



UPGRADING TRAINING SCHEMES FOR BUILDING WORKERS AND
BUILDING UP DEMAND FOR SKILLED WORKERS TO BOOST
SUSTAINABLE CONSTRUCTION IN HUNGARY

06.12. 2016. ATHEN, 9th EuASME Exchange Meeting

ELABORATED TRAINING SCHEMES, COURSES
AND MATERIALS, STUDY VISITS OF SIMILAR
EUROPEAN PROJECTS

HUNGARY, Mr. Attila ZOLTÁN

Acronym of the project: BUILD UP Skills TRAINBUD

Contract N°: IEE/13/BWI/724/ SI2.680172

Duration: 01.09.2014.– 31.08.2017. (36 months)

www.trainbud.hu



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



M-12/B KFT.



insomnia



Training for craftsmen, become an **energy-friendly contractor!!!**

One-Men-Contractors in the front rows, who meet very first the potential customers and should influence the best choice!

Knowledge we focused on:

- soft basic, cooperation with clients, small residential buildings
- management of clients, subcontractors
- tender preparation, cross craft understanding
- specific technical, building envelop, EE, RES, BMS,
- nZERO requirements
- precise work to be done, change behavior
- contracting tools, certifications, responsibilities





Project–halftime, about!!

- finalising of training, trade–material + contractors' awareness and practices
- first trainings for theoretical & practical trainers and pilot for trainees
- trained: theoretical trainers – **48**, practical trainers – **13**, trainees – **25**
- to be trained: trainers on demand, trainees about **400**
- knowledge centre, training institutions, dissemination,

Group of workers, technicians

- all ages, no limit, employed (rearily unemployed), Hungarian, novices and/or experienced people

Courses on building envelop, EE, RES

- the building related energy performance sector, 60 hours theory + n x 20 hours practice, partly outside the working hours



Visited partner: [Hungarian Heat Pump Association](#) /

EHPA.hu

- Topic: European Certified Heat Pump Installer
- Self test, training and assessment program (4+1 days)
- Registered certified personnel, www.ehpa.org
- Detailed training material , whole Lifecycle of HPs
- Not only trade related but contractors' knowledge
- Franchise-like operation, mutual recognition,
- MS Coordinator – Training Committee, Training partners,
- 14 EU countries (all with Heat Pump Associations)
- Voluntary, self –financed, sustainability.





Visited partner: **ENERGI AKLUB**, former project partner

- Topic: Innovative training for Biomass consultant
- Detailed needs assessment in partner countries,
- Elaboration of training material, courses, detailed contents,
 - Biomass production line, energy systems, emission, fuels
 - Trade, project management, legal and financial issues
- Open, free of charge pilot trainings, tools: Moodle–e.learning
- Evaluation of the trainings by trainees, trainers, experts
- Voluntary, self –financed, sustainability.





Partner: **National Climate Protection Authority**

- since 02/2015 under the Ministry of National Development
- Hungarian, IT supported implementation since 6 years (20 years on operated by Hungarian RAC Association)
- **Three pillar system** based on Montreal_Kyoto / Ozone and F-Gases regulations,
- detailed and mandatory certification procedure for **personnel** and **companies**, Europe-wide accepted, transferable,
- Mandatory registration for **operators**, e-logbook
- see Study Case of ODS and F-GG Hungarian Monitoring and Certification Body!
- similar or same systems for EE, RES, etc...under development!

