | | | | Serbian | L23 |
| | | | Electric heating systems | ER8 | | | | | | | Slovak | L24 |
| | | | Artificial lighting systems | ER9 | | | | | | | Slovenian | L25 |
| | | | Ventilation systems | ER10 | | | | | | | Spanish | L26 |
| | | Interdisciplinary skills | | IS | | | | | | | Swedish | L27 |



First outcomes:

PROF/TRAC Database - Online

<http://proftrac.eu/training-materials.html>

FIND RELEVANT PROJECTS



On this page you can find all relevant projects of PROF / TRAC. Use the filter form on the left to narrow the results.

Topic
Select topic ▼

Type of project
Select one... ▼

Building use
Select one... ▼

Type of material
Select one... ▼

Language
Select one... ▼

[Filter result >>](#)

| ◆ Relevant report | ◆ Topic | ▼ Project | |
|--|--------------------------------|-----------|------------------------------|
| The Comfort Houses: Measurements And Analysis Of The Indoor Environment And Energy Consumption In 8 Passive Houses 2008-2011 | Energy reduction | ZEB | More details |
| Energineutralt Byggeri – Definition og fremtidig rolle i samfundet | Energy management | ZEB | More details |
| Energineutralt Byggeri - Designprincipper og byggede eksempler for enfamiliehuse | Energy management | ZEB | More details |
| Energineutralt Byggeri – Tekniske løsninger | Energy management | ZEB | More details |
| Zero Energy Buildings – DESIGN PRINCIPLES AND BUILT EXAMPLES | Energy management | ZEB | More details |
| Survey Findings Report | Awareness of energy efficiency | TRB | More details |
| Final conclusions report | Awareness of energy efficiency | TRB | More details |



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PROF/TRAC coming activities

- First seven national pilots (Denmark, Netherlands, Czech Republic, Spain, Italy, Slovenia, Croatia) mid 2016
- Release of the PROF/TRAC skills mapping app
- Promotion of the PROF/TRAC database on training materials to use in other training and education projects
- Next round of trainings (REHVA and ACE members, not presented in PROF/TRAC); 2nd Train the Trainer session in Zagreb, Croatia, September 19 -21



- Training for managers in other sectors (social housing)
- Collaboration with other Construction Skills projects > MEnS



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COLOFON

www.proftrac.eu



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