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WP4. Training and Capacity Building

Brigitte Hasewend

Ion Visa



Aim in Capacity Building

Investments in human resources and capacity building are essential prerequisites for strengthening the innovation process.

- **The needs** of the scientific and economic stakeholders in energy efficiency and RES require:
 - To be concretely identified and formulated
 - To be addressed, according to the requirements of the beneficiaries and the existing EU experience.
- **The path**: Knowledge transfer from academia to business to support the commercialisation of research results.
- **Instruments targeting individuals**: staff exchanges, study visits and joint trainings.
- **Instruments targeting institutional level**: twinning structures between selected partners, the participating parties will exchange good practices in-depth.
- **Instruments for further sustainable cooperation**: Establishing sustainable cooperation networks between ENP and EU countries and contributing to a common innovation area.

→ **The needs** of the scientific and economic stakeholders in energy efficiency and RES need to be met through the adequate capacity building

1. **Training HR** for research and for academia-industry cooperation



2. **Implementing new /smart specialization**, on EE and RES, at different levels of training and education



3. **Training the trainers on EE and RES** in specific applications fields: built environment, industry, agriculture, transportation



4. **Developing the education and training instruments** shaped according to the study level and field of interest:



Curricula&Syllabi,

Educational Infrastructure supporting „hands on learning” by solving real problems

Well selected teaching aids

5. **Developing the horizontal skills** to the R&D staff, **extending the knowledge** at the industrial partners and **raising the awareness** of population

R&D staff: Communicating research to the industrial partners and broad public

Analysing the R&D results in terms of feasibility

Industrial partners: Implementing high-tech products

Giving value mainly to intelligence and less to raw materials

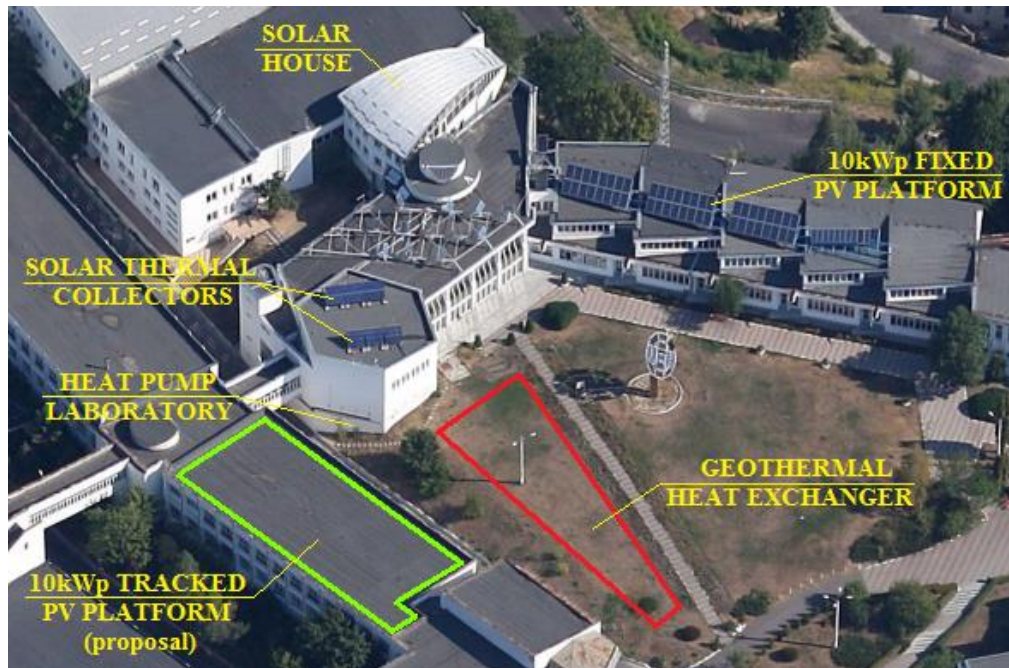
General public: Understanding the advantage of being a producer vs. a consumer

Imposing a bottom up pressure for implementing R&D results

Key actors: Developing specific legal and administrative instruments

A Case Study

The involvement of Transilvania University,
The R&D Centre Renewable Energy Systems and
Design (RES-REC)
in promoting EE and RES in Romania



R&D on Sustainable Communities

1. Increasing the efficiency of RES in the built environment (systems, materials)
2. Novel solutions for clean, efficient and affordable RES-based energy mixes in the built environment
3. Novel sustainable solutions for water recycling and reuse
4. Using wastes as second raw materials for products development



Education and Training

B. Sc. (engineering, 4 years)

- Engineering of Renewable Energy Systems
- Industrial Design
- Product Design
- Environmental Engineering
- Waste Recycling

M.Sc. Product Design for Sustainable Development

- Advanced Product Design
- Advanced Renewable Energy Systems Design
- Environmental Processes Design

Ph. D.

- Increasing the efficiency of RES in the built environment
- Advanced materials for RES and environment

LLL

- Flexible offer on RES, RES Design, Sustainable Communities

Links with the industrial partners and society

- Tailored solutions for implementing RES in communities
- Partnerships academia-industry, e.g.:
 - Novel solar-thermal collectors for facades integration
 - Portable small wind turbines
 - Portable PV arrays
 - Sustainable RES for powering various appliances
 - Implementing RES in novel products

Which are **YOUR** needs?

1. **Training HR** for research and for academia-industry cooperation
2. **Implementating new /smart specialization**, on EE and RES, at different levels of training and education
3. **Training the trainers on EE and RES** in specific applications fields: built environemnt, industry, agriculture, transportation
4. **Developing the education and training instruments** shaped according to the study level and field of interest:
5. **Developing the horizontal skills** to the R&D staff, **extending the knowledge** at the industrial partners and **raising the awareness of population**

..... Or?