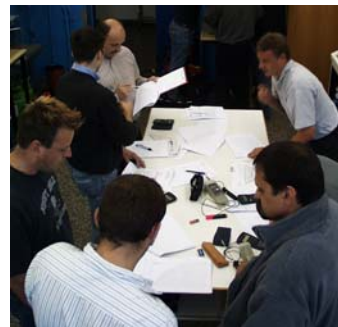


Training and Certification of Heat Pump Installers

An European training and quality campaign for Installers
in the field of heat pump technology
founded from the European commission



Why Education and Certification

- The quality of heat pump systems depend more on planning, design and installation than fossil systems
- Heat Pump system require more complex knowledge
- Markets are growing fast compared to a small pool of qualified installers



EU-CERT.HP

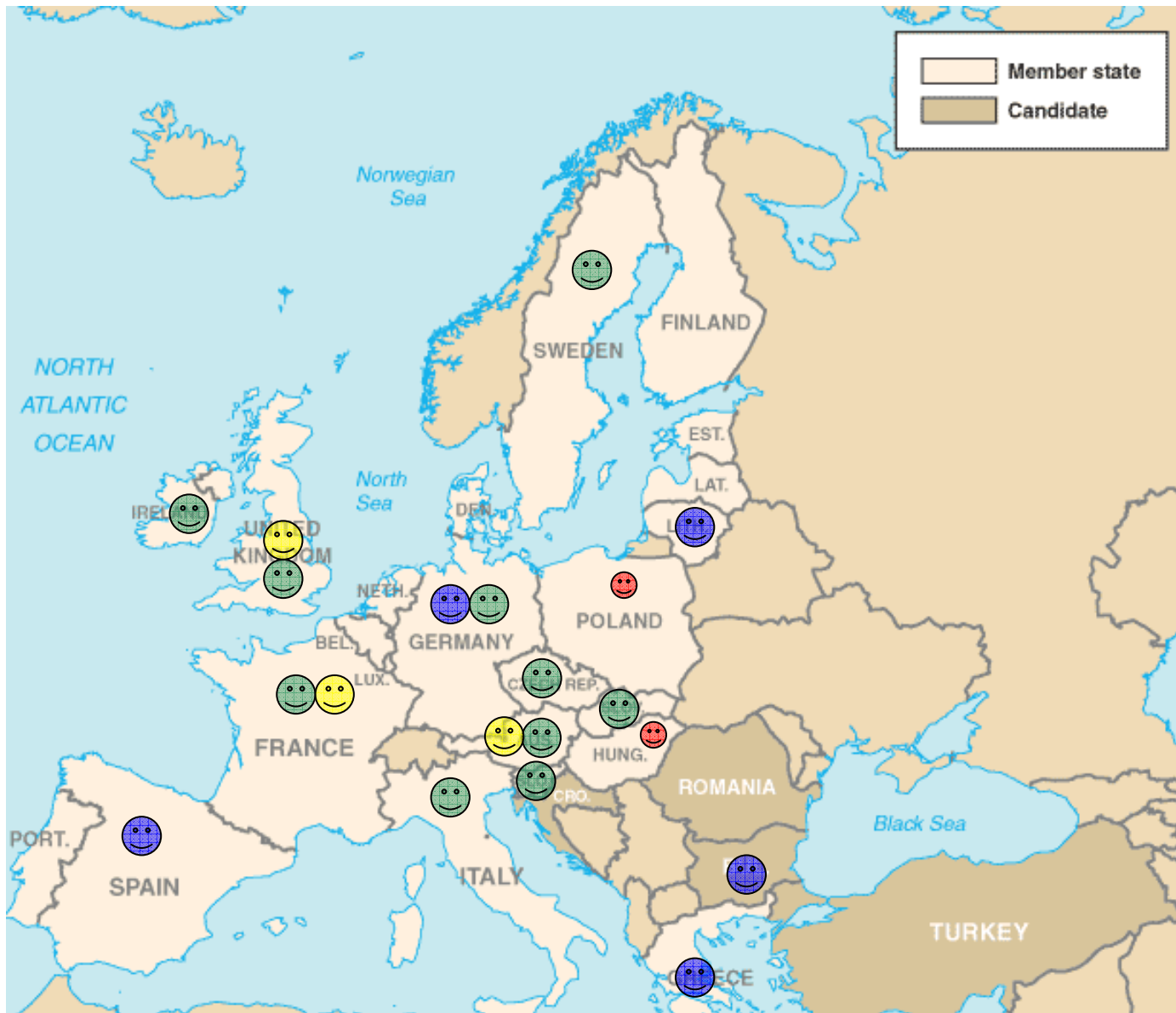
- 10 actual project partners from
 - Austria
 - Czech Republic
 - France
 - Ireland
 - Italy
 - Slovenia
 - Sweden
 - UK
- Additional to these official partners Germany and the Slovakia are involved in the activities as volunteer partners
- Project start: Spring 2004
- Project end: December 2006