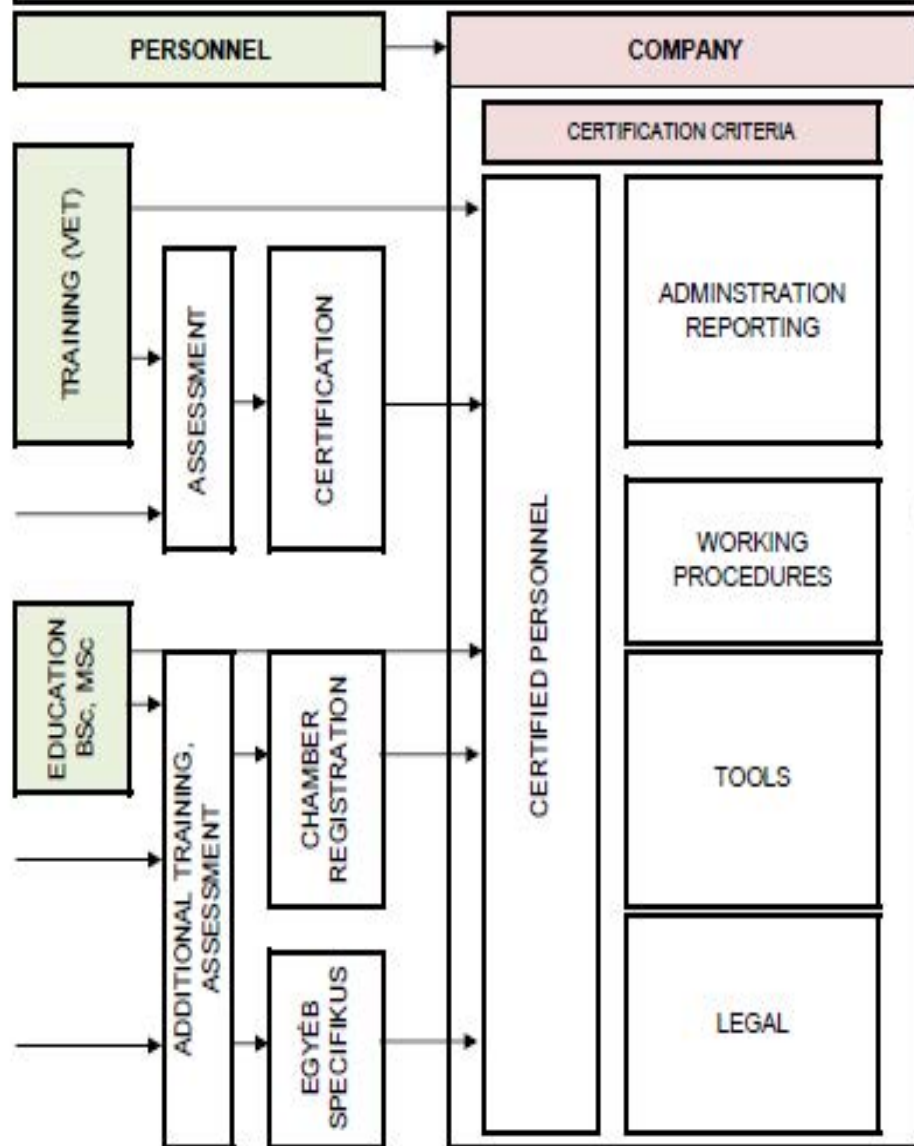


Cover the whole Building and Service Engineering trade!