Main topics of the project

- **Training**
 - Implementation of an European Training Programme for heat pump installers
 - Required infrastructure
 - Carry out the first training courses in all participating countries
- **Certification**
 - Implementation of an European Certification Programme for heat pump installers
 - Pilot certification of installers from the participating countries
- **Dissemination**
 - Trademark “Certified Heat Pump Installer” will get international importance for installers and customers
 - International conference where new countries will be invited to adopt the defined training programme

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- Identifying key competencies
- Preparation of a training manual
- Setting the training standards
- Setting the standards for the training facilities and the equipment
- Implement the required training infrastructure in national training institutions
- Realisation of pilot training courses in the participating countries
- Evaluation and revision procedure of the training materials and training organisation
- Defining an European certification scheme for Heat Pump Installers which enables a continuous quality control in the field of heat pump planning and installation.
- Setting up of an European Committee to validate the proceeding whilst ensuring that the consistency and quality of the certification scheme and the training courses
- Non-participating countries are invited to join the training and certification activities and take part on the Certification Committee.



- EU-CERT.HP 
- EARTH 
- SHERHPA 
- CER² 

Preliminary results of EU-CERT.HP

- National reports
- Specification of key competences
- Specifications of the equipment for practical training
- Manual
- Trainer handbook
- Agreement of continuation process after project end

Training Contents

- **Marketing**
- **Costs of a heat pump system**
- **About Environment and Ecology**
- **Geology Climate and National regulations**
- **Energy efficient buildings**
- **Operation Principle of heat pumps and technical details of the heat pump circle**
- **Heat distribution systems and hydronic system integration**
- **Determining planning and installation of the heat source**
- **Operation mode and control**
- **Conducting a site assessment**
- **Installing Heat Pumps & auxiliary components and performing a system check**
- **Electrical basics**
- **Customer education and Warranty**
- **Maintaining a heat pump system**
- **Fault diagnostic, frequent mistakes and practical experiences**



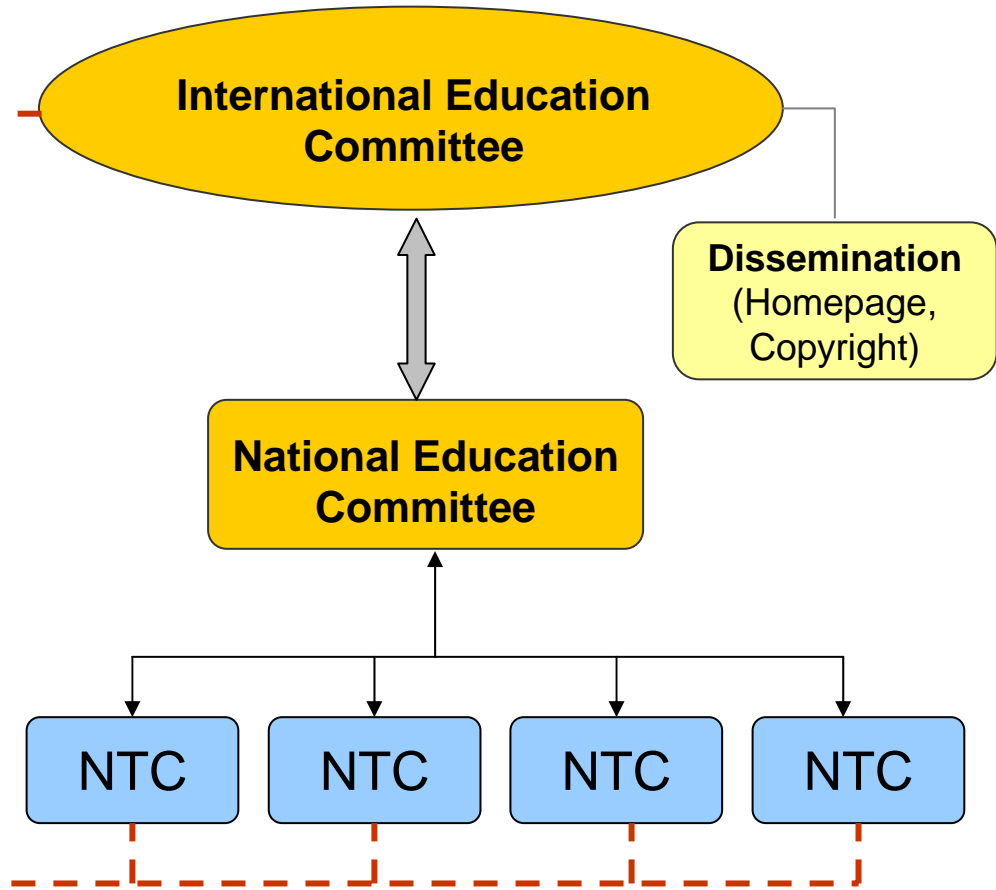
Communication structure

- subcommittee of (EHPA) ⇒

Training
commitment

- Representative of national training institutes ⇒

- Various training centres on national level ⇒



National Heat Pump Installer Training Centers

International Education Committee

- Main Tasks

- Definition of the training commitment including the mission statement, training targets, training standards, records
- Definition and amendments of training standards
- Transfer and exchange of know-how at European level
- Templates of documents for trans-national co-operations
- Dissemination and publication of the at European level



Keeping the training standards on international level

National Education Committee

- Main Tasks
 - Implementation of the international training standard and definition of specific adaptations needed at national scale
 - Report to international education committee considering required amendments and adaptations of training standard
 - Notification of any changes of training system to national training institutes
 - Dissemination of training program at national level

 Keeping the training standards on national level

National Training Centres

- Main Tasks
 - Carry out the training courses
 - Responsibility for the implementation and maintenance of the training programme
 - Dissemination on local level
 - Sub-contracting to trainers
 - Reporting to the national education committee



Put training system into action

Benefits of a common European Certification System

Common Quality Level

sustainable assurance of the quality of heat pump systems according to international guidelines and standards.

Independent third party confirmation that meets (continuously) appropriate standards

"Being certified bolsters the expertise of the heat pump market and assures current and prospective employers of high quality."

Public Authority

Rise of confidence of opinion leaders, planers and consumers in competent professionals

Fair competition

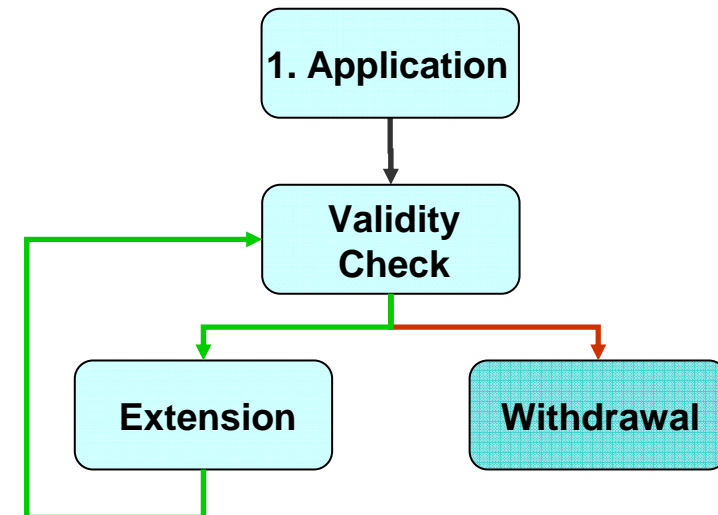
Competent Professionals

know-how will be secured in a continuously growing market by the evidence of a certificate to provide a common competence and expert knowledge