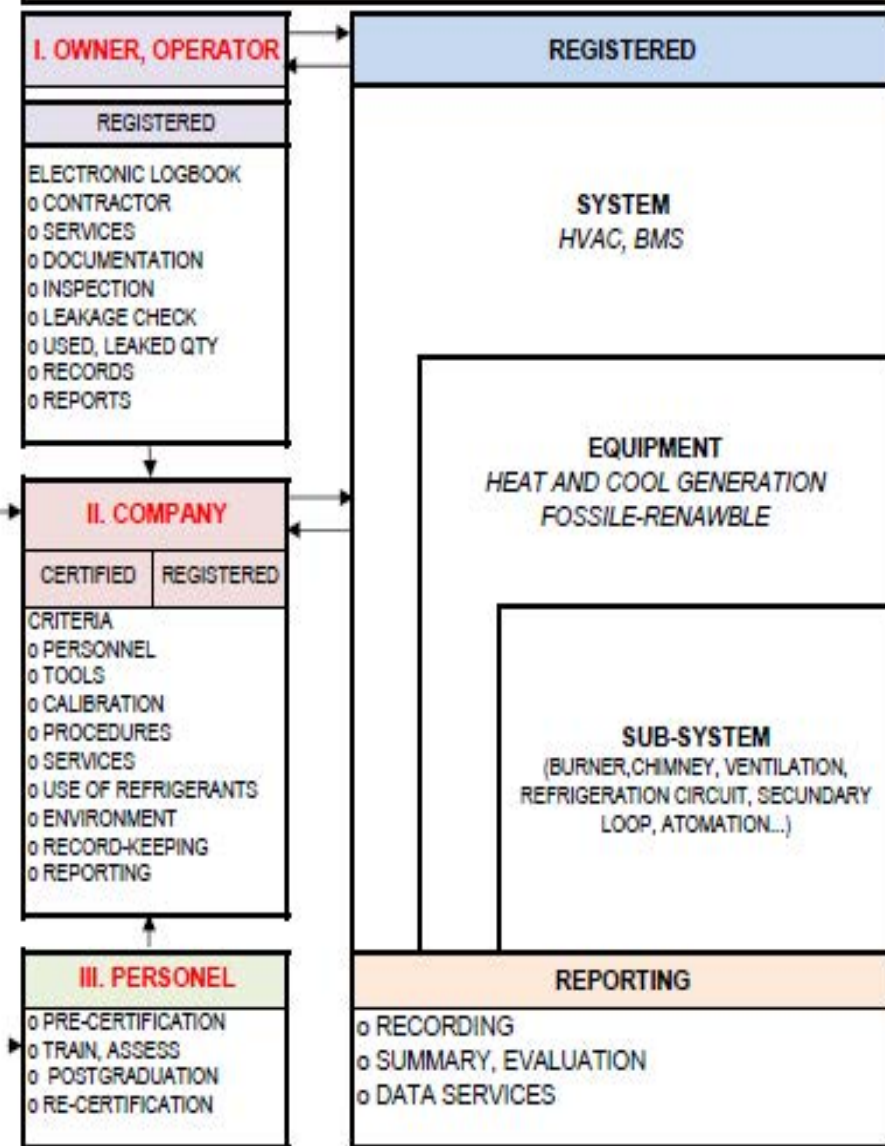
- Sectors, training systems mentioned above are always only a small part of the whole building industry,
- MSs' targets should be to build up a complete and comprehensive system for the whole EE and RES building trade, involving all sectors and levels (HVAC&R + building+ electricity + lighting + BMS)
- A horizontal and vertical structure and trace keeping for the whole lifecycle for the whole building sector,
- design–manufacturing–execution–putting into operation
- commissioning – operation– decommissioning
- Tool for dedicated financing, influence the 2020 goals