Local and regional economic gains

Certification operations

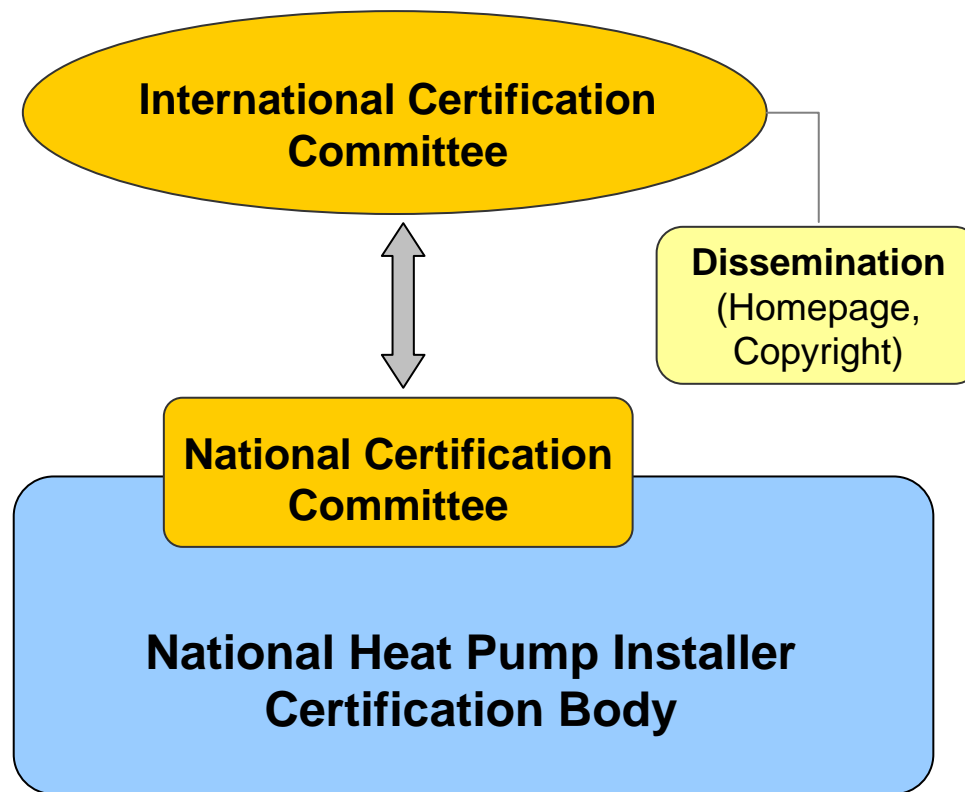
- Primary application of Certification
 - Singing of a certification contract, final examination, 2 years experiences in HP's, data of a reference system
- Validity of the Certificate
- Extension of Certification
 - Singing of extension application, active in heat pump business, ongoing further education, test if knowledge is up to date
- Withdrawal of the Certificate



General principles

- Austrian system is accredited according international standard
 - EN 17024 (Conformity assessment – General requirements for bodies operating certification for persons)
- International system will lean on international standard
- Implementation on national level
- International board for keeping general standards

Organisational Structure of Certification Bodies



Setting and keeping the certification standards on international level

Implementation the system on national level

International Certification Committee



**International Certification
Committee**

- Main Tasks
 - Definition of the certification system including the minimum requirement, validity, records, etc.
 - Amendments of certification scheme
 - Transfer and exchange of know-how at European level
 - Templates of documents
 - Dissemination and publication of the certification scheme at European level
- The committee will hold annual meetings

 Keeping the certification standards on international level

National Certification Committee

**National Scheme
Committee**

- Main Tasks
 - Implementation of the international certification scheme on national level and national adaptations
 - Reporting to international certification committee considering required amendments and adaptations of certification scheme
 - Adaptation and translation of the document templates
 - Dissemination of certification scheme at national level

 Keeping the training standards on national level



Looking forward to the discussion....