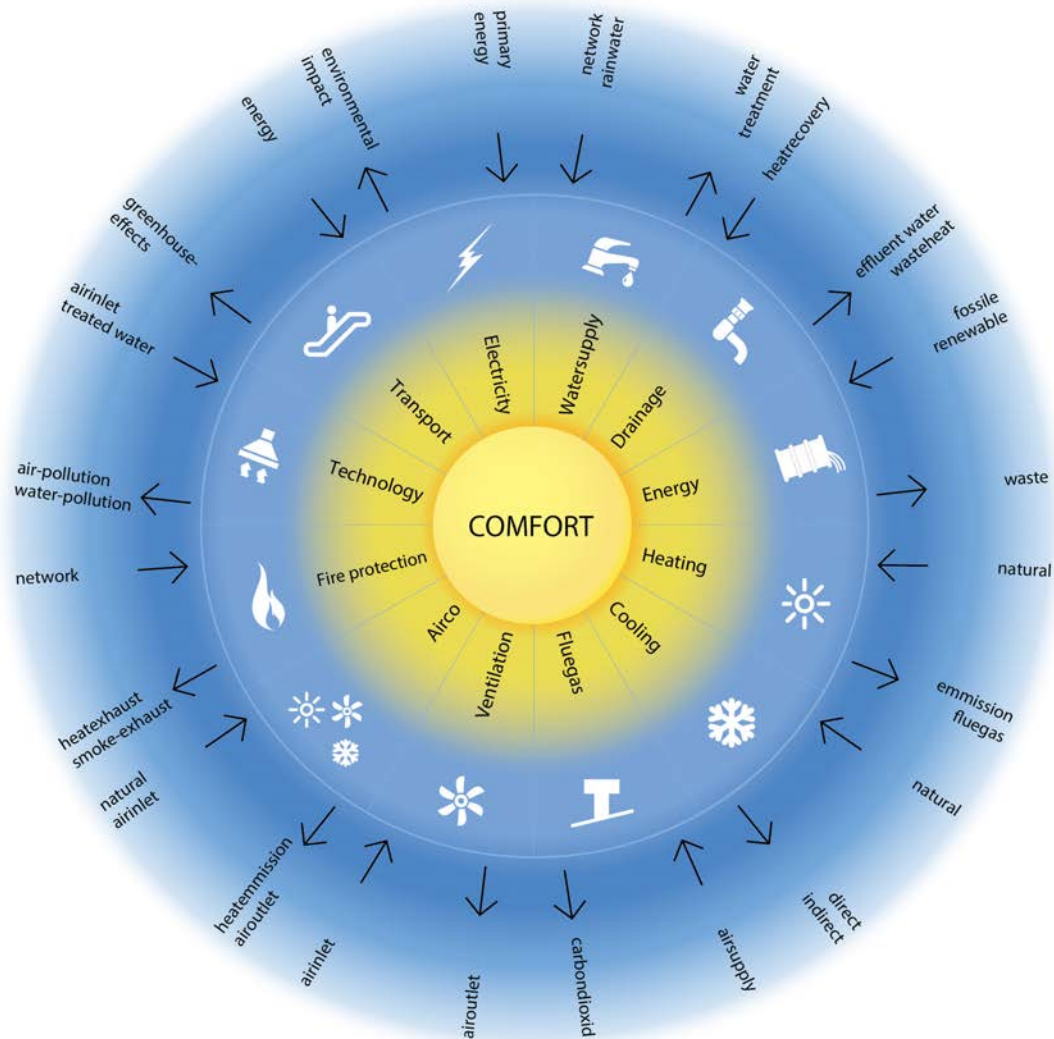
CERTIFICATION



MONITORING



ENVIRONMENT



One mandatory system with **MONITORING** of the whole Building & Service Engineering trade using Renewable and Fossil sources in Energy Efficiency sector through **CERTIFIED** Personnel & Companies and **REGISTERED** Operators



- **Transferable**, because of:
 - Training and certification based on European regulations, mutual recognition
 - easy to transfer or adapt, European directives and Commission Implementing Regulations tools, working procedures, assessment, services, legal environment)
- **SWOT** analyses by stakeholders, trainers and trainees/written/ consultations
 - **strengths:** strategy and solution itself, dedicated target group, actuality, system- knowledge, good practice, existing training centres, governmental and legal support, defend of interest certified stakeholders, monitoring system and database for statistics, fully IT supported, authority control
 - **weaknesses:** no detailed company certification criteria, mutual recognition, trade related misunderstandings (installed and mobile sector)



Innovative, because of

- the consistent system has been built up
- certification based on existing VET education, on dedicated and named trades
- e-learning based assessment of knowledge acquired in trade practice
- short special trainings for handling of refrigerantas and alternatives, EE, RES
- theoretical and practical assessment, certification (EN 17024:2013)
- mandatory postcertificate education, LifeLongLearning
- IT supported training and certification,
- database of operators and equipment
- mobile apps for data recording



